



ADAPTATION FUND

## ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regional Project

**Countries/Region:** Côte d'Ivoire, Ghana

**Project Title:** Improved Resilience of Coastal Communities in Côte d'Ivoire and Ghana

**Thematic Focal Area:** Disaster Risk Reduction and Early Warning Systems

**Implementing Entity:** United Nations Human Settlements Programme (UN-Habitat)

**Executing Entities:** Ghana and Côte d'Ivoire: University of Twente; Habitat for Humanity International; Abidjan Convention

**AF Project ID:** AF00000121

**IE Project ID:**

**Requested Financing from Adaptation Fund (US Dollars):** 13,991,990

**Reviewer and contact person:** Imèn Meliane

**Co-reviewer(s):** Saliha Dobardzic

**IE Contact Person:**

### Technical Summary

The project "Improved Resilience of Coastal Communities in Côte d'Ivoire and Ghana" has as a goal to improve adaptation of small-to-medium coastal settlements in West Africa by reducing climate change impact and establishing resilient economies and communities. It also has two specific objectives:

- To promote regional coordination, strategic planning, inter-country experience sharing and cross-fertilisation regarding the adaptation to transboundary climate-related hazards and disseminate lessons learned to progressively build urban climate resilience in coastal West Africa.
- To develop capacities and establish conditions to adapt to the adverse effects of climate change in vulnerable coastal settlements in Ghana and Côte d'Ivoire.

This will be done through the three components below:

Component 1: Strengthened spatial planning for coastal climate adaptation at different geographical scales (USD 2,046,331);

Component 2: Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change (USD 8,630,246);

	<p><u>Component 3</u>: Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities (USD 997,500).</p> <p><u>Requested financing overview</u>:</p> <p>Project/Programme Execution Cost: USD 1,221,000</p> <p>Total Project/Programme Cost: USD 12,895,077</p> <p>Implementing Fee: USD 1,096,082</p> <p>Financing Requested: USD 13,991,159</p> <p>The initial technical review raises some issues, such as further clarifying aspects of sustainability, the use of unidentified sub-projects (USP) and compliance with the ESP, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) in the review.</p>
Date	02 February 2023

Review Criteria	Questions	Comments	Response
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol, or the Paris Agreement?	<b>Yes.</b>	
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	<b>Yes.</b> Like other coastal countries of western Africa, Côte d'Ivoire and Ghana are particularly vulnerable to the adverse effects of climate change through the effects on coastal features and processes. Coastal West	

		Africa has experienced in addition to significant warming, increased rainfall variability and intensity, accelerated sea level rise, with related impacts in terms of soil and water salinization, as well as exacerbated coastal erosion. Both countries are prone to worsening floods, often deadly, damaging infrastructures, homes, livelihoods, and assets.	
Project Eligibility	1. Have the designated government authorities for the Adaptation Fund from each of the participating countries endorsed the project/programme?	<b>Yes.</b> As per the letters of endorsement, signed on 13 December 2022 for Côte d'Ivoire and 23 November 2022 for Ghana.	
	2. Does the length of the proposal amount to no more than One hundred (100) pages for the fully-developed project document, and one hundred (100) pages for its annexes?	<b>Yes.</b> The main proposal document amounts to 100 pages and the annexes to 97 pages.	
	3. Does the regional project / programme support concrete adaptation actions to assist the participating countries in	<b>Yes.</b> Component 2 of the project (which amount to 74% of the project costs) focuses on the implementation and management of concrete interventions to reinforce the	

	<p>addressing the adverse effects of climate change and build in climate resilience, and do so providing added value through the regional approach, compared to implementing similar activities in each country individually?</p>	<p>capacities of coastal communities to adapt to the effects of climate change.</p> <p>The project document includes a coherent Theory of Change which outlines the suitability of activities in responding to the threats posed by the likely climate scenarios.</p> <p>The regional approach is justified by the development of a novel transnational coastal development strategy for coordinated adaptation to common-transboundary climate-related hazards in the whole coastal area of Ghana and Côte d'Ivoire, in addition to the setting up of a regional knowledge platform to disseminate the lessons learned and best practices in coastal West Africa with the Abidjan Convention.</p>	
	<p>4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?</p>	<p><b>Yes, but more information is needed.</b></p> <p>The proposal includes information on the expected economic, social and environmental benefits of the project (pg 38-41) with some quantifications of both short and long-term benefits provided in Table 6. A gender assessment and action plan have been developed and informed the project design (pg 163-172).</p> <p>The main text of the proposal makes some references to particularly vulnerable groups and states that “The specific needs of women, youths</p>	<p>The section “Part II. C. ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS” has been completed in order to include information on the vulnerable groups that were identified, in coherence with the information provided in the section on environmental and social risks. Vulnerable groups identified include low-income families, women, children, elderly people and persons with disabilities. Additional information has been included to highlight specific economic and social benefits that will particularly benefit these vulnerable groups, linked to empowerment and social inclusion, food security and</p>

		<p>and ethnic and indigenous groups will be considered at all stages of the project” (pg. 23). However, it doesn't contain specific information on the marginalized and vulnerable groups and indigenous communities that have been identified in the project target areas (although the information is provided in Annex 4), and which particular benefits would be provided by the project to those groups.</p> <p><b>CR1:</b> Please enhance reference of the marginalized and vulnerable groups identified in the project target areas in the main text of the proposal and specify the particular benefits that would be provided to them by the project.</p> <p><b>CR2:</b> Please also indicate how the project would ensure equitable distribution of benefits to vulnerable communities, households, and individuals.</p>	<p>income stability. Furthermore, a paragraph has been added to specify how the project will ensure equitable distribution of benefits to vulnerable communities, households, and individuals.</p>
	<p>5. Is the project / programme cost-effective and does the regional approach support cost-effectiveness?</p>	<p><b>Yes.</b></p> <p>The proposal includes a logical explanation of the selected scope and approach of the project and an assessment of the cost-effectiveness of each component, with comparison to alternative adaptation options.</p>	
	<p>6. Is the project / programme consistent with national or sub-</p>	<p><b>Yes.</b></p>	

	<p>national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.</p>	<p>Relevant plans and strategies for both countries have been listed in the proposal and in Annex 6 with some explanation on how the project complies with those.</p>	
	<p>7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?</p>	<p><b>Yes.</b></p> <p>The relevant national laws and relevant codes and technical standards are identified for each country, with a brief outline of the procedure to be followed by the project to ensure compliance.</p>	
	<p>8. Is there duplication of project / programme with other funding sources?</p>	<p><b>No.</b></p> <p>The project proposal identifies relevant potentially overlapping and outlines the lack of overlap, complementarity and potential synergies with each of them, as outlined on pg. 55-61.</p>	

	<p>9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?</p>	<p><b>Yes.</b></p> <p>While the project does not have a dedicated component to knowledge management (KM), many planned activities from each component include generating and synthesising the knowledge built during the planning and implementation of the project. Table 13 outlines the knowledge products that will be developed by each output. The knowledge products will be further disseminated through mechanisms and platforms designed at different levels, including community, subnational, national, and transboundary levels within the African region as well as globally.</p> <p>The knowledge generated by the project will also include how traditional native knowledge (local organizing principles, technical skills, and procedures) is applied in combination with novel technical solutions.</p>	
	<p>10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations?</p>	<p><b>Yes.</b></p> <p>Consultations were held since 2016 and throughout the development of the project proposal up to 2022 (pg 64-67). In addition, Annex 3 provides more details.</p>	

	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	<b>Yes.</b>	
	12. Is the project / program aligned with AF's results framework?	<b>Yes.</b> As outlined in Table 31.	
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	<p><b>Yes.</b></p> <p>Sustainability of the project outcomes has been taken into account when designing the project.</p> <p>Some activities under component 2 (in particular the EWS, drainage channels and micro infiltration cells) would require maintenance, and while the project states that training the communities would reduce maintenance costs, it is still unclear regarding the remaining costs that may be needed for maintenance (replacement of instruments, any material needed etc).</p> <p><b>CR3:</b> Please clarify how funding for repair or maintenance costs (other than labour costs that is understood to be undertaken by the communities) would be addressed after the end of the project.</p> <p><b>CR4:</b> please also provide more details on the financial structure and</p>	<p>CR3: In the Sustainability section, on Component 2, Output 2.1 Early Warning Systems, in the "financial" bullet point new information has been added on the maintenance of the system, which defines that the EWS Central Data Management will be managed by national DRR institutions during the post-project phase.</p> <p>Under output 2.2 Integrated NBS for reducing run-off and adapting to floods, the post-project maintenance of the drainage channels and infiltration cells will be managed by the national authorities responsible of water and sewerage in each country in coordination with local communities and their representative bodies. Capacity building activities will be put in place to identify other funding options for low-cost maintenance.</p> <p>Under Output 2.3: Adaptive capacity through alternative livelihoods, in the "financial" bullet point, it is described that the maintenance of the agriculture and water management infrastructure will be done through training</p>



		<p>arrangement of the blue carbon project.</p>	<p>for trainers' activities to engage with community farmers. In the post-project phase training centres will be used for agricultural purposes by farmers and will be supported by the management of governmental agriculture authorities.</p> <p>CR4: In the Sustainability section, on Component 2, Output 2.2: Integrated NBS for reducing run-off and adapting to floods new information on the arrangements of the blue carbon project has been added in the "Institutional" bullet point, including the role of the EI, the local communities and carbon accredited entities for the project development. The financial arrangements that have been considered for its implementation are described in the same section, component and output, under the "Financial" bullet point.</p>
	<p>14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p><b>Unclear.</b></p> <p>Most of the activities under Component 2 constitute unidentified sub-projects (USPs). However, the proposal does not acknowledge the use of USPs, and also does not include the required justification. While there is an inherent justification in the theory of change for the use of USPs, this justification needs to be made explicit, and the implications need to be reflected in the ESMP.</p> <p>The information provided under Annex 2 shows that the activities are either "partially unidentified" i.e. with</p>	<p>UN-Habitat has provided additional information in the form of tables for all sub-projects indicating specific location and name of community in each respective map, definition of activities for each sub-project, sub-project budget and ESMP. Information was added in both the main document (please ref. To part 2A) and the subproject sheets annex (annex 2).</p> <p>All details of sub-project location and activities are presented in the respective community maps from page 131 to 141. Each community map includes the sub-project that take place in that community (EWS, NbS and adaptative capacity) with</p>

		<p>the specific activity identified, but the location is yet to be determined (e.g. drainage channels) or or “fully unidentified within a fixed framework” (e.g. mangrove restoration, or improving soil fertility). This still doesn’t allow to determine their risks – as on the environmental and social setting in which they will take place, is incomplete.</p> <p>Please refer to the updated USP Guidance document for more details on USP. <a href="https://www.adaptation-fund.org/wp-content/uploads/2021/05/Updated-guidance-on-USPs-.pdf">https://www.adaptation-fund.org/wp-content/uploads/2021/05/Updated-guidance-on-USPs-.pdf</a></p> <p><b>CAR1:</b> Please recognize and provide a justification for the use of USP in the project as per the Fund’s updated guidance referenced above.</p> <p>The overview of environmental and social risks presented in II.L and Annex 5 includes those related to the USPs and is speculative at times or takes into consideration some mitigation actions.</p> <p><b>CAR2:</b> Please adjust the risk screening and risk assessment to the activities that are fully identified, and adjust the ESMP to include a process for identifying and managing the risks of USPs once fully identified during the project’s implementation, in compliance with the ESP.</p>	<p>specific location of safe areas, evacuation routes, climate monitoring station, location and typologies of drainage channels, infiltration cells, bioretention and mangrove reforestation, location of agricultural plots, infiltration trenches, wells, pumps and irrigation equipment. Design details (such as size of the interventions) are also specified in the maps and in the tables comprised in Annex 2.</p> <p>All sub-projects have been identified in terms of location, activities and sub-activities, budget and screened for ESS. The design and location of the activities in each community were identified through consultations with the communities at the sites as well as with technical experts to validate them.</p> <p>The presentation of activities and outputs under component 2 were re-worked and edited in order not to have USP, the ESMP is structured to present the mentioned subprojects, no USP. Of course, all sections were double-checked and fine-tuned, but just to better reflect the nature, design and location of the activities under the subprojects (which have been defined, designed and located thanks to consultation with local communities, on site visits, and consultation with technical experts).</p>
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	<p>15. Does the project promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms?</p>	<p><b>Yes.</b></p> <p>The project includes a number of innovative solutions, in particular:</p> <ul style="list-style-type: none"> <li>- The Transnational Strategic Development Strategy (output 1.1.) will bring a new and innovative approach in the region through the design of a transnational plan, the use of spatial planning for medium-long term adaptation, as well as an inherent the level of innovation in its methodology with a new scale of analysis and methods to link national, local and sectoral climate assessments.</li> <li>- The establishment of a blue carbon financing mechanism that can help sustain the management and upscaling of the restored mangrove systems and other nature-based solutions that are included in the project.</li> </ul>	
<p>Resource Availability</p>	<p>1. Is the requested project / programme funding within the funding windows of the programme for regional projects/programmes?</p>	<p><b>Yes.</b></p>	

	<p>2. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?</p>	<p><b>Yes.</b></p> <p>Both the Implementing Entity Management Fee and the execution costs are each at or below 10% of the project cost.</p> <p><b>CAR3:</b> Please include both the IE fee and the Execution Costs in the table 32 (detailed budget).</p>	<p>IE fee and project execution costs have been included in previous table 32, currently table 33.</p>
<p>Eligibility of IE</p>	<p>1. Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?</p>	<p><b>Yes.</b></p>	
<p>32</p>	<p>1. Is there adequate arrangement for project / programme management at the regional and national level, including coordination arrangements within countries and among them? Has the</p>	<p><b>Unclear.</b></p> <p>The Executing entities outlined in the project proposal (University of Twente, Habitat for Humanity International and Abidjan Convention) are different from the ones specified in the Letters of endorsement, which include the Ministry of Environment, Science, Technology and Innovation</p>	<p>UN-Habitat apologizes for the honest mistake. The letters have been edited and re-signed by Designated Authorities. The Executing Entities are the University of Twente, Habitat for Humanity International and the Abidjan Convention.</p> <p>UN-Habitat will not execute any component, output or activity in this proposal.</p>

	<p>potential to partner with national institutions, and when possible, national implementing entities (NIEs), been considered, and included in the management arrangements?</p>	<p>and the Land Use and Spatial Planning Authority in the case of Ghana and the Ministry of Environment and Sustainable Development, the Ministry of Planning and Development and national executing entity, in the case of Côte d'Ivoire.</p> <p>The Letters of Endorsement also make the case that UN-Habitat will be executing activities under output 1.2., while this is not mentioned in the proposal.</p> <p><b>CAR4:</b> Please clarify in the proposal if UN-Habitat will also be executing parts of the project and ensure consistency between the Executing Entities mentioned in the LOEs and those described in the proposal.</p>	
	<p>2. Are there measures for financial and project/programme risk management?</p>	<p><b>Yes.</b></p> <p>As outlined in Table 25.</p>	
	<p>3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy of the Fund? Proponents are encouraged to refer to</p>	<p><b>Unclear.</b></p> <p>The project contains USPs, and the ESP-related risks management arrangements need to reflect this. See CAR1 and CAR2 above.</p> <p><b>CAR5:</b> Please revise the ESMP to reflect the use of USPs, including consultation and revising the budget</p>	<p>The presentation of activities and outputs under component 2, were re-worked and edited in order not to have USP. Hence, no ESMP, consultation nor budget changed in order to adapt to the existence of USP in the project. Of course, these sections were yes double-checked and fine-tuned, but just to better align with the subprojects (which have been defined, designed and located thanks to consultation with local</p>

	<p>the Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy, for details.</p>	<p>provisions (providing more details), as needed.</p>	<p>communities, on site visits, and consultation with technical experts.</p>
	<p>4. Is a budget on the Implementing Entity Management Fee use included?</p>	<p><b>Yes.</b> As included in Part IV, pg 102.</p>	
	<p>5. Is an explanation and a breakdown of the execution costs included?</p>	<p><b>Yes.</b> As included in Part IV, pg 102.</p>	
	<p>6. Is a detailed budget including budget notes included?</p>	<p><b>Yes.</b> As included in Part IV, pg 100-102.</p> <p><b>CR6:</b> Please include the current Table 36 budget notes immediately after the Table 32- detailed budget.</p>	<p>The order has been changed, and the budget notes are immediately after detailed budget.</p>
	<p>7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&amp;E plans and sex-disaggregated data, targets and indicators, in compliance with the</p>	<p><b>Yes.</b> The proposal includes an M&amp;E plan (pg 84-85), and its budget (Part V, Table 35- pg99).</p> <p><b>CR5:</b> Please include the current Table 35 within the Section Part III-D on Arrangements for Monitoring, Reporting and Evaluation.</p>	<p>M&amp;E Budget included in the Section Part III.D.</p>

	Gender Policy of the Fund?		
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	<b>Yes.</b> As per Table 35, pg99.	
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	<b>Unclear.</b> The project's results framework includes indicators that are disaggregated by gender where relevant, and some specific youth and gender targets.  The project document includes Table 31 showing the project's alignment with the Adaptation Fund results framework, and Table 30, showing the linkage between Project Components and Adaptation Fund core indicators.  However, it is unclear if Table 30 is only to show alignment or if the project will monitor these core indicators. Please note that the AF core indicators need to be part of the project's results framework, as relevant.  <b>CAR6:</b> The project result framework must include at least the core impact indicator "Number of beneficiaries", including estimations for direct and	<b>Noted.</b>  The Results Framework has been adjusted to include the Core indicators of the AF for: (1) Number of beneficiaries; (2) Early Warning System; (3) Assets Produced, Developed; Improved, or Strengthened; (4) Natural Assets Protected or Rehabilitated.  In addition, a column has been included to highlight the AF core indicators within the Results framework.

		indirect beneficiaries. In addition and given that the project includes activities targeting the areas identified in AF results framework, the following core-indicators need to be added as part of the project's results framework: (1) Early Warning System; (2) Assets Produced, Developed; Improved, or Strengthened; (3) Natural Assets Protected or Rehabilitated.	
	10. Is a disbursement schedule with time-bound milestones included?	<b>Yes.</b> As per the Table 33, pg 95.	





## REGIONAL PROJECT/PROGRAMME PROPOSAL

### PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Improved Resilience of Coastal Communities in Côte d'Ivoire and Ghana
Countries:	Côte d'Ivoire and Ghana
Thematic Focal Area:	Disaster risk reduction and Early warning systems
Type of Implementing Entity:	MIE
Human Settlements Programme Executing Entities:	Ghana and Côte d'Ivoire: University of Twente – Habitat for Humanity International – Abidjan Convention
Amount of Financing Requested:	US\$ 13,991,159

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### PART I. PROJECT / PROGRAMME BACKGROUND AND CONTEXT

#### ***Coastal West Africa context: climate change, coastal development and lack of adaptive capacity***

West Africa is one of the world's most vulnerable regions to climate variability and change<sup>1</sup>. Livelihoods are already being affected by increasing temperatures and altered rainfall patterns, which are impacting on food security, and economic and governance stability. Since the 1970s, climate variability has resulted in both water scarcity and extreme flooding, as well as environmental degradation<sup>2</sup>. More specifically, coastal West Africa has experienced in the last decade **worsening floods**, often deadly, damaging infrastructures, homes, livelihoods, and assets<sup>3</sup>. **significant warming** (between 0.5°C and 0.8°C) was registered between 1970 and 2010 over the region<sup>4</sup>. Significant warming has been registered together with increased evapotranspiration, increased **rainfall variability** and intensity, accelerated **sea level rise** of around 1m per century<sup>5</sup>, with related impacts in terms of **soil and water salinization**, as well as **exacerbated coastal erosion**<sup>6</sup>.

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The impacts of climate change in the region, and the **losses**, can be told under different aspects: number of events, economic losses, human lives. No matter the way: any aspect brings the same message of **urgency to intervene to boost climate change adaptation in West Africa**. Flood events in coastal West Africa have been more severe between 2005-2015, with a total of **132 events**, with more than **14 million people affected, 2,000 dead and almost 400,000 homeless**. Economies were affected as it caused **US\$ 830 million of economic losses** (IUCN/PAC, 2016<sup>7</sup>). In addition to flood events, sea-level rise and salinization are threatening food security. More precisely, the combination of hazards, exposure and vulnerability, worsened by risk multipliers (such as unsustainable urban development, poverty and inequality, and environmental degradation), determine climate change impacts such as loss of lives, damaged settlements and infrastructures, ecosystems loss, increased poverty, increased inequalities, and increased food security (Figure 1).

<sup>1</sup> USAID, Climate Risk Profile West Africa, 2018 —WHICH YEAR IS THIS? PLEASE NOTE THAT ALL FOOTNOTES WERE REFORMATTED IN FONT ARIAL SIZE 8PT WITH NO SPACES BETWEEN DIFFERENT FOOTNOTES. IN SOME PAGES, THE SME REFERENCE IS USED SEVERAL TIMES... I SUGGEST USING ONLY ONE FOOTNOTE NUMBER AND REFER TO THE SAME FOOTNOTE USING THE SAME NUMBER (BY DOING A SUPERSCRIPT) — YOU WOULD SAVE SIGNIFICANT SPACE...

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<sup>2</sup> USAID, Climate Risk Profile West Africa, 2018 — SAME QUESTION

<sup>3</sup> <https://www.wacaprogram.org/article/rising-tide-protecting-vulnerable-coastal-communities-west-africa>

<sup>4</sup> Niang, I., O.C. Ruppel, M.A. Abdrabo, A. Essel, C. Lennard, J. Padgham, and P. Urquhart, 2014: Africa. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bliir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1199-1265.

<sup>5</sup> Adaptation to Climate Change- Responding to Coastline Change in its human dimensions in West Africa through Integrated Coastal Area Management (ACCC), UNDP, 2007

<sup>6</sup> Allersman and Tilsman 1993 – quoted in Africa Environmental Outlook (2000)

<sup>7</sup> IUCN/PACO (2016). Regional Assessment on Ecosystem-based Disaster Risk Reduction and Biodiversity in West and Central Africa. A report for the Resilience through Investing in Ecosystems – knowledge, innovation and transformation of risk management (RELIEF Kit) project. Ouagadougou, Burkina Faso: IUCN. 58pp.

Figure 1: Climate Change and Coastal West Africa



Hazards and the level of exposure of coastal West Africa to climate change, combined with the relevance of the sub-region in terms of population density and economic production, determine a very high level of risk, and thus of opportunity if adaptation to climate change is properly managed. West Africa's coastal areas **host about one third of the region's population and generate 56 percent of its GDP** (WB, 2019<sup>8</sup>), meaning that any hazard occurring along the coast

affects huge -and still growing- numbers of human beings and livelihoods. West Africa also hosts the **largest number of people living in extreme poverty over the continent**. From the total estimated 412 million inhabitants in West Africa in 2021<sup>9</sup>, the region has over 165 million inhabitants living in extreme poverty. Population that is highly vulnerable to the impacts of climate change has and will continue to increase in West Africa more than any other African region<sup>10</sup>: These population, more **vulnerable to climate change effects**, is growing and projected to reach 210 million inhabitants living in extreme poverty by 2040.

The urban growth, especially along the coast, is a driver of vulnerability, as the combination of poverty and of the pace of urbanization promote the spread of informal settlements which are highly vulnerable and highly exposed to flooding and heat waves. The risks include food insecurity, major loss of life from floods, increasing likelihood of mass migration, and conflicts. According to Welborn (2018), "pressure on governing institutions at all levels to respond to major climate-related humanitarian crises in the region will intensify through the foreseeable future"<sup>10,11</sup>. However, across the whole African continent, most adaptation to climate variability and change is still reactive, short-term based, implemented at the individual or household level, and is not appropriately supported by government stakeholders and relevant policies. Meanwhile, the flood mortality risk in sub-Saharan Africa has grown consistently since 1980 as increasing population exposure has not been accompanied by a commensurate reduction in vulnerability<sup>12</sup>, which can be attributed to low levels of adaptive capacity. Furthermore, African countries are among the ones with the biggest financing gap for addressing climate vulnerability and are hence severely challenged by rising economic loss. In the African context, successful adaptation will depend on developing resilience<sup>13</sup>. Planning for climate change adaptation requires that urban planning, development and management are focused on producing urban systems that have a greater capacity to absorb shocks and adapt to climate-related impacts, thus ensuring the continuity of the city's key functions. At the same time, to increase resilience to climate disasters, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are resilient: well prepared, ready to act and equipped with the knowledge and capacities for effective disaster risk management within a longer-term development perspective. Building adaptive capacity at different levels is essential for ensuring future urban climate resilience. Coordination, collaboration and participation are key elements to link short-term priorities to long-term plans. Yet, despite the fact that urbanisation has progressively taken on a central role in understanding risk and its associated vulnerability, existing tools and approaches are not tailored to low-capacity local governments in the region, while at the same time tend to be dedicated to a narrow audience<sup>14</sup>.

<sup>8</sup> World Bank (2019). The cost of coastal zone degradation in West A-africa: Benin, Côte De Ivoire, Senegal and Togo.

<sup>9</sup> World Population Review 2021

<sup>10</sup> Africa and climate change. Projection and vulnerability and adaptive capacity. Lily Welborn, 2018

<sup>11</sup> Africa and climate change. Projection and vulnerability and adaptive capacity. Lily Welborn, 2018 — SAME FOOTNOTE AS PREVIOUS

<sup>12</sup> UNISDR, Global Assessment Report on Disaster Risk Reduction, 2015, p. 44

<sup>13</sup> Niang, I., O.C. Ruppel, M.A. Abdrabo, A. Essel, C. Lennard, J. Padgham, and P. Urquhart, 2014: Africa. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change; p. 1126

<sup>14</sup> Spaliviero, M., Rochell, K., Pelling, M., Tomaselli, C., Lopes, L., Guambe, M.: Urban resilience building in fast-growing African cities. London, 2019 (<http://pubs.iied.org/pdfs/G04380.pdf>)

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The Governments of Ghana and Côte d'Ivoire have requested UN-Habitat to support coastal (including riverine/delta) cities and communities to better adapt to climate change. Therefore, this project proposal aims to address main challenges linked to climate change in these coastal areas i.e.: coastal flooding, excess of run-off and drought due to altered rain patterns, salinization and coastal erosion due to sea level rise, and the related impact on livelihoods.

### **Ghana and Côte d'Ivoire: transnational and national contexts**

#### *Economic context at the sub-regional and national level*

The Abidjan-Lagos corridor (Figure 2) connects the coastal areas of Côte d'Ivoire, Ghana, Togo, Benin and Nigeria. It is an urban corridor with a fast-growing population of ~~over~~ 30 millions (based on the latest available data). Many experts<sup>15</sup> consider it as the engine of West Africa's regional economy. However, economic disparities do exist among the countries of the region. Despite strong urbanisation trends, agriculture is still the cornerstone of rural economies in West Africa, and accounts for 65% of employment and 35% of gross domestic product (GDP)<sup>16</sup> Marine artisanal fishing is also a major GDP contributor.



Figure 2: Abidjan-Lagos corridor mega region. Source: UN-Habitat

Nowadays, subsistence agriculture and fishing are generating fewer jobs due to the impact of climate change and unsustainable practices. Another major socioeconomic challenge in West Africa is the high unemployment rate, especially among the youth.

Côte d'Ivoire plays a key role in the West African region as it functions as transit trade for neighbouring, landlocked countries. The country is the largest economy of the West African Economic and Monetary Union and has a relatively high income per capita, with a favourable GDP growth rate since 2012 reaching 7.4% in 2018<sup>17</sup>. Despite good economic performance, around a quarter of the working population remains unemployed. Findings of the Living Standards Monitoring Survey carried out by the World Bank in 2015 indicate that the recent economic upturn has brought the poverty rate back down to 46%<sup>18</sup>. Despite recent efforts, Côte d'Ivoire remains one of the countries with the highest gender inequality rates in the world, 36% of youth unemployment with low integration of women into the economy. Climate change is also challenging the sustainable and equal development of Côte d'Ivoire by impacting more directly the vulnerable groups. The country is the fourth-largest exporter of goods, in general, in sub-Saharan Africa. Indeed, **agricultural sector remains the country's prime employer** and foreign exchange earner, and is key to poverty reduction. Cacao farming has contributed to 15% of GDP and about 38% of exports<sup>17,49</sup>. However, the price paid for expanding cultivated areas has led to destruction of massive forests land in the country. Secondly, agriculture is not sufficiently diversified and rural households are not adequately combining agricultural and non-agricultural activities to boost their incomes. Regarding the services sector, it contributed 3.4% to growth in 2018, remaining a main driver of economy. Industry sector such as agri-food industry, construction and public works sector contributed by 1.5%. The coastline is the principal economic resource of Côte d'Ivoire. The diverse habitats that characterize the littoral constitute an ecologic asset for the country due to its

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<sup>15</sup> [https://www.uneca.org/sites/default/files/PublicationFiles/int\\_progr\\_ri\\_inceptionecowaseng.pdf](https://www.uneca.org/sites/default/files/PublicationFiles/int_progr_ri_inceptionecowaseng.pdf)

<sup>16</sup> West Africa Economic outlook, African Development Bank Group, 2019

<sup>17</sup> African Development Bank Group Portal, <https://www.afdb.org/en/countries/west-africa/cote-d'ivoire/> <sup>16</sup> World Bank Data Portal <http://www.worldbank.org/en/country/cotedivoire/overview>

<sup>18</sup> <http://www.worldbank.org/en/country/cotedivoire/overview>

<sup>49</sup> African Development Bank Group Portal, <https://www.afdb.org/en/countries/west-africa/cote-d'ivoire/> <sup>16</sup> World Bank Data Portal <http://www.worldbank.org/en/country/cotedivoire/overview> - SAME FOOTNOTE AS 17

economic, cultural, and touristic value. **The principal activities in the coastal area include forestry, plantations, factories, tourism, and fishing<sup>20</sup>.**

Ghana has taken major steps towards economic development. As stated by the Climate Change Policy: "Ghana has moved from a Low Income to a Lower Middle-Income country (as defined by the World Bank) and is both high-growth and energy-hungry"<sup>21</sup>. To give a sense of scale, within the ECOWAS region, its economy is the second largest<sup>22</sup>, and in 2011 the country was **one of the six fastest growing economies in the world<sup>23</sup>**. However, an important remark is how employment growth has not kept pace with economic prosperity. Based on the latest ECOWAS Convergence Report in 2016 Ghana faced a moderate GDP growth of 3.5%. Climate change plays a key role given that higher temperatures, stronger storms, reduced rain, and sea level rise, highly impact natural resources communities rely on. Despite this, employment data shows that the **primary sector is still a main provider of livelihoods**, accounting for 30.4% in 2018<sup>24</sup>. On this regard, latest data shows growth values of 2.5% and 5.7% for agriculture and fishing, respectively. These sectors have also a **structural role in terms of food security**. Its demand keeps increasing, leaving a **production deficit** of 702,004 tons a year. As consequence of COVID and the Ukraine war, Ghana's inflation has risen to 40% in 2022.

#### *Social context, gender and vulnerable groups at the subregional and national level*

According to the World population prospects of the United Nations Department of Economic and Social Affairs, West Africa's total population is estimated at 381 million people as of 2018<sup>25</sup>, and a large percentage lives in coastal cities. The region has been experiencing an intense urban growth since the 1960's affecting mostly the coastal countries. The population concentrated in coastal urban areas could double by 2030 and double again by 2050. In Lagos only, the number of inhabitants could reach 90 million by 2100, making it the largest city in the world by then<sup>26</sup>. The 2010 UN-Habitat State of the World Cities report identified "megaregions" and "urban corridors" as new urban forms that could be "one of the most significant developments—and problems—in the way people live and economies grow in the next 50 years".

Social data matters when addressing climate change adaptation, as poverty is both a driver and a consequence of disasters. As described by UNDRR: "Socio-economic inequality is likely to continue to increase and, with it disaster risk for those countries, communities, households and businesses that have only limited opportunities to manage their risks and strengthen their resilience"<sup>27</sup>. This inequality perpetuates as impoverished people are more likely to be settled in hazard-prone areas, having less services, and less coping mechanisms. In general, research has shown how the poor are the most vulnerable to disasters and climate change. Poverty needs to be understood as multi-dimensional. It includes not only economic poverty, but also exclusion, illiteracy, discrimination, and limited opportunities. Once impacted by a hazard these communities suffer great loss and have very little capacity to adjust. Higher mortality, livelihoods loss, and damage of housing, services, and infrastructure increase the inequality gap. Additionally, women and youth are particularly prone to poverty. Between ages 25 and 34, women are 69 percent more likely to live in poverty than men of the same age, due to their limited capacity to access decent employment opportunities. According to the African Development Bank (AfDB) Gender Equality Index, Côte d'Ivoire ranked 0,409 and Ghana ranked 0,517 showing still a long way to reach equality. Women are amongst the most vulnerable to the impact of climate change hazards due to cultural and social parameters that shape and affect their access to services and opportunities. A gender and vulnerable groups baseline assessment for Ghana and Cote d'Ivoire was conducted as part of the project's formulation (see Annexes 1 and 4).

<sup>20</sup> African Development Bank Group Portal, <https://www.afdb.org/en/countries/west-africa/cote-d'ivoire/>

<sup>21</sup> World Bank Data Portal, <http://www.worldbank.org/en/country/cotedivoire/overview>

<sup>22</sup> Ministry of Environment, Science, Technology and Innovation. 2012. Ghana National Climate Change Policy.

<sup>23</sup> Alagidede, Paul, Baah-Boateng, William, Nketia-Amponsah, Edward. 2013. The Ghanaian Economy: An Overview.

<sup>24</sup> World Bank Data Portal. <https://data.worldbank.org/country/ghana>.

<sup>25</sup> World Population prospects – Population division". population.un.org. United Nations Department of Economic and Social Affairs, Population Division. Retrieved November 9, 2019.

<sup>26</sup> <http://www.visualcapitalist.com/animated-map-worlds-populous-cities-2100/>

<sup>27</sup> Prevention Web: <https://www.preventionweb.net/risk/poverty-inequality>

Côte d'Ivoire has reached a total population of around 25 million people in 2018. The Ivorian coastline hosts 30% of the population and shelters nearly 80% of the country's economy<sup>28</sup>. The main city, Abidjan, currently exceeds 6 million inhabitants and is the second most populous in West Africa after Lagos<sup>29</sup>. Indeed, Abidjan is subject to accelerated urbanisation giving it a cosmopolitan character. This exceptional demographic growth is due to strong natural growth as well as to significant immigration, Côte d'Ivoire was one of the top ten immigration countries of middle-income countries in 2013<sup>30</sup>.

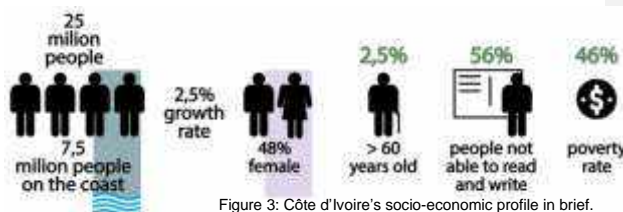


Figure 3: Côte d'Ivoire's socio-economic profile in brief. Source: World Bank Data Portal 2014.

In Ghana nearly half of the population lives in the coastal belt, especially due to migration from other areas, a region most impacted by climate change<sup>31</sup>. Ghana nationals accounted up to 97.5% of the population in 2010. Ghana has gone from being a major immigration destination in the West African sub-region, to a low immigrant country<sup>32</sup>. Ghanaians have more access to health services<sup>33</sup>, however inequality is still growing as benefits from economic growth and poverty reduction are not equally distributed across the territory and women and men<sup>34</sup>. This is especially significant in rural areas with a widened poverty gap against urban areas.

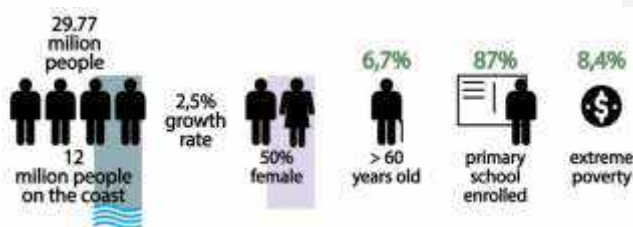


Figure 4: Ghana's socio-economic profile in brief. Source: Ghana Statistical Services. 2013. 2010 Population and Housing census; World Bank Data Portal. <https://data.worldbank.org/country/ghana>

### Institutional context

Coastal and marine issues are prioritised in the context of climate change across West Africa. Among national priorities presented by Côte d'Ivoire and Ghana for adaptation to climate change, agriculture and freshwater are in common, while coastal protection is present among Ghana's priorities but not for Côte d'Ivoire. Similarly, health is a priority included in the national strategy of Côte d'Ivoire, but not for Ghana. **Given the highly transboundary nature of drivers and risks between the two countries and the similarity in terms of their structural vulnerability (similar geographic conditions), this lack of alignment would need to be addressed by adopting common inter-country strategies and plans.**

Institutions to coordinate and align inter-country dialogues exist in West Africa based on ecosystem boundaries (GCLME, Guinea Current Large Marine Ecosystem, and CCLME), historical language and monetary relationships (UEMOA), regional trade liberalization (ECOWAS), and specific environmental challenges that expand beyond the region alone (Abidjan Convention). These institutions can play a crucial role for regional coordination and collaboration on coastal management, by establishing dialogues, setting priorities, and defining common action.

In particular, the Abidjan Convention on Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region covers a geographic area comprising 22 countries, 19 of which have already ratified it in 1984. In particular, the Abidjan Convention is engaged in coordinating coastal policy and information across West Africa with the

<sup>28</sup> World Bank Data Portal <http://www.worldbank.org/en/country/coteivoire/overview>

<sup>29</sup> Comment bénéficier du dividende démographique ? La démographie au centre des trajectoires de développement dans les pays de l'UEMOA, ainsi qu'en Guinée, au Ghana, en Mauritanie et au Nigéria», l'Agence Française de Développement (AFD), 2011.

<sup>30</sup> World Bank's Migration and Remittances factbook, World Bank Group, 2016

<sup>31</sup> Ministry of Environment, Science, Technology and Innovation. 2015. Third National Communication to UNFCCC

<sup>32</sup> Ghana Statistical Services. 2013. 2010 Population and Housing census.

<sup>33</sup> The World Bank, author. 2012. A Health Sector in Transition to Universal Coverage in Ghana.

<sup>34</sup> Ministry of Gender, Children and Social Protection. 2015. Ghana National Social Protection Policy.

<sup>35</sup> USAID 2014, Coastal Biophysical and Institutional Analysis

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support of UNEP and in coordination with the GCLME. Each African member of the convention developed a National State of the Coast Report<sup>36</sup>.

Initiatives have been developed in the West African region to support resilience-oriented planning in different areas, such as agriculture, coastal adaptation and biodiversity conservation. Côte d'Ivoire and Ghana are part of several regional projects focused on coastal adaptation, which have strengthened transnational sharing of knowledge and best practices. These projects include WACA-ResIP (West Africa Coastal Areas Resilient Investments Project), implemented in Benin, Côte d'Ivoire, Mauritania, Sao Tome and Principe, Senegal, and Togo), Mami Wata (implemented in Benin, Côte d'Ivoire, and Ghana), as well as several projects focusing on the Volta Basin and Gulf of Guinea countries. Through these multi-country projects, the two countries have been able to **cooperate with each other and with other countries in their region**. In particular, the **Mami Wata project represents a step towards improving cooperation** between Ghana and Côte d'Ivoire **through the development of a transboundary marine protected area**. However, there has been **no specific coastal adaptation project that focused on Ghana and Côte d'Ivoire despite their similar geographic settings**. Several challenges may limit such a cooperation, including the **language barrier** and the **differences in the institutional set up**.

Furthermore, **most existing projects focus on capacity development and awareness raising of local populations**. The use of **spatial planning as a lever** to enhance inter-country cooperation on coastal adaptation is often overlooked. **Developing spatial plans at different geographic scales**, from the local to the transnational level, can effectively inform strategic investments and actions to enhance **long term coastal adaptation**, by preserving functional environmental areas as buffer zones, preventing urbanisation in areas under climate risk, promoting the development of resilient/climate-proof infrastructure, among other possibilities. In addition, a transnational perspective including both Côte d'Ivoire and Ghana can help removing existing barriers in terms of adaptation strategies and funds management, upscaling/replicating good practices, including through cross-fertilization, and aligning major interventions by applying similar adaptation principles/measures. In this way, the current lack of alignment among adaptation priorities of the two countries, which is in contradiction with the existing common climate threats, could be addressed.

#### *Environmental context, current climate change issues, and future trends at sub-regional and national level*

**Environment.** West Africa has a total land area of 6,140,000 km<sup>2</sup>, or approximately one-fifth of Africa. This territory consists of a huge variety of ecosystems and climatic areas (ranging from humid rainforests to hyper-arid desert). Its coastline is a major ecosystem over 12,000 kilometres long from Mauritania to Nigeria. In particular, the coastal stretch between Ghana and Côte d'Ivoire is characterised by a deltaic morphology crossed by rivers and streams, major groundwater resources, and lagoon systems separated from the oceans by littoral bars, formed and maintained by waves and currents. The coastal system is shaped by a fast west-to-east **sediment transport dynamic** with a capacity up to 1.5 Mm<sup>3</sup>/ year<sup>37</sup>. The coastal line of Ghana and Côte d'Ivoire (566 km and 540 km long respectively) is characterised by sandy barriers and beaches that protect a system of freshwater/brackish lagoons, low-lying plains and estuaries. The abundance of **sandy barriers and coastal lagoons along the coast** of the two countries indicates a morphodynamical behaviour typical for an ebb tidal delta system. Both in Ghana and Côte d'Ivoire communities are built on the coastal barriers, or just land inwards at the banks of the lagoons/low lying plains. These lagoons **serve as natural water storage facilities**.

Overall, the natural environment supplies the region with a rich natural resource basis including soil, forest, rangeland, freshwater, and marine resources. Therefore, a variety of goods and services support the population's livelihoods. This is particularly evident in coastal areas, and even more in estuary systems and fluvio-marine connections, where these natural resources contribute directly to ecological services that are useful or even indispensable to coastal societies.<sup>41</sup> In both Côte d'Ivoire and Ghana, these coastal ecosystems' services and goods play a structural role in economic development. In particular, they help addressing the impact of climate change with, for example, mangrove systems mitigating the effects of floods and soil erosion, fisheries compensating the effects of drought on food security, vegetation and water bodies regulating microclimate and cooling heat-waves effects, etc. On the other hand, these ecosystems' services and goods are being harmed by climate-change itself and by anthropogenic actions. Therefore, the

<sup>36</sup> West African Coastal Areas Challenges, Coastal Ecosystems Group of the Commission on Ecosystem Management, IUCN, 2014

<sup>37</sup> Giardino, A. et al., A quantitative assessment of human interventions and climate change on the West African sediment budget, Ocean and Coastal Management (2017), <https://doi.org/10.1016/j.ocecoaman.2017.11.008>

conservation of the coastal environment is under stake as it is increasingly pressured by multiple threats like climate change and human activities (among these, urbanisation and land-use change). Impacts on natural resources and thus population well-being are compromising the long-term development of the region.

**Current Climate Change dynamics.** West Africa is generally regarded as particularly sensitive to climate change, with significant warming (between 0.5°C and 0.8°C) already registered between 1970 and 2010 over the region<sup>38</sup>. A climate-change analysis undertaken in 2022<sup>39</sup> subdivides West Africa in 6 zones based on a combination of the Köppen-Geiger climate classification and the country borders. According to this analysis, **coastal areas of Ghana and Cote d'Ivoire belong to the same zone** (i.e., the Southern East Coastal Zone, or Zone 6), which presents similar natural assets, climate change phenomena and trends (Figure 5Figure 5Figure 5).

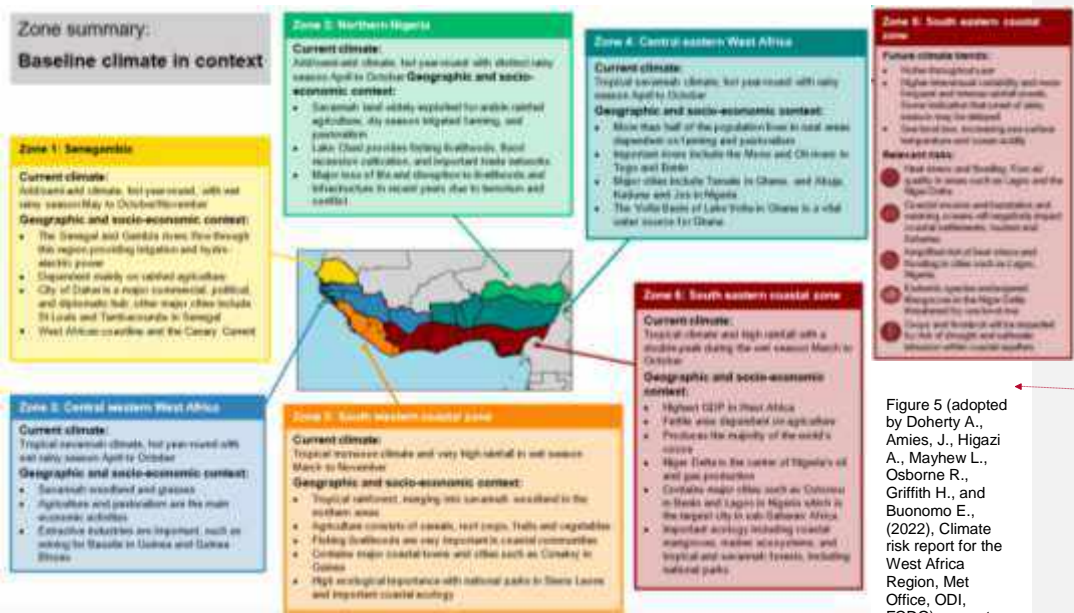


Figure 5 (adopted by Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO) presents

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current and future climate trends for the coastal areas of Ghana and Cote d'Ivoire (area 6, in bordeaux)

The current climate of the Zone 6 displays a double peak in precipitation, with the first peak typically in June and the second in September. This reflects the migration of the Inter Tropical Convergence Zone (ITCZ) over the region, which is associated with the West African Monsoon. West Africa has a narrow climatic temperature range compared to other regions, both interannually and seasonally and this is especially pronounced in this zone. It implies that even with a modest increase in temperature, temperatures will go

<sup>38</sup> Adaptation to Climate Change- Responding to Coastline Change in its human dimensions in West Africa through Integrated Coastal Area Management (ACCC), 2007, UNDP  
<sup>39</sup> Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO.

outside the range currently experienced, i.e., the lowest temperatures in the 2050s will be higher than the maximums experienced in the baseline period<sup>40</sup>.

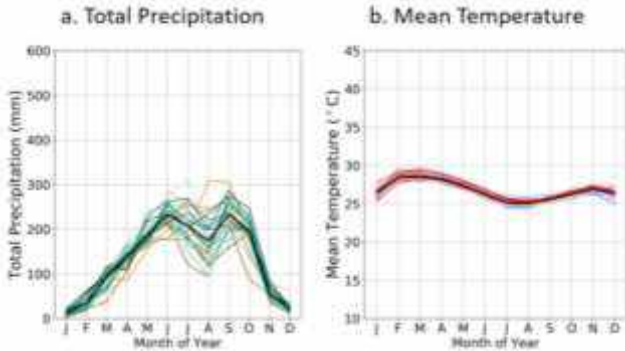


Figure 6 (adopted by Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO.): Observations for Zone 6 of a. total monthly precipitation from CHIRPS (Climate Hazards group Infrared Precipitation with Stations) dataset and b. average daily mean temperature from WFDEI-CRU (WATCH Forcing Data methodology applied to ERA-Interim data, adjusted using CRU TS3.101 precipitation totals) dataset, over the baseline period (1981-2010). Each line is one individual year. Colours show the ordering of years from brown to blue (total precipitation) and blue to red (mean temperature) – this highlights the presence, or lack of, a trend over the baseline period. The bold black line indicates the average of the 30-year period.

Temperature rise and rainfall variability trigger hazards. Based on the IPCC terminology, hazards can be considered both physical events (such as floods, heatwaves, ...) and trends (such as drought, salinization, ...)<sup>41</sup>. Coastal West Africa is mainly affected by: i) **sea-level rise between 40 to 80 cm by the second half of the 21<sup>st</sup> century** storms off the coast<sup>42</sup>; ii) **coastal erosion**, whose effects are already perceptible, and ocean acidification; iii) a **higher frequency of extreme weather events (heat waves, rainstorms, violent winds)**; iv) **floods**; v) **salinisation, which affects agriculture** and the quality of potable water along the coastline; and vi) reduced flow and drying up of rivers<sup>43</sup>.<sup>44</sup> When combined with water scarcity in river channels, sea-level rise causes the intrusion of highly saline seawater inland, posing a threat to coastal areas and an emerging challenge to land managers and policymakers. Seawater intrusion is generally caused by: (i) increased tidal activity, storm surges, cyclones and sea storms due to changing climate; (ii) heavy groundwater extraction or land-use changes as a result of changes in precipitation, and droughts/floods; (iii) coastal erosion as a result of destruction of mangrove forests and wetlands; and (iv) sea-level rise contaminating nearby freshwater aquifers as a result of subsurface intrusion (IPCC, 2019<sup>45</sup>). Such degradation takes the form of high soil salinity. **In particular, by overlaying information from the WB Climate Change Knowledge Portal ("Country profiles")<sup>46</sup> data base<sup>47</sup>, it emerges that<sup>48</sup> Côte d'Ivoire and Ghana, respectively, suffer mainly from floods (both urban floods and riverine/coastal floods), extreme heat and water scarcity (Figure 7). This information relates to physical events, while there is scientific evidence that **sea-level rise and salinization** also represents major problems<sup>49</sup>.**

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<sup>40</sup> Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO.

<sup>41</sup> Field, C.B. et al., 2014: Technical summary. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability, Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 35-94.

<sup>42</sup> <http://www.prcmarine.org/en/climate-change-west-africa-coastline>

<sup>43</sup> IPCC 2019, Special report on climate change and land

<sup>44</sup> UNFCCC, 2020. Climate Change is an Increasing Threat to Africa. <https://unfccc.int/news/climate-change-is-an-increasing-threat-to-africa>

<sup>45</sup> IPCC 2019, Special report on climate change and land

<sup>46</sup> [https://climateknowledgeportal.worldbank.org/sites/default/files/2018-10/wb\\_gfdr\\_climate\\_change\\_country\\_profile\\_for\\_GHA.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2018-10/wb_gfdr_climate_change_country_profile_for_GHA.pdf)

<sup>47</sup> <https://preview.grid.unep.ch>

<sup>48</sup> <https://climateknowledgeportal.worldbank.org/country/cote-divoire/vulnerability>

<sup>49</sup> IPCC 2019, Special report on climate change and land

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Figure 7 Report on natural hazards in Côte d'Ivoire and Ghana. Source: <https://thinkhazard.org/en/report/>

Due to their nature, low-lying coastal areas of Ghana and Côte d'Ivoire are particularly exposed to the nexus of climate change and increasing concentration of people (IPCC, 2019<sup>50</sup>). Flooding has already led to major damage to assets, houses and infrastructure; it has also devastated critical ecosystems such as beaches and mangroves, as well as many farmlands. Because of climate change, which triggers sea-level rise and more extreme rain events, **floods are getting more frequent and severe**. Severe floods are challenging communities of coastal West Africa and disrupting ecosystems. These effects are called "impacts". More specifically, IPCC defines climate change impacts as the "Effects on natural and human systems. Impacts generally refer to effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure due to the interaction of climate changes or hazardous climate events occurring within a specific time period and the vulnerability of an exposed society or system"<sup>51</sup>. In coastal West Africa, impacts are being experienced in areas located in proximity of estuaries and lagoons are becoming more prone to flooding, putting villages at risk and bringing **serious environmental health and sanitation challenges** related to access to safe drinking water and sewage systems. Other crucial impacts are occurring and are expected to grow in terms of **conflicts**: rainfall variability and the drying up of rivers other water bodies lead to shortage of freshwater and subsequent conflict dynamics, especially between herders and farmers. From both an **economic and food security** point of view, it is key to remember that the primary sector is still a main provider of livelihoods in both Ghana and Côte d'Ivoire, especially for agriculture and fishing. This sector has a structural role in terms of food security, for example fishing highly contributes to protein intake of the population and therefore is fundamental for adequate nutrition. Its demand keeps increasing, leaving a production deficit of 702,004 tons a year. For this reason, salinization, sea-level rise and flood-caused soil erosion, which harm the **mangroves and compromise their fishery provisioning**, are alarming. Sea-level rise will further affect coastal environments. Therefore, failure for restoring mangrove areas due to a lack of space or the construction of coastal infrastructure will result in even more serious degradation. **This in turn will negatively impact the reproduction of fisheries**, such as fishes, shrimps and oysters, which depend on mangroves, including wildlife (birds and manatees), carbon storage capacities and the coastline itself<sup>52</sup>. Other impacts related to mangrove degradation are, of course, loss of lives and damage to infrastructure and settlements when hazards occur. Indeed, mangroves can function as a primary storm surge barrier. On the other hand, rising sea levels, erosion from extreme weather and increased storm surge represent a significant and growing threat to mangroves. The degraded mangroves have affected livelihoods, due to their capacity to provide fishery, wood, and also as areas attracting eco-tourism, and reduced the water systems' benefits for coastal protection, flood buffering, and stabilising effects on substrates composed of fine sediments, among other ecological benefits (e.g., estimates indicate that 60 percent of the mangroves have been lost around Abidjan).

**Climate change projections.** Based on the models developed by IPCC experts, the following changes are expected in the West Africa region: **temperature rise from 3°C to 6°C** by the end of the 21<sup>st</sup> century and **reduced (from 20 to 35%) and irregular rainfall**, combined with a possible delay in the beginning of the

<sup>50</sup> IPCC 2019, Special report on climate change and land.

<sup>51</sup> Field, C.B. et al., 2014: Technical summary. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 35-94.

<sup>52</sup> <http://www.prcmarine.org/en/climate-change-west-africa-coastline>

rainy season<sup>53</sup>. Based on an analysis undertaken in 2022<sup>54</sup>, given the low seasonal and interannual variability in temperature, a temperature change of this magnitude will be very significant, taking temperatures outside the currently experienced range. In the literature there is high confidence in the rainy season onset being delayed in the zone, so although on average the rainy season will be shorter in the 2050s, in some years it will be longer. Regarding maximum and minimum temperatures, an increase is expected in all seasons<sup>55</sup>. Also, being this a zone with high humidity, these changes may have a great impact on human and livestock health and on ecosystems. Under the worst case scenario, an increase in flood magnitudes by 2050 is projected. Changes in river flow will also affect hydropower plants, such as the Kossou Dam in Côte d'Ivoire<sup>55,56</sup>. Sea levels will rise along the coast of the zone, with relative sea level projected to increase on the order of 0.3m between the baseline period and the 2050s. There is also high confidence of an increase in coastal erosion, coastal flooding and shoreline retreat<sup>55,57</sup>.

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*Key issues to be addressed to boost adaptation at the subregional and national scale: common climate change challenges, lacking governance and strategic planning, poor coordination and cooperation.*

As explained earlier, coastal Ghana and Côte d'Ivoire are exposed to high climate change impact, thus **increasing the intensity and frequency of flooding**. Rapid and often unplanned urbanisation determines the sprawling of settlements in flood-prone areas, hence increasing the urgency for adaptation. The high level of exposure of people, infrastructure and livelihoods combined with the increased frequency of extreme climatic events determines a **very high vulnerability** of human, social and built capital. The current model of development **has devastated the natural environment that once was serving as buffer for mitigating erosion and flooding impacts**. In addition, this vulnerability, and associated level of risk, is not "equitably" distributed: it mainly affects the poorest and most marginalised, and this trend is exacerbated by climate change. "While countries have started to contain erosion and flooding, there is an urgent need for partners to mobilise financing through **coordinated regional action**", states the World Bank<sup>55,58</sup>. Indeed, **West African coastal systems suffer from similar typologies of climate change risk and, therefore, call for common and "transferable" solutions**.

In sum, the coastal areas of Ghana and Côte d'Ivoire are insufficiently resilient to the present climate conditions. Their vulnerability will greatly increase in view of the projected changes in climate if no adaptation actions are taken. This is due to the combination of fast growing economies and urbanisation, the deltaic morphology of these coastal areas and the current inability of the built environment to withstand the effects of floods, drought and salinisation, among other climate-driven threats.

The interplay of these underlying vulnerabilities with ongoing and future changes in the climate will, if not urgently addressed, cause a great impact on the people living in the coastal areas of Ghana and Côte d'Ivoire, with more frequent loss of lives and assets, lower incomes that will cause more poverty, increased migration, poorer outcomes for women and a very challenging public health situation. Similarly, access to adequate housing and basic services will also worsen. Overall, without adaptation measures, climate change will be a barrier to socio-economic development for the coastal settlements of Ghana and Côte d'Ivoire.

To tackle such a situation, there is an urgent need for addressing the different aspects linked to the identified vulnerabilities. Current decisions are taken to respond to short-term needs, such as constructing in areas where flooding may occur or cutting mangroves without replanting. Therefore, areas to work on are: **improved governance systems**, with **enhanced understanding** of the different impacts of climate change, **strengthened technical skills**, and **better climate adaptation investments and decision-making**. This comes with **planning for mid to long-term climate adaptation**. Importantly, planning is not just about designing a plan, it is mainly **the process of agreeing on common strategies** by mainstreaming participatory approach, thus **building ownership and capacity**, and ensuring **vertical** (national to local and vice-versa) **and horizontal** (inter-sectoral and cross-cutting) institutional **coordination**. This should be done **at different geographical scales**: at the regional level (the **transboundary scale**) to boost cooperation

<sup>53</sup> <http://www.prcmarine.org/en/climate-change-west-africa-coastline>

<sup>54</sup> Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO.

<sup>55</sup> Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO.

<sup>56</sup> Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO.

<sup>57</sup> Doherty A., Amies, J., Higazi A., Mayhew L., Osborne R., Griffith H., and Buonomo E., (2022), Climate risk report for the West Africa Region, Met Office, ODI, FCDO.

<sup>58</sup> WAKA project

among these two neighbouring countries to address common threats, at the sub-national level (the **intermediate scale**) and at the community/settlement level (the **local scale**). Today, the transboundary scale is particularly missing as there is still little understanding of the impact of climate change at the regional level. Strategic spatial planning, through a proper assessment of the spatial distribution of socio-economic and environmental functions based on territorial realities, can enable decision-making and guide resilient and sustainable investments. The latter should be derived from an accurate understanding on where they will be viable and why, how they will help adapting to climate change (e.g., what infrastructure to support or repurpose), and which value chains and multipliers effect they will determine. Common data and tools are missing for such a purpose.

### Subnational and communities' contexts

Coastal Ghana and Côte d'Ivoire are **interested-characterised** by the presence of major lagoons. The Keta Lagoon is the largest out of over 90 lagoons that cover the 550 km stretch of the Ghanaian coastline. This 126 km long lagoon is located in the eastern coast of Ghana and is surrounded by flood plains and mangrove swamps. This large ecosystem forms the Keta Lagoon Ramsar site which covers 1,200 km<sup>2</sup> <sup>59</sup>. Climate change is causing regular overflow of this lagoon system after heavy rains due to excessive run-off in the surrounding settlements and the inflow of Kplikpa and Aka rivers. In Côte d'Ivoire, the Ebrie Lagoon is 130 km long and faces similar issues. It is surrounded by large urban areas such as Abidjan, Grand Bassam, Bingerville, Jacqueville, Attécoubé and Tiagba.

To foster climate adaptation in the coastal areas of the two countries, the project focuses on both major geographical scales (trans-national and national levels) and on the sub-national and community levels. In particular, **two main areas are targeted for intervention**, one in Ghana and one in Côte d'Ivoire, **which are most affected by frequent floods, among other climate induced threats**. These areas were prioritised through Vulnerability Risk

Assessments<sup>66</sup> and a multi-criteria methodology to ensure an evidence-based selection process, in coordination with national and local authorities. To ensure an objective prioritisation, a weighting system was adopted using a matrix in which measurable indicators were provided with a corresponding value. The evaluated areas ranked with the highest score were subsequently selected. Consultation was undertaken to validate the prioritisation process. For more information on the selection of the target areas, please refer to Annex 3.



Figure 8: The two main target areas (one in Ghana and one in Cote d'Ivoire)

Figure 8: The two main target areas (one in Ghana and one in Cote d'Ivoire)

### Selected districts and communities/settlements in Côte d'Ivoire

Due to the increased migration, the coastal area corresponding to **the Greater Abidjan** concentrates about 30% of the national population. The rapid urban growth is translated into a sprawl leading to increased pressure on the adjacent coastal areas, causing high levels of climate vulnerability, especially towards Grand-Lahou District in the West and towards Adiake District in the East. Hence Jacqueville District was also selected, located 60 km west of Abidjan, in the region of Grand- Ponts. Apart from the city of Abidjan, Jacqueville and Grand Bassam are the most populated districts, as they are located directly on the seaside.

<sup>59</sup> [https://en.wikipedia.org/wiki/Keta\\_Lagoon](https://en.wikipedia.org/wiki/Keta_Lagoon)

Ten (10) communities/settlements within these two districts were selected for implementing concrete sub-projects – for more details, see Table1.

Figure 9: Targeted department (Jaqueville) and 10 communities in the main Abidjan area (Côte d'Ivoire)



Table 1. Target communities' populations. Côte d'Ivoire.

Cote d'Ivoire	Departments		Communities	Population	Female %	Youth %
		Grand Bassam	1	Quartier France	2,394	45
		2	Azuretti	1,397	52	25
		3	Vitre 2	1,412	45	15
		4	Mondoukou	1,436	48	33
		5	Grand Jack	3,404	45	12
	Jaqueville	6	Tiémien	541	42	78
		7	Tefredji	3,726	50	6
		8	Taboth	899	55	18
		9	Attoutou B	1,616	45	42
		10	Koko	782	47	18
			TOTAL	17,607		

**Key issues to be addressed:**

The selected settlements in Jacqueville and in Grand Bassam Districts are periodically hit by floods, generally due to a combination of heavy rains, increased run off and high tide. Community livelihoods are affected by these events, which are exacerbated by poor drainage conditions and degradation of the lagoons, with the settlements presenting no capacity to store the excess of run-off. In addition, when an extreme climatic event occurs, these areas have no early warning system (EWS) nor capacity to cope with it. Livelihoods mainly rely on agriculture and fishery from mangroves systems. However, ~~due to sea level rise~~, soil salinization ([induced by sea level rise](#)) and altered rain patterns are harming the agricultural production. In addition, climate change combined with deforestation are harming the existing mangrove systems, thus increasing the flood exposure. Restoring the mangroves is crucial to mitigate the impact of floods. Their maintenance calls for alternative cooking solutions, i.e. without using [mangrove](#) wood. Agricultural practices also need to be rethought to adapt to climate change and restore livelihoods. Furthermore, lack of planning and of critical investments are exacerbating the situation.

During consultations, communities have proposed several adaptations measures:

- Provision of barriers for flooding and reducing coastal erosion/retreat
- Mitigation of floods impact and construction of drainage systems
- Providing alternative livelihoods and job creation
- Awareness raising for [preserving-preservation](#) of the natural environment
- Improvements [in](#)ef sanitation and waste management

**Selected districts and communities/settlements in Ghana**

In Ghana, the project will be implemented in the coastal areas of Greater Accra and the Volta Region in Anloga and Keta, which are the most densely populated and show an unplanned settlement growth. This implies encroachment of natural systems like mangroves. In the Volta Region, the deforestation rates of

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mangroves are particularly alarming. Therefore, **Ada East District** was selected for the district level activities, while communities (11 in Ghana) were selected in the larger stripe between Ada West and Anloga/Keta.

The selected communities are located in a low-lying coastal plain (lowest points between 1 to 3.5 metres below sea level). These communities are located close to the Volta estuary on a narrow land strip separating the Keta lagoon from the ocean. The area is marshy due to the sandy-clay type of soil. The Anloga/Keta wetlands have been designated as a Ramsar site since they constitute sanctuaries for several species of birds, including migratory birds. These communities are located on the edges of the beach for better access to both the sea and the lagoons. They are described in Table 2.

Figure 10: Targeted district (Ada East) and 11 communities in the main Greater Accra area (Ghana)



Table 2. Target communities' populations. Ghana.

District	Community	Population	Female %	Youth %
Ada West	1. Akplabanya	5,208	51	35
	2. Wokumagbe	1,664	53	51
	3. Goi	3,734	53	34
Ada East	4. Kewunori/Azizanya	2,889	50	52
Anloga/ Keta	5. Agorkedzi/Atiteti	2,499	53	53
	6. Agbledomi	4,966	51	55
	7. Dzita	3,011	53	51
	8. Tegbi	12,419	54	54
	9. Woe	10,862	51	49
	10. Anloga	23,199	53	58
	11. Whuti	2,365	53	46
	TOTAL		72,816	

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**Key issues to be addressed**

Similarly to what happens in Côte d'Ivoire, these communities in Ghana are highly vulnerable to recurrent floods. Exposure is increasing due to the degradation of natural mitigation systems (mangroves) and poor planning (which is needed to take into account flood prone areas). Vulnerability of communities is exacerbated by their economic dependence on agriculture (being harmed by increased climate change-induced salinization and altered rain patterns). Sea level rise and shoreline retreat is getting the sea line closer to the communities and fishing devices such as canoes and other related activities (trading, markets, and workshops) along these beaches are decreasing. This is due to the limited space and damaged infrastructure resulting from flooding events and storm surges. Though there is high willingness to protect the community, people's capacity to cope with these challenges is very limited. As of today, they are filling up the wetlands, lagoon areas with plastic rubbers aiming at preventing floods.

The communities have proposed several adaptation measures:

- Provision of alternative employment or livelihoods
- Provision of barriers for flooding
- Construction of drainage systems
- Increase lagoons' storage capacity and measures to mitigate erosion
- Obtaining an appropriate site for dumping refuse
- Provision of portable drinking water
- Awareness raising

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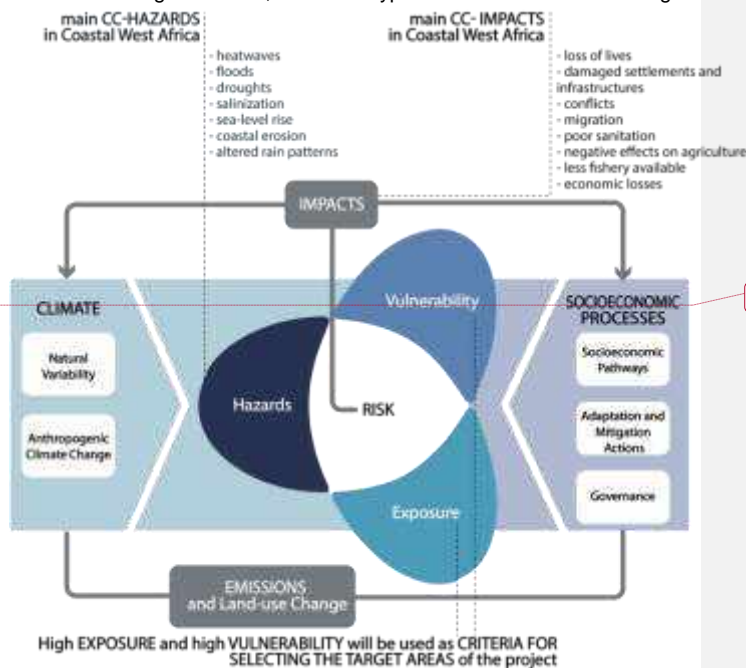
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### Project / Programme Objectives (approach, goal and objectives)

According to IPCC, climate change adaptation is about reducing exposure and vulnerability<sup>60</sup>. This definition was used to assess the current situation in the targeted areas, select the types of interventions and design the project itself (see Figure 11 (Figure 14)).

Figure 11: Climate change risks and impacts, adapted from Field et al. (2014).<sup>60</sup> Field, C.B. et al., 2014: Technical summary. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 35-94



The identification of climate hazards and the selection of target areas based on their vulnerability and exposure are presented above. The third piece of information to design the project is the identification of aspects of vulnerability and exposure to climate change, that were already summarised in the sections above titled: "key issues to be addressed".

To successfully support coastal settlements of Ghana and Côte d'Ivoire to adapt to the mentioned climate hazards, it is necessary to implement concrete interventions but also to act on issues related to governance, coordination and collaboration, as well as strategic planning and increased capacity.

All these measures are complementary and necessary, as "adaptation is place- and context-specific"<sup>61</sup> and no single action can effectively reduce climate risk across all its dimensions. In addition, adaptation planning deals not only with "natural assets", but societal values, objectives, and risk perceptions. For this reason, to be effectively enhanced, it needs to be addressed by parallel and complementary actions across institutional levels and scales, from communities to governments. Last but not least, climate hazards do not respect administrative boundaries, consequently adaptation responses may call for transboundary actions. To deal with such a level of complexity, an effective response strategy has to be more comprehensive by identifying the proper scale for action, the right stakeholders, the adequate measures, and to closely interlink its elements towards the pursue of one shared goal.

The ultimate goal of the project is to improve adaptation of small-to-medium coastal settlements in West Africa by reducing climate change impact and establishing resilient economies and communities. The goal is pursued through an adaptation pathway designed to increase resilience and decrease both exposure and vulnerability. Based on the hazards and impacts analysis presented in the previous sections, three different but complementary domains need to be tackled: i) spatial planning, ii) concrete interventions, and iii) coordination and governance. Within each domain, actions involve different geographical scales.

More specifically, in alignment with the Adaptation Fund results framework, in particular: **Outcome 1** (Reduced exposure to climate-related hazards and threats), **Outcome 2** (Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses), **Outcome 3** (Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level), **Outcome 4** (Increased adaptive capacity within relevant development sector services and infrastructure assets), **Outcome 5** (Increased ecosystem resilience in response to climate change and variability-induced stress), **Outcome 6** (Diversified and strengthened

<sup>60</sup> IPCC: IPCC (2014), Climate change 2014, Impacts, Adaptation and Vulnerability -Top findings from the working group II AR5 Summary for policy makers

<sup>61</sup> IPCC (2014), Climate change 2014, Impacts, Adaptation and Vulnerability - Top findings from the working group II AR5 Summary for policy makers

livelihoods and sources of income for vulnerable people in targeted areas), **Outcome 7** (Improved policies and regulations that promote and enforce resilience measures), and **Outcome 8** (Support the development and diffusion of innovative adaptation practices, tools and technologies), the project has two main objectives, namely:

*Objective 1: To promote regional coordination, strategic planning, inter-country experience sharing and cross-fertilisation regarding the adaptation to transboundary climate-related hazards and disseminate lessons learned to progressively build urban climate resilience in coastal West Africa.*

*Objective 2: To develop capacities and establish conditions to adapt to the adverse effects of climate change in vulnerable coastal settlements in Ghana and Côte d'Ivoire.*

Objective 1 mostly addresses the regional dimension of the project and will be pursued through the **promotion of coordination** (such as meetings, mutual learning activities, joint trainings involving both Ghana and Côte d'Ivoire) and implementation of coordinated action, such as a **Transboundary Coastal Development Strategy**. Regarding the strategic dimension of adaptation planning, national and local level climate risk assessments are well established practices, but there is one missing link: the regional scale, at which value-chains, inter-city and economic corridor function. A systemic approach to climate change requires the development of strategic assessments at the right scale. There is need to address trans-national climate assessment and plans, to effectively guide national plans, and coordinate local actions. Finally, without a shared strategy, **big-large targeted investments and funds communing-pooling** from other pathways, **will not find an upscale upscaling will not be possible**. It is within the mandate of the United Nations Human Settlements Programme (UN-Habitat) to support such an approach. UN-Habitat will **deploy-utilise** its planning expertise, capacity and tools **through executing entities** to move forward such innovation in transnational strategic planning for adaptation. In addition, as anticipated, the project will promote **inter-country experience sharing and cross-fertilisation**. The project will build common knowledge regarding concrete coastal adaptation measures that apply to both Ghana and Côte d'Ivoire. This knowledge will be disseminated in the whole coastal West Africa through the Abidjan Convention, which will work as a knowledge platform. The key "*raison d'être*" for establishing an agreement between UN-Habitat and the Abidjan Convention is the need for the countries belonging to the same geographical region to coordinate climate adaptation policies and initiatives and share best practices on how to address common transboundary climate-related natural hazards, despite differences in terms of language or governance structure. The Transboundary Coastal Development Strategy involving the whole coastal area of both Ghana and Côte d'Ivoire will represent a replicable pilot for transnational cooperation in the region, in the light of coastal climate adaptation. This certainly represents a strong added value of the project, whose impacts will also benefit other coastal countries in West Africa.

Objective 2 responds to the problem raised in the project background regarding both ongoing and expected hazards in coastal West Africa, and the exposure and vulnerability of coastal settlements. The latter are also related to low capacity of local governments in West Africa in identifying and planning actions for effectively adapting to the negative effects triggered by climate change. This is especially true in fast growing small and intermediate cities. In these contexts, vulnerable communities are the ones most severely affected by climate change. Underserved unplanned settlements are sprawling in an uncontrolled manner and municipal authorities are ill-prepared to face the unwanted consequences of this dynamic process. These consequences range from the increased risk to climate-related natural hazards such as floods, simply due to the vulnerable location of these settlements, to issues compounding the impact of climate change, such as the lack of proper drainage systems, or poor techniques applied in housing construction. Through Objective 2 sub-national authorities are also targeted. The idea is to take advantage of the improved regional coordination pursued through objective 1 to prepare coherent and effective spatial development frameworks at district level, integrate climate action in strategies and in local concrete interventions (both at community level). For this purpose, the project will also deliver training activities to sub-national and local authorities and communities through appropriate institutions and networks. It will build appropriate partnerships with on-going initiatives and start-up the design of aligned spatial development frameworks in the two targeted countries.

Therefore, there are three Project Components (which will be described in more detail in Part II), the first contributing to both Objective 1 and 2, the second mainly targeting Objective 2, and the third mainly contributing to Objective 1 but also capitalising on the results achieved while addressing Objective 2. Thus, it is key to highlight that **the three components are closely interlinked, capitalising from one another and providing mutual inputs**.

**Component 1** focuses on **strengthening spatial planning for coastal climate adaptation at different geographical scales**. The component comprises the development of: (i) a Transnational Coastal Development Strategy, bringing together climate-related hazards, territories, languages and governance structures of both Ghana and Côte d'Ivoire; (ii) at the sub-national level: district spatial development frameworks and community spatial plans; and (iii) at both national and sub-national levels: capacity building activities and on-the job trainings. The activities and the derived outputs and outcome are aligned with AF Outcome 2: "Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses", AF Outcome

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4: "Increased adaptive capacity within relevant development sector services and infrastructure assets", AF Outcome 7: "Improved policies and regulations that promote and enforce resilience measures", and AF Outcome 8: "Support the development and diffusion of innovative adaptation practices, tools and technologies". In particular, spatial planning (and the planning-related capacity building) can foster adaptation by systematising physical interventions (delivered by component 2) through the upscaling of good practices and the capitalisation of lessons learned, managing land-use to better adapt to climate hazards and impacts, prioritizing future adaptation interventions and promoting economic development through strategic investments. Component 1, which is the planning dimension of the project, can also support the upscaling of the project's results through other funds, while Component 3 will support coordination among the two countries, and within the region. Planning-related capacity building activities and trainings will enable local experts to adopt tools and datasets to boost climate adaptation in transnational, subnational and local strategies and plans.

**Component 2 focuses on sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change.**

Preparation, implementation and sustainable management of concrete interventions at the community level are designed to respond to extreme flood events through early warning systems, to cope with moderate floods due to altered rain patterns through Nature-Based Solutions (NBS), and to improve adaptive capacity of communities to climate change through alternative livelihoods. Activities under Component 2 and their outputs are aligned with AF Outcome 1: "Reduced exposure to climate-related hazards and threats", AF Outcome 3: "Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level", AF Outcome 4: "Increased adaptive capacity within relevant development and natural resource sectors", AF outcome 5: "Increased ecosystem resilience in response to climate change and variability-induced stress", AF Outcome 6: "Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas", and AF Outcome 7: "Improved policies and regulations that promote and enforce resilience measures". The concrete interventions include also awareness raising and on-the-job capacity building regarding climate adaptation concepts and practices. All activities will provide inputs to "community plans" and other plans within Component 1 to enable replication of good practices, and for integrating these interventions with other climate-adaptation experiences and, in general, in spatial local plans. Activities under Component 1 will also provide precious inputs to Component 3 in terms of experience-sharing and cross-fertilization. Thus, thanks to the support of the Abidjan Convention as knowledge platform, communities and governments not directly involved in these local interventions will have a chance to access to the experiences of the 21 targeted communities of Ghana and Côte d'Ivoire and replicate their successful stories.

**Component 3 focuses on enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities.**

More specifically, it will take care of the compilation and dissemination of good adaptation practices in coastal West Africa, of the exchange of experiences derived from Components 1 and 2, and of delivering joint bi-lingual trainings involving government officials and professionals from both Ghana and Côte d'Ivoire. These trainings will directly benefit from the implementation of Component 1, ensuring a long-lasting impact. In particular, through these joint inter-country trainings and workshops, the Trans-national Coastal Development Strategy will open the floor for strategic cooperation for climate change adaptation in coastal West Africa. In fact, the compilation of good practices on climate adaptation in the sub-region will involve neighbouring coastal countries in the project to capitalise on their experiences. Finally, the exchange of experiences under Component 3, which capitalises on the outputs of Component 2, will bring back to the whole coastal region precious knowledge products to mainstream adaptation actions at the different levels (from concrete interventions at community level to planning experiences at subnational and trans-national level). The involvement of the Abidjan Convention to bring stakeholders together and build ownership of processes and results will be key to ensure and ~~16~~ maximize the regional resonance of the project's impacts. Inter-country experience sharing, cross-fertilisation and dissemination of lessons learned at the regional level, as well as joint trainings are aligned with AF Outcome 2: "Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses", AF Outcome 3: "Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level", AF Outcome 4: "Increased adaptive capacity within relevant development sector services and infrastructure assets", AF Outcome 7: "Improved policies and regulations that promote and enforce resilience measures", and AF Outcome 8: "Support the development and diffusion of innovative adaptation practices, tools and technologies".

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## PART I. CONCEPTUAL FRAMEWORK (SYNTHETIC THEORY OF CHANGE)

Figure 12: Theory of change of the project

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**Long term goal**  
Improved adaptation (reduced climate change impacts of extremes and resilient economies and communities) of small-to-medium coastal settlements in West Africa

**Adaptation Fund Component**

**1. Strengthen spatial planning for coastal climate adaptation at different geographical scales**

**2. Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change**

**3. Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities**

**Outcomes**

**1 National governments, as well as local level staff, have created enabling conditions for enhancing coastal adaptation**

**2 Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realised projects**

**3 Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards**

**Outputs**

**O.1.1 One Transnational Coastal Development Strategy** for the joint planning and management of the coastal area of Ghana and Côte d'Ivoire.

**O.1.2. National and subnational level capacity building activities** for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience.

**O1.3 Two sub-national spatial development frameworks** are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire).

**O.1.4. Community level adaptation plans (11 in Ghana and 10 in Côte d'Ivoire)** are developed with the purpose of spatializing the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community.

**O.2.1. EWS for coping with coastal floods and extreme rain events** are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire.

**O.2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns** are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities.

**O.2.3. Adaptive capacity through alternative livelihoods is strengthened** in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions.

**O3.1 Compilation and dissemination of lessons learned and best practices** on climate change adaptation in coastal West Africa through the regional knowledge platform of the Abidjan Convention.

**O.3.2. Cross-fertilization activities** among Ghana and Côte d'Ivoire at different scales for sharing experiences on project's implementation, and fostering cooperation on coastal adaptation.

**O.3.3. Joint trainings** including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation.

## PART I. PROJECT COMPONENTS AND FINANCING

Table 3: Project component and financing

Project/ Programme Components (ToC Outcomes)	Expected Outcomes	Expected Outputs	Countries	Amount (US\$)
1. Strengthened spatial planning for coastal climate adaptation at different geographical scales	1. National governments, as well as local level staff, have created enabling conditions for enhancing coastal adaption	O.1.1 <b>One Transnational Coastal Development Strategy</b> for the joint planning and management of the of coastal area of Ghana and Côte d'Ivoire	Ghana and Cote d'Ivoire	532,800
		O.1.2. National and subnational level <b>capacity building activities</b> for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience	Ghana and Cote d'Ivoire	246,091
		O1.3 <b>Two sub-national spatial development frameworks</b> are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire)	Ghana and Cote d'Ivoire	922,600
		O.1.4. <b>Community level adaptation plans</b> (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community	Ghana and Cote d'Ivoire	345,840
<b>SUBTOTAL – Component 1</b>				<b>2,046,331</b>
2. Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change	2. Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realised pilots	O.2.1. <b>Early warning systems (EWS)</b> for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire	Ghana and Cote d'Ivoire	1,887,333
		O.2.2. <b>Integrated NBS for reducing run-off and adapting to floods</b> and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities	Ghana and Cote d'Ivoire	3,602,755
		O.2.3. <b>Adaptive capacity through alternative livelihoods</b> is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions	Ghana and Cote d'Ivoire	3,140,158
<b>SUBTOTAL – Component 2</b>				<b>8,630,246</b>
3. Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities	3. Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards	Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa through the regional knowledge platform of the Abidjan Convention	Ghana and Cote d'Ivoire, with the participation as guests from Togo, Benin, Nigeria, and Liberia through the Abidjan Convention	353,000
		O.3.2. Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for sharing experiences on project's implementation, and fostering cooperation on coastal adaptation	Ghana and Cote d'Ivoire	404,000
		O.3.3. Joint trainings including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation	Ghana and Cote d'Ivoire	240,500
<b>SUBTOTAL – Component 3</b>				<b>997,500</b>
<b>Total components</b>				<b>11,674,077</b>
<b>Sub-total Project Execution Costs (max 9.5%) – 9.47%</b>				<b>1,221,000</b>
<b>Sub-total Component + execution fee</b>				<b>12,895,077</b>
<b>Sub-total Project Cycle Management Fee (max 8.5 %) – 8.50%</b>				<b>1,096,082</b>
<b>Amount of Financing Requested</b>				<b>13,991,159</b>

Table 4: Project calendar

## PROJECT / PROJECT CALENDAR

Component description	Outcome	Output	Activity	1st	2nd	3rd	4th	5th	6th	7th	8th
				Semesters							
				semester							
1. Strengthen spatial planning for coastal	1. National governments, as well as local level staff have created enabling	O.1.1 One Transnational Spatial Development Framework for the joint planning and management of the of coastal area of Ghana and Cote d'Ivoire	Develop a spatial development framework for coordinated adpatation to common-transboundary climate-related hazard in the whole coastal area of Ghana and Cote d'Ivoire								
		O.1.2. <b>National level capacity building activities</b> for strengthening the capacity	Organize four national workshops: two in Ghana involving Land Use Spatial Planning Authority (LUSPA) and the Municipal								

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climate adaptation at different geographical scales	conditions for enhancing coastal adaption	<u>of the to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience</u>	<u>District Assemblies (MMDAs) and two in Cote d'Ivoire involving Ministry of the Environment and Sustainable Development</u> <u>Support the subnational staff through on the job trainings in the planning offices in charge of the spatial development plans</u>														
		O1.3 Two sub-national (at district/department level) spatial development framework are developed (one in Ghana and one in Cote d'Ivoire)	Develop two subnational spatial development frameworks: 1 targeting the district of Ada East in Ghana, and one targeting the department of Jaqueville in Cote d'Ivoire, with climate change-related coastal risks identified and measures to increase coastal resilience proposed														
		<u>O.1.4. Community level adaptation plans (11) in Ghana e (10) in Cdl are developed with the purpose of spatializing the pilots and ensuring an integrated climate-change adaptation strategy within the planning practice of the community</u>	<u>Develop 10-year- horizon adaptation plans (in collaboration with the local staff) of 11 communities in Ghana and 10 communities in Cote d'Ivoire</u>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change	2. Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realised pilots	O.2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Cote d'Ivoire	Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 communities in Cdl														
		<u>O.2.2. NBS for reducing run-off and adapt to increasing riverine floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Cote d'Ivoire, in collaboration with local staff and communities</u>	<u>Set up awareness raising activities to mainstream EWS plans and e-cape strategies in 11 communities in Ghana and 10 in Cote d'Ivoire</u> <u>Build drainage channels in 9 communities of Ghana and 6 Communities of Cote d'Ivoire</u> <u>Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana</u> <u>Reforest mangrove systems to minimize the impact of floods in 8 communities in Cote d'Ivoire and 11 communities in Ghana</u>														
		<u>O.2.3. Adaptive capacity through alternative livelihood is put in place in 21 coastal settlements of Ghana and Cote d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions</u>	<u>Set up resilient agriculture activities through dedicated plots and training centres in 6 communities in Ghana and 3 communities in Cote d'Ivoire</u> <u>Train local staff and communities regarding project management and maintenance, and climate adaptation activities</u>														
			<u>Train local staff and communities regarding project management and maintenance, and climate adaptation activities</u>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Organise one regional workshop for experience sharing of national coastal climate adaptation Set up of a knowledge platform to upload and exchange best practices at the local, subnational and national level, regarding coastal climate adaptation Prepare and disseminate publications on lessons learned and best practices implemented in the two countries and dissemination of guidelines													
3. Enhanced coordination and cooperation between Ghana and Cote d'Ivoire for more resilient coastal communities	2. Local staff, communities, and national governments of the two countries have build common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards	O3.1 Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa with Abidjan Convention as regional knowledge platform	Organise meetings (twice a year) involving national level staff from the two countries to address common challenges and exchange possible solutions (facilitated by the local universities) Prepare meetings (twice a year) involving community staff from the two countries to discuss common challenges and and possible solution in terms of project implementation, governance, and capacity building Facilitate government officials carry out exploratory missions the another country to learn through one-month on-the-job training														
		O.3.2. Cross-fertilization activities among Ghana and Cote d'Ivoire at different scales for exchanging experiences from project's implementation, and fostering cooperation on coastal adaptation	Organise one training per year for national level staff involving Ghana and Cote d'Ivoire about tools, monitoring systems and strategies for coastal climate adaptation														
		O.3.3. Joint trainings including both countries officials to improve															

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		transboundary governance systems and planning for coastal climate adaptation	Organise sub-national Coastal Development Strategy involving Ghana and Cote d'Ivoire	■		■		■			
			Organise one training per year involving staff from the sub-national level spatial frameworks	■		■		■			

## PART II: PROJECT / PROGRAMME JUSTIFICATION

### PART II. A. PROJECT COMPONENTS

The whole project builds on the adoption of a regional approach. Three main reasons justify the position taken:

**1. Common climate risk.** The two countries are exposed to the same set of climate hazards. They also present similar vulnerabilities in terms of lack of adaptive capacity of the national governments and of the local authorities, and in terms of a high level of sensitivity of the coastal population. The two countries also share common ecosystems and similar natural features, determining their exposure and vulnerability to climate change. However, such set of common aspects does not only present a similar risk profile, but the concrete opportunity to join forces for building a common strategy that can lead them enhanced cooperation to successfully adapt to climate change.

**Côte d'Ivoire and Ghana, respectively, suffer mainly from floods** (both urban floods and riverine/coastal floods), **heatwaves and droughts**. On top of **altered rain patterns (contributing to floods and drought)**, there is scientific evidence that **sea-level rise** (and consequent coastal erosion) and **salinization** also represent major problems. These phenomena have devastating effects in coastal settlements and livelihoods, including agriculture and the link with food security. It is crucial that the countries start learning from each other on how to adapt to these common climatic threats. Generally speaking, inter-country cooperation has been weak, especially regarding climate adaptation. In particular, as mentioned in the previous sections, the two countries present different climate priorities at national level, despite their common threats. **For example, coastal protection is present among Ghana's priorities but not for Côte d'Ivoire. Côte d'Ivoire could take advantage from the coastal strategies already developed by Ghana, while Ghana could take advantage from the health-related adaptation measures being undertaken in Côte d'Ivoire.** Some major projects (e.g. WACA project and Mami Wata project) represent a step towards promoting cooperation between the two countries. However, there has been no project on coastal adaptation that focused on Ghana and Côte d'Ivoire only. **Building on an existing dynamic of cooperation established** through previous projects, the project aims at promoting joint trainings, knowledge sharing sessions and the development of a *Transnational Coastal Development Strategy*, which will allow to foster real cooperation between the two countries on coastal adaptation issues.

**2. Transnational coastal spatial planning as an innovative lever for adaptation. Strategic spatial planning represents a tremendous opportunity to adapt to climate change.** Thus, through the spatial control of land use, urbanisation, resources and people, it can minimise the risk of climate change, promote the development of safe areas, and equip risk prone areas to face climate hazards. However, spatial planning in adaptation measures and strategies is often overlooked. When climate adaptation is embedded in spatial planning, plans are limited to existing administrative boundaries. At present, there is poor capacity or understanding of how services and functions will evolve due to climate change in coastal areas, which are the backbone of economies and development of Ghana and Côte d'Ivoire, and of coastal West Africa at large. In the field of adaptation, significant decisions and investments are taken without a proper understanding on how territorial realities will evolve because of climate change. Successful **climate adaptation requires a new scale of analysis** and methods to link national, local and sectoral climate assessments. UN-Habitat, with its experience in strategic spatial planning, is developing new tools and approaches to boost adaptation through transboundary strategic planning and is glad to bring its contribution to an innovative approach to adaptation on Ghana and Côte d'Ivoire.

**3. Adaptation needs to occur at multiple scales and dimensions.** According to IPCC, climate change adaptation is about reducing exposure and vulnerability<sup>62</sup>. "Adaptation is place- and context-specific<sup>62-69</sup>, and there is no one-size-fits-all strategy for reducing risks across all dimensions. In addition, adaptation planning deals not only with "natural assets", but societal values, objectives, and risk perceptions. For this reason, to be effectively enhanced, **it needs to be addressed by parallel and complementary actions across institutional levels and scales, from communities to national governments.** In addition, **climate hazards do not respect administrative boundaries, consequently adequate adaptation responses call for transboundary actions.**

<sup>62</sup> IPCC: IPCC (2014), Climate change 2014, Impacts, Adaptation and Vulnerability -Top findings from the working group II AR5 Summary for policy makers

<sup>63</sup> IPCC: IPCC (2014), Climate change 2014, Impacts, Adaptation and Vulnerability -Top findings from the working group II AR5 Summary for policy makers

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For dealing with such a level of complexity, an effective response strategy has to be comprehensive by identifying the proper scale for action, the right stakeholders and the adequate measures, and to closely interlink its elements towards the pursue of one shared goal. Emerging conceptual and empirical advances in the understanding of adaptation to climate change is very much related with understanding the implications of **spatial scales**<sup>64</sup>. To this regard, the sets of measures to put in place climate change adaptation tackle aspects of exposure and vulnerability that occurs or can be managed at different scales. For example, while institutional and governance issues can be better addressed at higher scales (regional level and national level)<sup>64,65</sup>, on site implementation of concrete interventions calls for a local scale<sup>66</sup>. Adaptation is not only based on geographical contexts, but also on social and political conditions and drivers. Scale affects the fundamental conceptualisation of equity and justice. Scale determines the construction and the implementation of adaptation policies, with actions and plans at the national level significantly affected by local institutional issues<sup>64,67</sup>. Moreover, **to ensure coordination, a common institution guiding and supporting the development of shared strategy can be the driver of success. This is the case of the Abidjan Convention**, which is among the executing entities of the project, and which is a common reference institution for climate adaptation for coastal West African countries. Indeed, the Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West and Central Africa Region (Abidjan Convention) came into force in 1984. Recognising the ecological uniqueness of the marine environment and coastal areas in the region, the threats to it and the need for action, the countries of the region met in 1981 and signed the Convention and its Protocol. They also adopted a plan of action for the protection and development of the marine environment and coastal zones of the region. As of today, the Convention has 19 Contracting Parties. Due to its background, the Convention will work both as a knowledge platform for sharing good practices, and an incubator of new collaborations, such as the joint trainings, sharing of best practices, etc. Strategic spatial planning represents an innovation to the Convention. It will contribute to strengthen and diversify the knowledge of the Convention as inter-country cooperation facilitator to include strategic spatial planning as an adaptation approach.

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In addition to scales, to pursue coordination, different domains need to be coordinated: planning and capacity building, concrete interventions, coordination and collaboration. For this reason, the outputs under the three components of the project, which will be further described below, are closely interlinked both in terms of scales and domains covered, to ensure vertical coordination and mutual pollination: transnational planning will support the upscaling of community level concrete interventions, best practices will be promoted through regional cross-fertilisation activities, but also community level plans will capitalise on general principles derived from the higher level plans and activities.

The specific needs of women, youths and ethnic and indigenous groups will be considered at all stages of the project. This will be achieved by engaging the representatives of vulnerable groups in community and stakeholders' consultations through a participatory approach following the UN-Habitat tool 'Planning for Climate Change' principles. To ensure strong community involvement during implementation, the project will build on existing community groups, like women unions, or form new committees where necessary, and sustain these throughout the project duration. This will include monitoring and evaluation to ensure that project outcomes equally benefit women and men, assess the effectiveness of gender sensitive trainings, and measure efficiency in addressing gender issues. As mentioned earlier, the objectives of the proposal are in line with national priorities (see section II.E) and the AF outcome areas, which resulted in the following three components:

### **Component 1: Strengthen spatial planning for coastal climate adaptation at different geographical scales**

**Why is it needed and what is its innovative contribution to adaptation:** climate adaptation in the coastal areas of Ghana and Côte d'Ivoire requires improved planning capacity, effective climate adaptation-oriented spatial planning, innovative tools and governance structures. This can be done by developing transnational long-

<sup>64</sup> Adger, W. N., Arnell, N. W., & Tompkins, E. L. (2005). Adapting to climate change: perspectives across scales. *Global Environmental Change*, 15(2), 75-76.

<sup>65</sup> Adger, W. N., Arnell, N. W., & Tompkins, E. L. (2005). Successful adaptation to climate change across scales. *Global environmental change*, 15(2), 77-86.

<sup>66</sup> IPCC: IPCC (2014). Climate change 2014. Impacts, Adaptation and Vulnerability -Top findings from the working group II AR5 Summary for policy makers

<sup>67</sup> Adger, W. N., Arnell, N. W., & Tompkins, E. L. (2005). Adapting to climate change: perspectives across scales. *Global Environmental Change*, 15(2), 75-76.

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term strategies which are then broken down into sub-national and community/local spatial plans, adaptation strategies, guidelines, and regulations, accompanied with educational and awareness raising activities. Capacity development of national and subnational/local officials in relation to adaptation to climate change is critical as they constitute the governance structures responsible for providing concrete guidance to address these issues. As mentioned, strategic spatial planning is key to address the transboundary nature of climate change. Therefore, this component covers activities from technical capacity building to real planning practices at different and complementary geographical scales, with a vision to ensure long-term climate adaptation and sustainable development of coastal areas. It also supports the upscaling of outputs under Component 2.

In line with AF Outcomes 2 and 7 and Côte d'Ivoire and Ghana National priorities (see section E and Annex 7), Component 1 aims at promoting climate change resilient coastal development through Outcome 1: "National governments, as well as local level staff, have created enabling conditions for enhancing coastal adaptation". It is structured into four outputs: O.1.1) One *Transnational Coastal Development Strategy* for the joint planning and management of the coastal areas of Ghana and Côte d'Ivoire; O.1.2.) National and subnational level capacity building activities for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience; O1.3) Two sub-national spatial development frameworks are developed at district level (1 in Ghana and 1 in Côte d'Ivoire); O.1.4.) Community level adaptation plans (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatialising the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community.

Figure 13 below shows the spatial distribution of spatial planning activities at different scales comprised by the component (namely, O.1.1, O.1.3 and O.1.4, as O.1.2 is about capacity building and will not need to be spatially determined).



Figure 13: Spatial distribution of outputs under component 1 (O.1.1. Transnational Strategic Spatial Plan; O.1.3. Two subnational Spatial Development Frameworks, one in Ghana and one in Cote d'Ivoire; O.1.4. The twenty-one community plans)

***O.1.1 One Transnational Coastal Development Strategy for the joint planning and management of the of coastal area of Ghana and Côte d'Ivoire.***

***Related activity: Develop a Transnational Coastal Development Strategy for coordinated adaptation to common-transboundary climate-related hazards in the whole coastal area of Ghana and Cote d'Ivoire.***

There is very limited capacity or understanding of how services and functions will evolve due to climate change in territories, regions, and water basins, which are the backbone of economies and development. Even though tools and guidelines exist, climate risk and vulnerability assessments often focus on sectors (e.g. infrastructure,



agriculture) or administrative boundaries (national, city and local level, assessments). Consequently, significant adaptation planning decisions (and investments) are taken without the understanding of how spatial frameworks will evolve because of climate change. **Climate-proofing planning and investments require a new scale**, and methods to link national, local and sectoral climate assessments. UN-Habitat and Arup, separately, have been working on this, with the purpose to connect practitioners in the climate and spatial planning practice, to networks, NGOs and financial organizations that are at the forefront of developing sustainable and resilient pipelines of investments opportunities.

There are practices and methods to close the critical gap between national and sectoral climate resilience plans, and local levels; and that these practices are instrumental to build the resilience of countries and economies to climate change. The Transnational Coastal Development Strategy works in this direction and will bring together governments, strategies, data and technical staff from both Ghana and Cote d'Ivoire to develop, through a Matrix of Function, an analysis of the territory beyond sectors or administrative boundaries, to trigger coordinated and collaborative adaptation actions at their right scale. The schemes below (Figure 14) present a Transnational Coastal Development Strategy already developed for another geographical area, and the identification of clusters for intervention emerging from the Matrix of Function. This output presents a two-fold innovative nature, both in the adoption of such a planning approach, which is new to the business-as-usual planning and climate adaptation practices, and in the involvement of two neighbouring countries, with different languages, institutional set-up, and adaptation vision, but same climate challenges and shared ecosystems. The development of the strategy will present a showcase for other countries (first within the coastal areas of the Abidjan Convention, and then beyond) to replicate the experience.

Linkages with other outputs: This output will capitalize results from O.2.1, O.2.2., O.2.3., O.3.1 and O.3.3. It will provide fundamental inputs to O.1.3., O.1.4., and O.3.1.

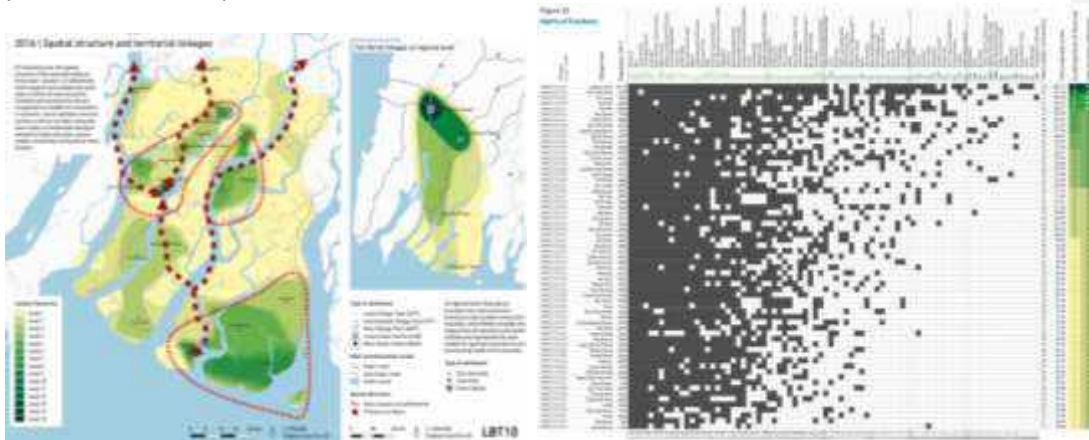


Figure 14: The Transnational Coastal Development Strategy developed for Myanmar, and the theory of function to build it. Adopted by: Fee, L.; Gibert, M.; Bartlett R.; Capizzi, P., Horton, R., Lesk, C. (2017) Climate Change Vulnerability Assessment of Labutta Township, Myanmar, 2016-2050: scenarios for building resilience. UN-Habitat - UN Environment

*O.1.2. National and subnational level capacity building activities for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience*

Activities under this output are two:

*Organize four national workshops: two in Ghana involving Land Use Spatial Planning Authority (LUSPA) and the Municipal District Assemblies (MMDAs) and two in Cote d'Ivoire involving Ministry of the Environment and Sustainable Development; Four workshops will be organized, two in Ghana and two in Cote d'Ivoire, to build capacity among national staff.*

Two workshops (one in Ghana, and one in Côte d'Ivoire) will focus on presenting the potential and main challenges of addressing climate change also through proper planning. A particular attention will be put in facilitating vertical coordination of principles and vision from regional level to local level. The other two workshops (one in Ghana and one in Côte d'Ivoire) will focus on –governance, policies, and finance of planning-related activities at the national level, to support climate adaptation.

*Support the subnational staff through on the job trainings in the planning offices in charge.* This activity aims specifically at providing the technical support needed to implement O.1.3. Thus, international and national experts will support the local subnational staff dealing with the subnational Spatial Development Frameworks. In particular, they will visit through frequent and missions (from one week-long missions to one month-long missions, depending on the needs) the technical offices in charge of the two plans, and work with them. Several tools from UN-Habitat will be guiding this process. For example: Local Leadership for Climate Change Action (2011), Developing Local Climate Change Plans (2012), Planning for Climate Change (2014), Integrating Climate Change into City Development Strategies (2015), Guiding Principles for City Climate Action Planning (2015) or International Guidelines on Urban and Territorial Planning (2015).

This output will capitalize results from O.3.1., O.3.2., and O.3.3. It will provide fundamental inputs to O.1.3., and O.3.2, and O.3.3.

#### *O1.3 Two sub-national spatial development frameworks are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire)*

*Related activity: Develop two subnational spatial development frameworks: 1 targeting the district of Ada East in Ghana, and one targeting the department of Jacqueville in Côte d'Ivoire, with climate change-related coastal risks identified and measures to increase coastal resilience proposed.*

Spatial development frameworks provide a multi-sectorial analysis and diagnosis that aim at identifying main challenges and opportunities through which to develop spatial strategies and action plans. Spatial development frameworks at the subnational level (district/departments) are key for adaptation and they can convert regional principles and national guidelines to the ground. They can provide a general asset to the local level in order to minimize climate risk by reducing the exposure, prevent the development of hazard-prone areas, design safe infrastructure to adapt to recurrent climate events, ... In this process, a comprehensive approach will be pursued in which all 3 dimensions of sustainability are integrated, social, economic, and environmental. This will also include legal and financial studies and recommendations to support the spatial planning output. Topics like land rights or financial opportunities will be crucial to identify feasible concrete interventions, such as the ones to be implemented through component 2. These plans will therefore become a tool through which to orient decision making in the short, medium, and long term. In addition, given the huge impact that climate change has in the countries, mainstreaming climate change and disaster risk will be paramount in the process. The spatial development frameworks will identify risk areas and its adaptation and mitigation capacities, which will help to define suitable areas for growth, environmental protection areas, and non-buildable areas. The objective is building resilience by avoiding risk prone development and leveraging upon identified opportunities and strengths.

Of course, both Ghana and Côte d'Ivoire have developed and approved national planning policies and frameworks that set the priorities of the countries in relation to urban development and climate change adaptation and mitigation. The project takes these documents and an evaluation on existing gaps, as a baseline to define and execute this component and designated outputs. Therefore, the spatial development frameworks at the sub-national (district / department) level respond to legislative needs and are aligned with national policies. In addition, local strategies and plans, following their development and implementation, will inform the subsequent drafts of the national policies, to ensure that local challenges and priorities are incorporated.

The coordination between the national strategies and the subnational spatial development frameworks will be ensured through a participatory process during the elaboration of the plans, and through the creation / strengthening of inter-ministerial and inter-district / department coordination mechanisms. Specific activities such as inter-ministerial meetings, working sessions, expert meetings, and workshops will be developed during the project to promote the plans endorsement and support by all stakeholders (government, communities, private sector, NGOs, etc.). In Côte d'Ivoire, the target area is the Jacqueville department for the local development

scale. In Ghana, the target area is Ada East. Finally, the last element for this component is the technical support to be provided by UN-Habitat as agreed with the relevant authorities. This includes support on stakeholders' engagement processes, on alignment with international standards and methodologies, technical assistance, and capacity building.

*O.1.4. Community level adaptation plans (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community*

*Related activity: develop 10-year-horizon adaptation plans (in collaboration with the local staff) of 11 communities in Ghana and 10 communities in Cote d'Ivoire.*

*The Community-level plans cover a ten-years time span and have the scope of building adaptation starting from the concrete interventions under component 2, to design a coherent and sound strategy for all the 21 communities involved. In the same way that national planning feeds into district/department level and vice versa, the district/department planning documents (O.1.3) will inform and support decision making at community level planning. This output is required to ensure that future interventions in the communities are fully in line with communities' adaptation needs and complementary to outputs delivered through component 2. The plans will also ensure the maintenance of outputs under component 2. This will be done by fully involving communities in the planning, including management and maintenance arrangements. Special attention will be given to gender and youth regarding challenges from climate change and opportunities for resilience.*

This output will capitalize results from O.1.1., O.1.2., O.2.1, O.2.2, O.2.3., O.3.1., O.3.2.and O.3.3. It will provide fundamental inputs to O.1.4., and O.3.1, and O.3.2.

**Component 2: Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change**

Why is it needed and what is its innovative contribution to adaptation: given the present and future climate risk in terms of floods (both urban floods and riverine/coastal floods), heatwaves and droughts, altered rain patterns, sea-level rise (and consequent costal erosion) and salinization, component two aims at developing and implementing concrete interventions to support 21 communities to urgently adapt to climate change. This implies the need to develop a community-informed learning-by-doing environment in which an integrated range of fit-for-purpose, sustainable, multi-benefit solutions can be developed, tested and monitored. The test and monitoring part of the concrete interventions will prepare the ground for the upscale of best practices and lessons learned through dissemination-related outputs (component 3) and to be integrated into plans (component 1). Working on different communities at the same time by implementing the sub-project activities, gathering new lessons learned and continuously adapting to improve the results, the solutions can be transferred across the region.

The concrete interventions under this component ~~present have~~ an area-based ~~nature~~ approach that relates to the community scale. Thus, ~~c~~concrete interventions address local needs and enable a tailored process considering the specific characteristics of each community ~~and~~ building on the local knowledge and traditions. ~~For this reason, all three outputs of component 2 (early warning systems, nature-based solutions and adaptative capacity interventions) are implemented~~ executed in each community, to achieve integrated climate adaptation, but for.

~~each community only a specific subset of activities (the ones fitting the needs and the opportunities of the community) per outputs has been defined and designed.~~ All the sub-projects and community interventions have concretely defined locations in each community map, as can be seen in the example on Figure 17 as well as in the subproject sheets located in Annex 2. Annex 2 contains a map per community, indicating all details of subproject location, activities and sub-activities, as well as project budget and ESMP defined in Part 3.G Detailed Budget and Annex 5 ESP respectively. Each community map includes the sub-project that take place in that community (EWS, NbS and adaptative capacity) with specific location of safe areas, evacuation routes, climate monitoring station, location and typologies of drainage channels, infiltration cells, bioretention and mangrove reforestation, location of agricultural plots, infiltration trenches, wells, pumps and irrigation equipment.

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Concrete interventions proposed also adopt an integrated [nature approach](#). This means that all together they contribute to adaptation, and none of them ~~is are~~ designed as a stand-alone pilot. Thus, component 2 entails transformative and catalytic subprojects as the basis for the implementation of coastal resilience responding to the combined actions of hazards at the community level by leveraging the existing natural environment and its ecosystems services as a tool to respond to main hazards. In addition, the effects derived from the outputs aim at reducing poverty and vulnerabilities, but also at safeguarding the natural environment and its provision and regulating services. Most vulnerable groups in the targeted areas (e.g. farmers) are particularly targeted. To ensure local ownership and capacity to 'manage' the concrete interventions for adaptation (subprojects) and to avoid social tension of proposed project benefits, measures to inclusively fine-tune the planning of the implementation phases, operate, maintain and replicate the actions are proposed, and trainings are delivered within the component itself. Of course, the community plans under component 1 will also contribute to increase the capacity of the local staff to ensure the best social, economic and environmental impact of the process. For more detailed info see Annex 2, where all subprojects are presented, and Annex 5 for the Environmental and Social Plan.

In line with AF outcome 1 and Côte d'Ivoire and Ghana National priorities (see section E), the outcome of the component aims at strengthening community awareness and capacities to anticipate, adapt and respond to climate-related coastal hazards and threats. It is structured into three outputs: O.2.1) EWS for coping with coastal floods and

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extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire; O.2.2) Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities; O.2.3) Adaptive capacity through alternative livelihoods is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions. As already highlighted in this section, all three outputs of component 2 will be implemented in each of the 21 targeted communities. However, each output comprises a set of activities, and only specific activities per each outputs are validated through community consultations and technical experts are being built in each community, designed and located, and will be implemented in each community (following the area-based approach to ensure effective adaptation). The specific subset of activities being implemented, executed, for each community, has been, was selected and designed through site visits, consultation with communities (please see annex 3 for consultation) and consultation with technical experts. All activities (for every single communities) have been defined, precisely localized and designed.

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Figure 15: Outputs and activities per community under component 2 in Ghana. O.2.1) EWS for coping with coastal floods and extreme rain events in orange; O.2.2) Integrated NBS for reducing run-off and adapting to floods and altered rain patterns in blue O.2.3) Adaptive capacity through alternative livelihoods is strengthened in green

Figure 16: Outputs and activities per community under component 2 in Cote d'Ivoire. O.2.1) EWS for coping with coastal floods and extreme rain events in orange; O.2.2) Integrated NBS for reducing run-off and adapting to floods and altered rain patterns in blue O.2.3) Adaptive capacity through alternative livelihoods is strengthened in green

Figure 17 shows the community of Agbledomi in Ghana, and is a representative example of the detailed location and the spatial distribution of the three outputs among communities in Ghana (Figure 15) and Cote d'Ivoire (Figure 16) respectively. Further details and maps regarding the three outputs (all subprojects and their activities) and their location are provided in annex 2 (subproject sheets). Further details and maps regarding the three outputs (all subprojects and their activities), the design and precise location of activities are provided in Annex 2 (subproject sheets). 21 Maps (one per each community) showing activities designed per each single community and localities of every single activity are presented in Annex 2 (from page 127 to page 137) Here, an example of such community maps (showing detailed activities under each of the three



outputs) designed and located for each community, is presented

Figure 17: Example of community map representing the 21 community maps contained in Annex 2. The map shows all the activities and their localities for one specific community, under component 2 in Ghana. O.2.1) EWS for coping with coastal floods and extreme rain events in orange; O.2.2) Integrated NBS for reducing run-off and adapting to floods and altered rain patterns in blue O.2.3) Adaptive capacity through alternative livelihoods is strengthened in green

Figure 16: Outputs under component 2 in Cote d'Ivoire. O.2.1) EWS for coping with coastal floods and extreme rain events in orange; O.2.2) Integrated NBS for reducing run-off and adapting to floods and altered rain patterns in blue O.2.3) Adaptive capacity through alternative livelihoods is strengthened in green

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*O.2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire.*

This output comprises two activities:

a) "Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire". The EWS will enable communities to adapt to major events (e.g. coastal floods) by reducing the exposure of people and livelihoods. Thus, by being alerted, communities will be able to leave the risky area and to bring with them most valuable goods. EWS in each of the communities will be implemented by installing monitoring stations, identifying evacuation routes and safe areas, and drafting an escape plan to be participatory developed. These activities will be implemented in all 21 target communities. Precise location of monitoring stations, evacuation routes, and safe areas are presented in Annex 2, from page 127 to 137. The tables below (tables 5 and 6) presents the overview of all in-a-snapshot designed activities under output 2.1 in the communities of Ghana and Cote d'Ivoire.

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b) "Set up awareness raising activities to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Cote d'Ivoire" will ensure that the installed EWS are understood by all components of the communities, and effectiveness is maximized. This activity ensures that all the measures taken are properly communicated, and that people in the communities are fully informed and trained about escape plan and routes, in order to maximize the effect of the activity above mentioned under this output. These activities will be implemented in all 21 target communities. The tables below (tables 5 and 6) presents in a snapshot designed the overview of all activities under output 2.1 in the communities of Ghana and Cote d'Ivoire.

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This output works in high synergy with output O.2.2. (as this output minimizes impacts of hazards that cannot be mitigated, and O.2.2. mitigates the effects of minor floods). In addition, it works in synergy with O.2.3. as if EWS can support livelihoods to limit damages due to floods, in the medium livelihoods need to adapt to climate change by investigating alternatives.

In addition, this output will capitalize results from O.1.4., O.3.1. and O.3.2. It will provide fundamental inputs to O.1.1, O.1.3, O.1.4, O.3.1. and O.3.2.

Table 5. EWS in Ghana

District	Community	a) "Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire"			b) "Set up awareness raising activities to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Cote d'Ivoire"
		Safe Areas	Evacuation routes	Climate monitoring	
Ada West	1 Wokumagbe	1	yes	1	yes
	2 Akplabanya	4	yes	1	yes
	3 Goi	3	yes	1	yes
Ada East	4 Kewunor/Azizanya	2	yes	1	yes
	5 Agorkedzi/Aitieti	1	yes	1	yes
Anloga-Keta	6 Agbledomi	6	yes	1	yes
	7 Dzita	3	yes	1	yes
	8 Whuti	4	yes	1	yes
	9 Lagbati/Kashibi (Anloga)	3	yes	1	yes
	10 Woe	3	yes	1	yes
	11 Tegbi	3	yes	1	yes
	<b>Total Ghana</b>	<b>33</b>		<b>11</b>	

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Table 6. EWS in Cote d'Ivoire

District	Community	Safe Areas	Evacuation routes	Climate monitoring	Awareness raising activities
Jacqueville	1 Tefredji	2	yes	1	yes
	2 Tiémien	2	yes	1	yes
	3 Attoutou B	1	yes	1	yes
	4 Grand-Jacques	2	yes	1	yes
	5 Koko	1	yes	1	yes
	6 Taboth (Ahizi)	1	yes	1	yes
Grand-Bassam	7 Vitre 2 (Eholié)	2	yes	1	yes
	8 Azuretti (n'zima)	1	yes	1	yes
	9 Quartier France	3	yes	1	yes
	10 Mondoukou	2	yes	1	yes
	<b>Total CDI</b>	<b>17</b>		<b>10</b>	<b>yes</b>

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*O.2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities*

For this output, activities are three:

a) "Build drainage channels in 9 communities of Ghana and 6 Communities of Cote d'Ivoire". This activity is about building drainage channels to get rid of the run-off to adapt to the altered rain patterns causing minor

recurrent floods in the settlements. The locations for the interventions were chose during field missions, together with the communities and local experts, in order to maximize the positive impact and avoid negative externalities. The choice of community is based on community needs according to experts and consultation with the communities. These activities will be implemented in 9 communities in Ghana (Wokumagbe, Akplabanya, Goi, Kewunor/Azizanya, Agorkedzi/Atiteti, Agbledomi, Dzita, Whuti and Tegbi) and 6 communities in Cote d'Ivoire (Tefredji, Grand-Jacques, Vitré 2 (Ehotilé), Azuretti (n'zima), Quartier France and Mondoukou). Precise location of the channels and their type and width are presented in the table 7 and mapped in Annex 2.

b) "Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana". This activity works in synergy with the activity described above under this output, as infiltration cells and bioretention basins absorb the water from drainage channels during recurrent floods, and enable it to percolate in the ground. While this help to adapt to altered rain patterns and to mitigate the run-off in the settlements, it indirectly contributes to store underground water to respond to droughts. The choice of community is based on community needs according to experts and consultation with the communities. These activities will be implemented in 9 communities in Ghana (Wokumagbe, Akplabanya, Goi, Kewunor/Azizanya, Agorkedzi/Atiteti, Agbledomi, Dzita, Whuti and Tegbi) and 6 communities in Cote d'Ivoire (Tefredji, Grand-Jacques, Vitré 2 (Ehotilé), Azuretti (n'zima), Quartier France and Mondoukou). Precise location of the micro infiltration cells and bioretention basins are presented in the table 7 and mapped in Annex 2.

c) "Reforest mangrove systems to minimize the impact of floods in 8 communities in Cote d'Ivoire and 11 communities in Ghana". Reforest mangrove systems to minimize the impact of floods in 10 communities in Cote d'Ivoire". This activity contributes to minimize the impact of floods by protecting the settlements from floods coming from surface-water. Even though major floods cannot be stopped by mangroves, mangroves reduce the impacts of waves during storm and mitigate the impact of minor coastal floods. The activity comprises the reforestation of 10 plots of mangroves where it can be more strategic for protecting the settlements from water. This activity is implemented only in communities already presenting mangroves, in order to avoid the introduction of invasive species through the project. Sustainability and maintenance of reforestation of mangroves are ensured under output O.2.3. These activities will be implemented in all the communities in Ghana and 8 communities in Cote d'Ivoire (Tefredji, Tiémien, Attoutou B, Koko, Taboth (Ahizi) , Vitré 2 (Ehotilé), Azuretti (n'zima) and Quartier France). Precise location of the mangrove reforestations areis presented in the table 7 and mapped in Annex 2.

This output works in high synergy with output O.2.1. (as output O.2.1. minimizes impacts of hazards that cannot be mitigated, and this output mitigates the effects of minor floods). In addition, it works in synergy with O.2.3. to adapt to droughts, floods, and altered rain patterns.

In addition, this output will capitalize results from O.1.4., O.3.1. and O.3.2. It will provide fundamental inputs to O.1.1, O.1.3, O.1.4, O.3.1. and O.3.2.

Table 7. NBS Interventions overview

		NBS for Reducing Run-off and Adapt to Floods											
District	Community	a)"Build drainage channels in 9 communities of Ghana and 6 Communities of Cote d'Ivoire"					b)"Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana".					Bioretenti on Basin (total #)	c)"Reforest mangrove systems to minimize the impact of floods in 8 communities in Cote d'Ivoire and 11 communities in Ghana".
		D1 (10m) = 10.00 x 2.10	D2 (25m) = 25.00 x 2.10	D3 (50m) = 50.00 x 2.10	D4 (60m) = 60.00 x 2.10	TOTAL	IC1 (small) = 2.25 x 2.25	IC2 (medium) = 2.25 x 4.00	IC3 (large) = 3.00 x 5.00	TOTAL			
Ada West	1 Wokumagbe	2	3			5	10	2	0	12		42	
	2 Akplabanya	7	1			8	6	2	6	14		21.5	
	3 Goi		3		1	4	6	4	4	14		49	
Ada East	4 Kewunor/Azizanya	2	2			4	8	0	2	10	1	28	
	5 Agorkedzi/Atiteti		2	3	1	6	8	0	2	10	1	38	
Anloga-Keta	6 Agbledomi		1	5	2	8	15	2	2	19	1	32	
	7 Dzita		4	2		6	8	4	2	14	1	22	
	8 Whuti				5	5	8	4	1	13		40	
	9 Lagbati/Kashibi (Anloga)										1	40	
	10 Woe											48	
	11 Tegbi		6		2	8	15	3	2	20		50	
	<b>Total Ghana</b>	<b>11</b>	<b>22</b>	<b>10</b>	<b>11</b>	<b>54</b>	<b>84</b>	<b>21</b>	<b>21</b>	<b>126</b>	<b>5</b>	<b>411</b>	
Jacqueville	1 Tefredji	2	2	3		7	12		4	16		6	
	2 Tiémien											15	

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	9	Lagbati/Kashibi (Anloga)	778	1	2	2	24	yes	yes	yes
	10	Woe	778	1	2	2	24	yes	yes	yes
	11	Tegbi	778	1	2	2	24	yes	yes	yes
		Total Ghana	4,668	6	12	11	144	-	-	-
CDI										
Jacqueville	1	Tefredji	-	-	-	-	-	yes	yes	yes
	2	Tiémien	778	1	2	1	24	yes	yes	yes
	3	Attoutou B	778	1	2	1	24	yes	yes	yes
	4	Grand-Jacques	-	-	-	-	-	yes	-	yes
	5	Koko	-	-	-	-	-	yes	yes	yes
	6	Taboth (Ahizi)	778	1	2	1	24	yes	yes	yes
Grand-Bassam	7	Vitré 2 (Ehotilé)	-	-	-	-	-	yes	yes	yes
	8	Azuretti (n'zima)	-	-	-	-	-	yes	yes	yes
	9	Quartier France	-	-	-	-	-	yes	yes	yes
	10	Mondoukou	-	-	-	-	-	yes	-	yes
		Total CDI	2,334	3	6	3	72	-	-	-

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### Component 3: Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities

**Why is it needed and what is its innovative contribution to adaptation:** in the region, there is a lack of vertical coordination in terms of climate change priorities, as well as in terms of spatial strategies to adapt to climate change. In addition, there is lack of horizontal cooperation between neighboring countries. There is poor understanding on how coastal dynamics, and natural and socio-economic systems interact, and how these interdependencies lead to increased vulnerability to climate change. Scientific data and knowledge are fragmented or not integrated in a systemic way. Capacity also needs to be enhanced among governments to build, mainstream and manage such knowledge. However, the present climate knowledge (from community level to transnational level), even when limited, represents a tremendous opportunity for mutual learning and experience sharing. The need to exchange knowledge, together with the need to build common knowledge and action, calls for an improved coordination of the two Countries on climate adaptation. Thus, even though there are already environmental projects and climate institution (such as the Abidjan Convention) involving both Ghana and Cote d'Ivoire, real climate cooperation is still in its early stages and needs to be fostered. In addition, in transnational climate adaptation, planning is still overlooked. Given the potential of planning to support climate adaptation at different scale, component 3 focuses on setting the floor for such dissemination, cross-fertilization, and joint trainings (involving representatives from the two countries together) at different level, focusing on climate, with an additional attention to what can planning do to adapt to climate change. There is thus need to invest in a better understanding of the regional, national, and local interdependencies between climate change, and ecosystems and socio-economic dynamics. Linking these with communities' resilience will be paramount. On the other hand, a regional institution that can be the engine of such capacity building, coordination building and experience sharing exists: the Abidjan Convention.

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The Abidjan Convention will provide active contribution, together with UN-Habitat, to the implementation of Component 3. These two institutions will play a strong role at the regional level as they embody credible institutions with complementary roles of sharing experiences, promoting knowledge and delivering trainings. The formalisation of the relation between these two institutions will facilitate this process. The Abidjan Convention is interested in using the expected results of this project to influence regional policies and strategies. This component highlights the added value of adopting a regional approach compared to implementing projects in individual countries separately. Thus, while the Abidjan convention exists and represent a tremendous opportunity for coordinated and sound climate change adaptation, many countries involved apply non-aligned climate change adaptation priorities at national and sub-national level. At the same time, another promising opportunity is represented by internationally funded infrastructures and projects (e.g. the WB WACA project) that can really bring solutions to the ground, but if not effectively understood at national level and integrated into lower level planning, the risk of non-integration and loss of potential of the project is high. As well as local experiences. Other expected positive effect of component 3, focus on:

- Promoting and facilitating the coordination, exchange, learning, and south-to-south technical assistance between Ministries, local governments and additional stakeholders with the mandate of addressing climate change through project implementation mechanisms such as the Regional Project Implementation Unit (RPIU) and Regional Steering Committee (RSC) and the regional convening power of the Abidjan Convention.

- Promoting the development of knowledge and technical materials both in English and French, having both Ghana and Cote d' Ivoire as early adopters and champions of climate change adaptation policies, plans and interventions to be shared and replicated in the other ten West African countries.

-Benefitting from the competitive advantages and knowledge complementarities of both Ghana (e.g. spatial planning and environmental planning) and Cote d' Ivoire (e.g. institutional integration and primary sector production) to promote south-to-south learning, collaboration and technical assistance.

Component 3 will focus on the outcome "Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards". Component 3 is structured into 3 outputs: O.3.1) Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa through the regional knowledge platform of the Abidjan Convention; O.3.2) Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for sharing experiences on project's implementation, and fostering cooperation on coastal adaptation; O.3.3) Joint trainings including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation. For this component, no map indicating the location of outputs is provided, as it focuses on non-physical interventions nor plans.

O.3.1. Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa through the regional knowledge platform of the Abidjan Convention;

The output comprises three activities:

a)"Organise one regional workshop for experience sharing of national coastal climate adaptation" One Regional Workshop will be organized, involving representatives from all Coastal Countries of the Abidjan Convention. The workshop, organized in the first semester of the project, will be important to present and share all ongoing adaptation projects and strategies in the area. In particular, it will be asked to provide insights in terms of implementation and project management, in order to capitalize on other projects' experience. Funds mobilization, scaling up, and issues related to gender and to vulnerable groups will be deeply considered.

b)"Set up of a knowledge platform to upload and exchange best practices at the community, subnational, national and transnational level, regarding coastal climate adaptation". The set up a knowledge sharing platform led and managed by the Abidjan Convention. The platform will host the online events of the projects, as well as online trainings. The platform will also host online versions of all reports and materials produced during the project (e.g. activities below under this output). A "discussion channel" will also be set-up to put in contact people involved in the project and knowledgeable of best practices with people from other areas in region, in order to reply to their questions.

c)"Prepare and disseminate publications on lessons learned and best practices implemented in the two countries (one at the beginning of the project, and one at the end of the project, to disseminate project's best practices". The region presents common threats and common opportunities: a report on lessons learned derived from the activity "a" of this output will be drafted, in order to mainstream possible adaptation measures to respond to the common challenges of the area. In addition, during the last semester of the project, another publication will be drafted, compiling best practices from the project's implementation, together with basic guidance for replication of pilots. In this way, it will be possible to maximize the effect and effectiveness of locally developed solutions through replication.

This output will capitalize results from O.1.1, O.1.3, O.1.4, O.2.1, O.2.2, O.2.3, and O.3.2. It will provide fundamental inputs to O.1.1, O.1.2, O.1.3, O.1.4, O.2.1, O.2.2, O.2.3, and O.3.2.

O.3.2. Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for sharing experiences on project's implementation, and fostering cooperation on coastal adaptation;

This output comprises three activities:

a) "Facilitate national level staff carrying out exploratory missions to the other country to learn through one-month on-the-job training". The mobility of national level staff involved in climate strategies (Spatial Planning Authority (LUSPA), Ministry of the Environment and Sustainable Development) will be promoted and supported. More specifically, two national level experts one for Ghana and one for Cote d'Ivoire) from the mentioned institutions will visit the other country and stay one month to learn from real practices in the national technical office of the neighbouring country, and from peers. This will be organized once a year through-out the project. This activity will contribute to the cross-fertilization and mutual learning of good practices at the national level.

b) "Organise meetings (twice a year) involving subnational level staff from the two countries to address common challenges and exchange possible solutions (facilitated by the local universities)". Meetings (50% in person and 50% online through the digital platform developed under component 1) will enable sub-national staff involved in the district/department level spatial development framework to meet with their peers from the other country, to exchange progress, experiences, lessons learned, challenges and possible solutions.

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c) "Organise meetings (twice a year) involving community level staff from the two countries to discuss common challenges and possible solution in terms of project implementation, governance, and capacity building". Meetings (through the digital platform developed under component 1) will enable community representatives involved in the community level concrete interventions (component 2) to meet with their peers from the other country, to exchange progress, experiences, lessons learned, challenges and possible solutions regarding the implementation and maintenance of the climate adaptation concrete interventions.

This output will capitalize results from O.1.2, O.1.3, O.1.4, O.2.1, O.2.2, O.2.3, O.3.1 and O.3.3. It will provide fundamental inputs to O.1.2, O.1.3, O.1.4, O.2.1, O.2.2, O.2.3, O.3.1 and O.3.3

#### O.3.3. Joint trainings including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation.

Activities are three:

a) Organise one training per year for national level staff (from Ghana and Cote d'Ivoire) about tools, monitoring systems and strategies for coastal climate adaptation. One training (in person) per year will be organized for national governments for increasing the capacity of the use of data and tools to foresee and manage climate change-related risks and impacts. The selection of tools will be based on the capacity and data availability of the two Countries. As an indirect result, this activity will highlight to the national governments, and to the Abidjan Convention, important data gaps to be addressed, to effectively plan climate adaptation in the coastal areas.

b) Organise trainings for national and subnational staff (from Ghana and Cote d'Ivoire) participating to the Transnational Coastal Development Strategy. A package of four trainings (50% in person, and 50% online, through the platform developed under component 1) will be organized for sub-national staff involved in the Strategy for increasing the capacity of the use of data and tools to plan to adapt to climate change in the coastal areas. The four trainings, organized by the Abidjan Convention, in collaboration with UN-Habitat and the local universities, will focus on GIS tools, environmental aspects, social analysis, risk mapping, and spatial planning for climate change.

c) Organise one joint training per year involving staff (from Ghana and Cote d'Ivoire) engaged with the sub-national level spatial frameworks. A package of four trainings (50% in person, and 50% online, through the platform developed under component 1) will be organized for sub-national staff involved in the Spatial Development Frameworks for increasing the capacity of the use of data and tools to plan to adapt to climate change in the coastal areas. The four trainings, organized by the Abidjan Convention, in collaboration with UN-Habitat and the local universities, will focus GIS tools, environmental aspects, social aspects, equity and sustainability, and spatial planning for climate change. In addition, the trainings will support subnational staff in including, at the department/district scale, regional and national climate priorities and strategies in their planning practice.

This output will capitalize results from O.1.2, and O.3.2. It will provide fundamental inputs to O.1.1, O.1.2, O.1.3, O.1.3, and O.3.2.

Table 95. Project Component

Outcomes	Outputs	Activities	Suitability	Beneficiaries Target areas		Target areas/Total project cost	Total project cost Executing entities	Executing entities
				Direct	Indirect			
<b>COMPONENT 1. Strengthened spatial planning for coastal climate adaptation at different geographical scales.</b>								
1. National governments, as well as local level staff, have created <b>enabling conditions</b> for enhancing coastal adaption.	1.1 <b>One Transnational Strategic Spatial Development Plan</b> for the joint planning and management of the of coastal area of Ghana and Côte d'Ivoire.	Develop a <b>Transnational Strategic Spatial Development Plan</b> for coordinated adaptation to common-transboundary climate-related hazard in the <b>whole coastal area of Ghana and Côte d'Ivoire.</b>	Spatial planning is an effective decision-making tool to manage development along the coast, including (spatially) identifying climate change-related risks / impacts and vulnerabilities with the purpose to avoiding future development in risk areas and identifying sustainable development options.	144	13,000,000	Côte d'Ivoire Districts: Bas-Sassandra, Gôh-Djiboua, Lagunes, Cote d'Ivoire Departments: Western North, Western, Central, Eastern, Greater Accra and Volta.	531,800	ITC
	1.2. National and subnational level <b>capacity building activities</b> for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience.	Organize <b>four national workshops: two in Ghana</b> involving Land Use Spatial Planning Authority (LUSPA) and the Municipal District Assemblies (MMDAs) and <b>two in Côte d'Ivoire</b> involving Ministry of the Environment and Sustainable Development.  Support the <b>subnational staff</b> through <b>on the job trainings</b> in the planning offices in charge.	Governments recognize lack of regional and district development frameworks with climate change mainstreamed in it, as well as insufficient capacity for spatial plan preparation and implementation.	480	Targeted districts	Côte d'Ivoire: Ministry of the Environment and Sustainable Development (MdP). Ghana: Land Use Spatial Planning Authority (LUSPA) and the Municipal District Assemblies (MMDAs)	246,091	ITC  ITC
	1.3 <b>Two sub-national spatial development frameworks</b> are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire).	Develop two subnational spatial development frameworks: 1 targeting the <b>District of Ada East in Ghana</b> , and one targeting the <b>Department of Jacqueville in Côte d'Ivoire</b> , with climate change-related coastal risks identified and measures to increase coastal resilience proposed.	It will be ensured plans will be aligned with National and Regional coastal management and sectoral development strategies.	400	634,458	Côte d'Ivoire: Department of Jacqueville. Ghana: District of Ada East.	922,600	ITC
	1.4 <b>Community level adaptation plans</b> (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community.	Develop <b>10-year horizon adaptation plans</b> (in collaboration with the local staff) of 11 communities in Ghana and 10 communities in Cote d'Ivoire.		630	154,764	21 Communities in Ghana and Côte d'Ivoire	345,840	ITC
<b>COMPONENT 2. Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change.</b>								
2. Municipal staff, communities and local stakeholders have successfully planned and <b>implemented integrated concrete interventions</b> for increasing the climate resilience of their settlements and have acquired the capacity to manage and ensure durability of the realised pilots.	2.1 <b>Early warning systems (EWS)</b> for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire.	i) Develop and establish, in collaboration with communities, <b>Early warning systems</b> , and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire.  ii) Set up <b>awareness raising activities</b> to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Côte d'Ivoire.	These interventions are suitable for the local context because they build on the existing ecosystems, and environmental and socio-economic dynamics.	18,482	138,818	21 Communities in Ghana and Côte d'Ivoire.	1,887,333	Habitat for Humanity Habitat for Humanity
	2.2 <b>Integrated NBS for reducing run-off and adapting to floods</b> and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities.	i) Build <b>drainage channels</b> in 9 communities of Ghana and 6 Communities of Cote d'Ivoire.  ii) Build <b>micro infiltration cells</b> in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 <b>seasonal bioretention basins</b> in Ghana.  iii) Reforest <b>mangrove systems</b> to minimize the impact of floods 8 communities in Cote d'Ivoire and 11 communities in Ghana	They aim at creating and restoring systems that together contribute to climate change adaptation, by minimizing risk, minimizing the impact of risk and ensuring livelihoods despite climate change.  All outputs represent cost-effective solutions and allows continuous healthy interaction between the ecosystems and local communities.	88,643	56,002	21 Communities in Ghana and Côte d'Ivoire.	3,602,755	
	2.3. <b>Adaptive capacity through alternative livelihoods</b> is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions	i) Set up <b>resilient agriculture activities</b> through dedicated plots and training centres in 3 communities in Côte d'Ivoire and 6 communities in Ghana.  ii) <b>Train</b> local staff and communities regarding project management, maintenance, and climate adaptation activities.		16,800	258,709	21 Communities in Ghana and Côte d'Ivoire.	3,140,158	
<b>COMPONENT 3. Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities.</b>								
3. Enhanced <b>coordination and cooperation</b> between Ghana	3.1 <b>Compilation and dissemination of lessons learned and best practices</b> on climate change adaptation in coastal West Africa	i) Organise <b>one regional workshop</b> for experience sharing of national coastal climate adaptation.  ii) Set up of a <b>knowledge platform</b> to upload and exchange best practices at the community, subnational, national and transnational level, regarding coastal climate adaptation.	Knowledge exchange across the two countries that share the same type of coastal dynamics and	100	Everyone with internet access, especially planners and	Ghana, Côte d'Ivoire and other coastal countries withing the Abidjan	353,000	Abidjan Convention

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and Côte d'Ivoire for more resilient coastal communities.	through the regional knowledge platform of the Abidjan Convention.	iii) <b>Prepare and disseminate publications</b> on lessons learned and best practices implemented in the two countries (one at the beginning of the project, and one at the end of the project, to disseminate project's best practices).	geomorphology but have different systems (language, culture, governance structure)		development professionals.	Convention.(Togo, Benin, Nigeria, and Liberia)		
	3.2. Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for <b>sharing experiences</b> on project's implementation and fostering cooperation on coastal adaptation.	i) Facilitate national level staff carrying out exploratory missions to the other country to learn through <b>one-month on-the-job training</b> . ii) Organise <b>two meetings per year</b> facilitated by the local universities, involving subnational level staff from the two countries to address common <b>challenges and exchange possible solutions</b> . iii) <b>Prepare and disseminate publications</b> on lessons learned and best practices implemented in the two countries (one at the beginning of the project, and one at the end of the project, to disseminate project's best practices).	represents an opportunity to strengthen the coordination, collaboration, and continuity of efforts. UN-Habitat and the Abidjan Convention as international bodies can support these neighbouring countries overcome the challenges and benefit from the opportunities of working together.	260	Governments in Ghana and Côte d'Ivoire.	Ghana and Côte d'Ivoire	404,000	ITC
	3.3. <b>Joint trainings</b> including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation.	i) Organise one training per year for national level staff (from Ghana and Côte d'Ivoire) about tools, <b>monitoring systems</b> and strategies for coastal climate adaptation. ii) Organise <b>trainings for national and subnational staff</b> (from Ghana and Cote d'Ivoire) participating to the <b>Transnational Coastal Development Strategy</b> . iii) Organise one <b>joint training</b> per year involving staff (from Ghana and Côte d'Ivoire) engaged with the <b>sub-national level Spatial Development Frameworks</b> .		80	200	Ghana and Côte d'Ivoire	240,500	ITC

## PART II. B. PROMOTION OF INNOVATIVE SOLUTIONS

Overall, the project encourages and accelerates the development of innovative adaptation practices and tools. Innovation in this project is meant as both the creation of something new, but also the mainstreaming initiatives, approaches, processes, techniques and concepts which are new vis-à-vis the local context they are applied in. Thus, even though some specific activities of the project do not literally represent approaches that are globally innovative, in the countries involved in this project they certainly have a strong innovation component as they are not yet sufficiently diffused and applied. This section describes general elements of innovation of the projects and innovative solutions promoted by the subprojects (component 2).

### General elements of innovation of the projects:

**Strategic planning as an adaptation tool.** The project promotes innovative measures and tools through its strategic planning dimension (covered by component 1). As mentioned in section 1 and 2a of this document, the potential of spatial planning to adapt to climate is still overlooked in the region. UN-Habitat, in collaboration with ITC, will put its experience in the field at the service of Ghana and Cote d'Ivoire. In particular, the Transnational Strategic Development Strategy (output 1.1.) will bring a brand-new approach in the region. Its innovation is represented by: i) the design of a transnational plan, ii) the use of spatial planning for medium-long term adaptation, iii) the level of innovation of its methodology. Thus, it implements an approach developed by UN-Habitat and ARUP, which was tested in the southern pacific and in the Sahel, which is still pioneering (despite already proved success in its pilots) and is completely new in West Africa (the methodology was also peer reviewed by scientists and published in the scientific literature<sup>68</sup>). **Process:** Innovation in adaptation using spatial planning at different scales to specifically target climate change will be promoted first through the design of plans and strategies (component 1). Then, the project will ensure that this element of innovation is fully capitalized, through joint trainings (output 3.3) that will ensure that national staff is trained to the use of the Transnational Coastal Development Strategy and, more in general, to the use of planning to adapt to climate change. In addition, best practices and lessons learned will support the mainstream of awareness and evidence even outside the two countries, thanks to the knowledge platform managed by the Abidjan Convention all trickling down effects of the project in the coastal areas of West Africa for a potential scaling up of the approach to other countries in the region. **Desired result:** National governments, as well as local level staff have created enabling conditions for enhancing coastal adaptation. In addition, the Transnational Coastal Development Strategy may be replicated in other countries of coastal West Africa.

<sup>68</sup> Spaliviero, M., Boerboom, L., Gibert, M., Spaliviero, G., & Bajaj, M. (2019). The Spatial Development Framework to facilitate urban management in countries with weak planning systems. International planning studies, 24(3-4), 235-254

**Transnational approach to adaptation.** While projects adopting a transnational approach exist in Coastal West Africa, transnational cooperation in adaptation is still pioneering (as described in section 1 and 2a of this document). In addition, when it occurs, it usually overlooks spatial planning as a promising tool to trigger adaptation. On the other side, a trans-national approach is particularly needed to ensure effective adaptation, as hazards and ecosystems do not recognize administrative boundaries. At present, the Abidjan Convention addresses transnational projects that relate to environmental protection. The project will support the Convention in focusing on adaptation themes which still need much development in coastal West Africa and are not yet institutionalized, such as urban risk reduction, urban climate adaptation, strategic planning and resilience. The involvement of the Abidjan Convention and the creation of a knowledge platform (output 3.1) represent a powerful means for the project to mainstream innovative solutions. The Abidjan Convention will represent a vector for mainstreaming innovation focusing on the implementation of innovative solutions for climate change adaptation. Through a “learning by doing” approach, it will help officials to take a distance from highly theoretical approaches and promote a new paradigm: inform policy formulation from lessons learned from practical implementation and experience. Lastly, the Convention will be supported by UN-Habitat and ITC to fill the gaps of national programmes related to urban adaptation and disaster risk reduction. The need for increased coordination and collaboration between neighbouring countries threatened by similar climatic hazards to exchange information, knowledge and mutual capacity reinforcement in the area of disaster risk reduction is clearly expressed in key regional and international agreements and strategies. **Process:** Adaptation through a transnational approach is particularly challenging between countries with different languages, different adaptation policies and institutional set-up. For this reason, bilingual joint-trainings (bringing together national and subnational staff from both countries) will be organized under output 3.3; cross-fertilization activities and trans-national meetings will allow teams from the two countries to exchange lesson learned at all scales (output 2.2.), a regional workshop and a knowledge platform managed by the Abidjan Convention will help setting up a common ground and maximizing indirect impacts in the region. Knowledge products (such as the reports from the implemented subprojects under component 2) will also provide a contribution. Finally, under component 1 the Transnational Coastal Development Strategy will put in place a real case of transnational collaboration through a plan, and all other planning activities (output 1.3 and 1.4) will capitalize from subprojects (implemented under component 2) occurring in the two countries. **Desired result:** Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices and are better prepared to face transboundary climate-related hazards.

**Area-Based Development (ABD) and an Integrated Landscape System.** The proposal is built following an integrated and Area-Based Development approach, focused on localizing efforts for improving climate resilience in a comprehensive and well-defined geographic area. This approach strengthens the integration of cross-cutting climate change adaptation measures within the different interdependent sectors, elements and actors that build up the complex peri-urban system. Applying an ABD approach, different strategies within the environmental and socio-economic spheres are intertwined in a complex network. Evaluations of ABD projects implemented by international organizations suggest that they are particularly effective in responding to complex conflict characteristics on sub-national levels across the world and its development is recommended as appropriate in disaster-related environments. UN-Habitat always promoted the adoption of such an approach which, even though the theory is well known, and its added value is recognized, its real application is not to be taken for granted. Climate adaptation interventions in the area lack integration, and the design of activities provides a concrete contribution to the mainstream of both vertical and horizontal integration. In addition, local level initiatives were designed based on continuous consultation to both ensure ownership and to go against the “one-size-fits all” principle. In general, the project privileges a bottom-up approach, i.e. local experiences are mainstreamed into guidelines and strategies at the national and regional level. This allows avoiding the prescriptive and somehow “blind” nature typical of top-down initiatives, which define intervention strategies without first duly considering local realities and contexts. UN-Habitat’s experience in adopting this kind of approach in regional initiatives shows that it creates a positive dynamic of participation of the stakeholders at the various levels (local, national, regional) for ensuring successful project implementation. **Process:** the design of local subprojects derived from continuous consultation to define needs, possible responses, and even physical location on subprojects. As proof of the area-based approach adopted, Annex 2 shows that each community presents a different and personalized subset of activities to be implemented. Regarding the integration, all subprojects integrate with one another working in synergy to adapt to climate change (please, see Annex 2). Participatory sessions will be ensured throughout all planning activities, as well as subprojects implementation. In

Ghana, more specifically, the adoption of the CREAMA approach is envisioned to ensure effective participation and bottom-up nature in all activities. In addition, vertical integration of subprojects will be ensured by all planning activities (under component 1) and promoted through the dissemination activities under component 3. **Desired result:** Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realized subproject.

#### Innovative solutions under Component 2:

**EWS for coping with coastal floods and extreme rain events (output 2.1.).** While implementation and diffusion of EWS in West Africa is progressing, it mainly focuses on main cities (including their informal settlements), and inland rural communities. Small coastal communities represent a target which is less covered and present a very high level of risk due to the combination of high exposure and very poor adaptive capacity. While targeting coastal communities, the project aims at building the missing link between community level adaptation through EWS, and adaptation strategies and plans at subregional, national and subnational level. Hence, while the regional dimension of the project will contribute to improve the policies and the institutional capacity through transboundary joint trainings, plans and workshops, at the local level the EWS will be a tool to both mainstream awareness on climate change adaptation, and to minimize the impact of floods. The main innovative aspect of the output is presented by the data management. Thus, data collected through the EWS implemented in each community, will establish a transboundary set of data available, that will be used to integrate existing information and products for floods and drought management in the coastal area at the higher level. **Process:** Under output 2.1., two data centres (one per country) will be established. Through the cross-fertilization activities under output 3.2. (two meeting a year to discuss lessons learned and challenges), a transboundary exchange of data will take place. The National Disaster Management Organization (NADMO) will be supported by the information gathered in the area and it will actively increase their abilities for disaster risk management and emergency response in the region, possibly allowing replication and expansion from the outcomes learned of the project. The Abidjan Convention and the University of Cape Coast will provide their support. Plans and strategy at different scale (the Transboundary Coastal Development Strategy, the subnational SDF, as well as the community level plans) will represent concrete chances to integrate the data collected and the derived information into the adaptation planning practices. The regional workshop, as well as the establishment of the knowledge platform (managed by the Abidjan Convention) and the upload of reports on lessons learned will increase the capacity of the output to provide evidence-based support to the upscale of the initiative or to the use of data to inform plans and policies.

**Carbon credits from mangrove systems, under NBS for reducing run-off and adapt to increasing riverine floods and altered rain patterns.** Communities' ownership and economic sustainability of the activities is transcendent for the success of the project, and such activities must be capable of creating and improving communities' livelihoods to reduce their climate vulnerability. The project is focused on enhancing long-term sustainability and ensuring livelihoods with an innovative financial strategy ensuring blue carbon credits generated by the mangrove systems. Even though carbon credits per se contribute to mitigation (not to adaptation), they contribute to adaptation by generating a source of finance that can help the mangrove systems being managed through time (as well as the other NBS included in the output) and being upscaled. **Process:** The blue carbon project links in an innovative manner the environmental services provided by the local wetlands and the mechanisms set up to pay for them. In this sense, the maintenance through time of the activity (after the project's end) is funded through the benefits derived from the activity itself. Plans at the community level act as the negotiating board to establish agreements for the next phases of funding between private sector receivers of environmental services and community/government as providers of the environmental services to adapt to climate change. While all the carbon credits procedures will be set up by technical experts under output 2.2., the communities will be trained about the management of credits through trainings under outputs 2.3. (as alternative livelihoods, as it represents a know-how that is not present in the area and the management of carbon credits may represent a job opportunity). As per the other outputs, cross-fertilization and dissemination activities will support the possible upscale of the activity in other communities of the area.

**Climate resilient agriculture under Adaptive capacity through alternative livelihood (output 2.3.).** Coastal communities highly rely on subsistence rain-fed agriculture, which is being highly impacted by altered rain patterns, drought and salinization of soil (caused by sea-level rise). This harms already vulnerable targets of people. However, while programs are already targeting climate-resilient agriculture in the Sahel, far from the

coast (particularly in Burkina, Niger, and Senegal, in the coastal areas of Ghana and Cote d'Ivoire such practice is not diffused yet. This emerged from both desk research, consultation with experts and community consultation throughout the years. The innovation led by this output (output 2.3) on the one hand is due to the importing of a technique which proved to be effective in West Africa but is not present in the areas targeted by the project; on the other hand, to the specific type of technique. Thus, the technique adopted by output 2.3 does not pursue crop improvement through pure plant breeding. Plant breeding may be adopted, but crop improvement goes beyond business-as-usual plant breeding and represents a much broader continuum of activities at the intersection of agriculture, life and social-science. "Like plant breeding, crop improvement has the ultimate goal of generating useful germplasm, yes, but germplasm that increases equitable benefits to those who are most marginalized. It is the qualifier that is often overlooked"<sup>69</sup>. **Process:** the activity helps generate evidence base of effective, efficient adaptation practices through the selection of dedicated crops per each community (among a pre-selected set of crops already selected to fit the needs and opportunities of the area), to ensure that the technological advancement goes hand in hand with social acceptability. The training centers will help both train the beneficiaries through direct practice, and mainstream basic knowledge about climate resilient agriculture. In addition, to ensure full cost of adaptation, the use of salt resilient crops is integrated with trainings and practices which address soil management and water management, to effectively respond to the combine action of climate change (salinization and altered rain patterns and droughts). The reports, dissemination and cross-fertilization activities under component 3 will promote the scale up of these practices in other communities in the coastal areas of Ghana and Cote d'Ivoire.

## PART II. C. ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS

The project focusses its efforts to strengthen the skills and level of preparedness from the different involved stakeholders (such as regional bodies, ministries, and local authorities) during the process of climate adaptation and spatial development and planning, to enhance local climate adaptation through community participation, capacity building and to integrate concrete adaptation actions for improving climate adaptation and for building climate resilience. There are different vulnerable groups present in the targeted areas of the project and within the selected communities where the subprojects will be implemented. The vulnerable groups identified include low-income families, women, children, elderly people and persons with disabilities. Several activities implemented under the project will have concrete benefits for vulnerable groups, by strengthening women and youth engagement and developing new and more stable sources of income. The planning and design of the project's gender policy and cross-cutting issues include strategies for all community member (with a particular focus on women, youth, and marginalized groups) to be involved in decision-making process, assessments and spatial planning procedures.

Organization of all activities will be designed to ensure equitable access to different groups, in particular to vulnerable groups. Decision-making processes for the development of spatial plans and frameworks will be designed taking into account the views and needs of different groups (as already initialized in the preparation of the project through the consultation process). In addition, the project will put a specific focus on equal access to trainings and capacity building activities. Monitoring and controls will be set up to ensure that implementation activities continue including representatives from all groups of the communities throughout the project (with a particular focus on vulnerable and marginalized group).

Regarding the Blue Carbon project, the creation of specific committees will be facilitated which will oversee the project and design implementation to follow the procedures and guidelines of carbon certifying entities, which will allow to guarantee transparency and equal access to economic benefits.

For further details on the short and long-term benefits of the project's activities please see table 10 below.

### ECONOMIC BENEFITS

**Prevent damages to reduce possible economic losses:** Outcomes are planned to prevent damages and reduce economic losses through multi-level spatial planning instruments and concrete interventions which can transform the project area to increase climate resilience in coastal zones. NBS leverage nature to protect communities and optimises

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<sup>69</sup> Feed The Future Innovation Lab



green infrastructure. The implementation of drainage channels and bioretention facilities are also capable to reduce the possible damages to the infrastructure caused by floods. The avoided economic losses will benefit all members of the communities, but in particular low-income families which are particularly sensitive to sudden decreases in income.

**Improved livelihoods through a better income and food security:** The project targets the most vulnerable communities in the coastal zone and low-income communities, who are relying on natural resources such as agriculture for their food security and for income generation. For instance, climate-resilient agriculture activities will be capable to reduce food losses related to soil intrusion, soil quality and lack of water by optimizing the soils' productivity and integrating water management infrastructure. In the long-term, low-income families and women will have the opportunity to sell more products on the local market due to the yield increase and the avoided losses. All these elements can eventually lead to a better income for families, allowing children to access to education and schooling materials. This will allow to enhance food security and support a more sustainable economy for the local population. Additionally, workshops on alternative cooking practices will focus on possibilities to reduce the use of mangrove wood, which will also allow women to spend less time commuting to obtain raw materials which can also benefit to assign time for other activities related to income generation and family and caring activities (e.g., taking care of children and elder people). NBS can also enhance provisioning services by increasing the number of molluscs and fisheries which can enhance sustainable local fishing. The carbon project can also increase the general income of the community while protecting the ecosystem and strengthening the provided natural co-benefits. The project will protect the current communities' assets and sources of income where possible, and support livelihood opportunity in less risk / vulnerable areas (i.e., more land-inwards). It will also aim at generating revenue and employment opportunities through community work (e.g., reforestation and construction activities). The blue carbon project will also provide for the creation of formal jobs in the long-term as part of the management and conservation of the mangrove areas. Requirements for employment will be drafted in consultation with the representatives to ensure equal access to job opportunities, whenever possible, giving opportunities for employment of young adults and women. The above would especially support women as they face challenges related to working opportunities and its derived poverty.

### SOCIAL BENEFITS

**Spatial and urban planning increases climate resilience.** An important benefit to highlight of using spatial development frameworks is the capacity of preventing communities from settling in high risks areas, which reduce their exposure, and increase empowerment and long-term opportunities. Planning can also avoid diseases coming from environmental pollution and bad quality of urban spaces, and support on ensuring better services provision. These issues were highlighted by elderly people as a challenge they face. The implementation of concrete interventions will protect these communities by reducing their vulnerability and improving their quality of life. This will directly increase their social resilience since their current poverty and lack of capacity prevents them from coping with the impacts of climate change. One more benefit of spatial planning is linked to the opportunity of integrating a spatial inclusion approach in planning instruments, where distinct needs for vulnerable groups can be addressed. With spatial planning for climate adaptation, the voices of people with disabilities can be heard and special attention can be focused on their needs, to mention tailored climate-related emergency responses and procedures for people with disabilities, planning of public climate-resilient spaces to allow easy access for people with disabilities. Spatial planning activities will also include a focus on improving environmental and living conditions and access to services for low-income families, including through specific strategic projects focusing on pro-poor planning that will be prioritized in the planning process.

**Regional cooperation and knowledge sharing on adaptation strategies:** The benefits of improving the coordination capacities of regional and national bodies are critical for reducing climate migration rates, reducing the number of climate refugees, increasing adaptive capacity and early disaster response, and tackling regional poverty. The negative impact of these challenges can be diminished through the adoption of instruments that facilitate the communication of the different institutions in charge of climate adaptation, using knowledge-sharing platforms, where lessons learned of previous implemented adaptation programs can be shared and mainstreamed for improving climate adaptation responses. Technical information provided by regional assessments can also be beneficial for improving spatial planning processes while increasing climate-adaptive capacities.

**Reduced marginalization and poverty:** The physical interventions and alternative practices can help reducing poverty rate by improving communities' livelihoods and protecting critical infrastructure such as schools and medical centres which have been destroyed in some cases due to climate risks. Through planning and concrete interventions, the project benefits children by reducing child trafficking as adults will have a better income hence they will be able to take care of their children which are part of the identified vulnerable groups, and improve their conditions, ensuring long-term resilience. In addition, if schools' infrastructure is protected against floods, children can increase their

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adaptive capacity by learning how to respond to climate risks. Protecting medical centres against climate related risks can increase the possibility to provide medical service which can reduce climate-related health risks. Women - who are part of the vulnerable groups - have an established gender role as household keepers within their families and hold many responsibilities for different tasks, including taking care of children and family members, cooking and collecting wood. They can also have an important role in managing mangroves and the nurseries production. At the same time, women are often excluded from planning or decision making and job opportunities. The project will promote the active participation of women and youth in the development of climate resilient agricultural practices. Women will benefit from the trainings on EWS, climate resilient agriculture practices as well as from the other capacity trainings regarding for example alternative cooking practices, as there will be a minimum quota to ensure their participation. This will not only allow women to gain new capacities and skills, but also to develop their participation in community-related activities. Women and youth will also benefit from the interventions as women committees and youth groups will be established for certain trainings, thus allowing to take into account and address vulnerable groups' needs. This will ensure ownership and it will enhance the inclusion and empowerment of minorities and vulnerable population in the decision-making processes. The integration of most vulnerable groups—for example women, will be ensured by quotas of participation, women-group discussions and collaborations with women-civil society organizations. Youth also plays a key role in the whole process as a youth led development will facilitate sustainability and potentialize resilience. The blue carbon project will have the capacity to produce revenues that allow the community management organizations to allocate money to public local development, for example, to improve education infrastructure, allowing children to continue with their education or to improve roads and other services which can also benefit low-income families.

**Improve the capacities of authorities on climate resilience:** The project aims to increase the capacity of authorities in *technical* and *strategical* matters related to climate adaptation. This will be done by implementing the different trainings, cross fertilization activities and discussion platforms that are planned among the implementation of the components. In the long term this can improve multilevel and transboundary governance for climate response, which can furtherly enhance the implementation of projects that have more complex variables to consider. To increase these technical and strategical capacities also allows the authorities to identify multiple climate resilient solutions for specific climate challenges.

#### **ENVIRONMENTAL BENEFITS:**

**Spatial planning for sustainable land use:** Spatial planning for sustainable, both at sub-national and district/department level will aim at integrating the territory and its dynamics into the planning process. Nature and its systems will become part of the resilience development strategy in order not only to restore what has been lost and protect what remains, but also to potentialize and maximize the interaction of the built and natural environment. This will be implemented through the ecosystem-based interventions which will tackle the roots of climate change challenges by working with nature. The community-based interventions will also benefit the environment by raising awareness and ownership from the local people on the importance of the ecosystems as a structural and indispensable element for their resilience.

**Regulatory services provided by nature are enhanced:** As NBS, mangroves can work as **natural buffer zones** in coastal areas reducing the sensitivity of the communities to coastal related hazards, shielding settlements against cyclones, storm surges, floods and wind. In addition to this, mangrove can bring other co-benefits focused on environmental degradation and biodiversity loss. NBS can also reduce saltwater intrusion into crops and drinking water. Moreover, the water infiltration systems that include the drainage channels and the bioretention facilities will be capable to reduce flood risk in the identified communities. Additionally, they will reduce the water pressure in the area while provide other services such as water absorption and increase vegetation in specific areas.

**Enhances capacities for protecting coastal ecosystems and enhancing climate adaptation:** National level borders can split and alter ecosystems and the natural dynamics that constitute them, therefore transboundary capacity building activities are necessary to strengthen cross-border environmental management. By strengthening these skills, healthy ecosystems can support communities to increase their adaptive capacity. To implement this approach, it is crucial to strengthen regional and local bodies' capacities to jointly coordinate activities with local communities. This can improve climate planning efforts and facilitate the implementation of regional environmental assessments, leading to environmental conservation practices, improved sustainable management and restoration of ecosystems.

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Table 10406. Benefits per proposed project output

Component	Outcome	Output	Economic		Social		Environmental	
			Short-term benefits	Long-term benefits	Short-term benefits	Long-term benefits	Short-term benefits	Long-term benefits
1. Strengthen spatial planning for coastal climate adaptation at different geographical scales	1. National governments, as well as local level staff have created enabling conditions for enhancing coastal adaptation	O.1.1 One Transnational Coastal Development Strategy for the joint planning and management of the coastal area of Ghana and Côte d'Ivoire	No short-term benefits are expected from the transboundary plan.	The Transnational Coastal Development Strategy will allow to reduce economic losses and damage from climate-related disasters and from their possible consequences on transboundary migration.	The development of the Transnational Coastal Development Strategy will lead to improved understanding of spatial planning strategies for climate adaptation in the neighboring country and reinforced knowledge sharing in between the two countries on good practices for climate adaptation.	The cross-border spatial plan is a supplementary element that will further strengthen regional cooperation between Ghana and Côte d'Ivoire and may lead to more joint climate adaptation projects following the end of the project.	The development of a Transnational Coastal Development Strategy will take into account the necessity to better manage and preserve natural ecosystems as infrastructures for climate adaptation. Through the Transnational Coastal Development Strategy, ecosystems located in Côte d'Ivoire and Ghana, as well as along the border will be managed to preserve and/or enhance their adaptive capacities. Transnational Coastal Development Strategy will also improve ecological connectivity in the region.	Building on the experience from the project, other Transnational development strategies may be put in place in between Ghana and Côte d'Ivoire or internationally, thus further contributing to environmental preservation for climate adaptation.
		O.1.2. National and subnational level capacity building activities for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience	No short-term benefits are expected from the capacity building activities at national level.	Trainings of authorities can reduce costs by avoiding external technical support and enhance the development of new projects that may be able to take into account a higher-level complexity (e.g. integrated climate adaptation projects).	Capacity training will improve knowledge on integrated climate change adaptation of <b>3,3561 people</b> through-out the different regional and national staff trainings. <b>Up to 100 trainees</b> from Ministries of the Environment and Sustainable Development and municipalities (Ghana), and of Land Use Spatial Planning Authority (LUSPA) and Municipal District Assemblies (MMDAs) (Cdl) will strengthen their capacity to design, implement and update spatial development frameworks.	Training of staff at the national level is a key element that will allow them to develop relevant national and regional adaptation projects, strategies and policies, and also allow them to consider all the elements necessary to avoid possible forms of maladaptation.	No short-term benefits are expected from the capacity building activities at national level.	Capacity building activities will improve climate planning efforts and facilitate the implementation of regional environmental assessments, leading to environmental conservation practices, improved sustainable management, and restoration of ecosystems.
		O1.3 Two sub-national spatial development frameworks are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire)	These frameworks will help authorities identify and prioritize climate-vulnerable zones and adaptation measures, thereby optimizing national budgets in the area of climate action.	In the long term, sub-national spatial development frameworks will allow to reduce economic losses and damage from climate-related disasters.	sub-national spatial development frameworks will be designed to protect communities, reduce vulnerability to climate change and improve the quality of life of residents.	Sub-national spatial development frameworks will reduce climate vulnerability of communities in the long run by preventing settlements in high risks areas.	Through the sub-national spatial development frameworks, nature and natural infrastructure will become part of resilience development strategies in order not only to restore what has been lost and protect what remains, but also to potentialize and maximize the interaction of the built and natural environment.	Sub-national spatial development frameworks help safeguard the natural infrastructure and its benefits for long-term adaptation by protecting it from urbanization and other potential pressures.
		O.1.4. Community level adaptation plans (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community	These plans will help authorities identify and prioritize climate-vulnerable zones and adaptation measures, thereby optimizing local/municipal budgets in the area of climate action.	In the long term, local-level adaptation plans will allow to reduce economic losses and damage from climate-related disasters.	Community-level adaptation plans will ensure the participation of all community members and vulnerable groups, particularly through the participation of women and youth. This will allow for the development of local level plans tailored to the needs of local communities, building on the knowledge and experience of the residents.	Community-level adaptation plans will help prevent settlements in hazard-prone areas and serve as a basis for implementing concrete adaptation projects at the local level, thereby fostering long-term adaptation action.	Special attention will be given to integrating the natural infrastructure as a key component of resilience in community-level adaptation plans. Plans will also build on past experiences using nature-based solutions to potentiate and maximize the interaction of the built and natural environment for climate adaptation.	The community-level adaptation plans will direct planning efforts toward the protection of the natural infrastructure and the implementation of nature-based solutions in the long term.
2. Sustainable development, implementation and management of concrete	2. Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions	O.2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Cote d'Ivoire	No short-term benefits are expected from the implementation of EWS.	EWS will allow to reduce economic losses and damage through better anticipation of natural hazards, thus allowing to save livestock, movable belongings, and health costs (estimated at up to <b>\$1083 USD per household</b> ).	The awareness raising activities and the mapping and identification of evacuation centers and routes will increase the capacity of individuals and the communities to effectively prepare for and respond to climate-related disasters (training of <b>18,482 community members</b> ).	EWS will allow for better data availability and good risk management decisions based on accurate information, helping to prevent potential loss of life, livelihoods and infrastructure from climate-related disasters, thereby improving the public's sense of security. Local EWS may act as a first step towards developing further strategies and/or plan	Awareness raising campaigns will inform people about risk areas and flooding zones, to prevent possible pressure on essential ecosystems for climate adaptation in these zones.	EWS may increase the community awareness regarding the linkages between the state of the environment, the location of safety routes/zones and their well-being and safety.

interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change	for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realised pilots					for disaster preparedness and response at different levels (local, regional, national).		
	O.2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities	Restoration of the mangrove can generate an estimated of <b>170 local jobs</b> during planting activities.	Reduction of loss and damage from natural hazards (flooding and erosion). The Blue carbon project can generate between <b>\$14,098.55 USD/tCO2/year to \$65,788.82 USD/tCO2/year</b> on revenue. Implementation of NBS for urban flood adaptation can <b>save up to 20%</b> of overall implementation and stormwater management costs.	NBS implementation will enhance the community involvement so can increase cohesion among community members. <b>1800 community members</b> will be actively participating in the community-based restoration activities.	In the long-term, around <b>88,643 people</b> that live near areas prone to flood, water accumulation hotspots and water runoff surfaces will reduce their risks to floods through the implementation of Nbs. An estimated of <b>86,958 people</b> will be benefited in the long-term from the climate and coastal regulatory services provided by mangroves. Around <b>3,550 m2 of infiltration cells and 252 m of channels</b> will help to reduce loss and damage (infrastructure, housing, etc.) from natural hazards. <b>25 people per community</b> will be trained to maintain and produce co-benefits through rain gardens nearby the implementation areas.	Flood reduction through increased water infiltration. Reduced pollution and spreading during extreme weather events associated with climate change. Improved water quality and conveyance through purification and filtration.		<b>582 hectares</b> of mangrove planted will enhance coastal restoration and work as buffer zones in areas prone to flood, guaranteeing long-term resilience to climate change hazards. Enhancement of ecosystem services provided by coastal wetlands, including, soil stabilization, erosion reduction, water quality maintenance and other regulatory services. Biodiversity conservation: Over <b>72 of shorebird species and 38 fish species</b> can be potentially benefited from the increase on wetlands vegetation in the Volta region considered a RAMSAR site. Carbon storage: Around <b>9,770 to 12,700 tCO2e</b> will be absorbed by mangroves as nature carbon pools in the first four years.
	O.2.3. Adaptive capacity through alternative livelihoods is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions	<b>Income generation</b> is expected to <b>increase by 15%</b> for direct beneficiaries on the first two years of implementing climate-resilient agriculture practices.	Alternative practices and livelihood options can increase long-term economic benefits creating new income generation activities related to new agricultural and cooking practices. Mangrove reforestation and the associated blue carbon project will contribute to the diversification of, with an <b>income diversification of at least 50%</b> .	Regarding poverty reduction and improved food security, <b>540 farmers</b> will be trained to adapt climate-resilient practices to improve their livelihoods and restore agriculture land. Furthermore, <b>5,040 people will receive training on resilient housing, and 5,040 on energy efficiency and alternative cooking solutions.</b>	Up to <b>2,160 community members</b> will be directly benefited from the implementation of climate-resilient agriculture practices. Climate-resilient agriculture enhance the conservation of social dynamics and traditions.		<b>180 acres per year</b> adopting climate-resilient practices will improve their conditions ensuring land and water sustainability for future generations.	Reduction of salinity level in soil induced by climate change, increasing of soils productivity, water management is enhanced with the different implemented infrastructure such as ponds and wells.
3. Enhance coordination and cooperation between Ghana and Cote d'Ivoire for more resilient coastal communities	2. Local staff, communities, and national governments of the two countries have build common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards	O.3.1 Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa through the regional knowledge platform of the Abidjan Convention.	No economic short-term benefits are expected from the compilation and dissemination of lessons learned and best practices.	Integrating lessons learned in specific platforms can help policy makers, academia, NGOs, agencies, and technical experts to learn from others experience, including the identification or implementation of financial resources or approaches to reduce costs of project implementation for climate adaptation.	Workshops allow stakeholders to share experiences, improve networking which can enhance	Publications have a long-term impact, even after the project ends, and can reach a variety of stakeholders such as technical experts and policy makers.	No environmental short-term benefits are expected from the best practices and lessons learned. The process of gathering this information requires time to further reflect medium and long-term benefits.	In general, lessons learned can enhance the protection of coastal regions, not only in West Africa but it can be tropicalized to other global contexts.
		O.3.2. Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for sharing experiences on project's implementation, and fostering cooperation on coastal adaptation	Meetings and missions can enhance initial discussions for financing climate resilience projects. Meetings are capable to strengthen multistakeholder's relationships, including partnerships for financing climate resilience projects and set the first steps for more solid projects.	Exchanging experiences in the long-term can successfully end-up in the implementation of climate resilience projects.	Meetings and discussion platforms can enhance initial discussions for project implementation and governance coordination relates to climate adaptation in coastal zones.	No social long-term benefits are expected from the cross-fertilization activities to exchange experiences.	Meetings and missions can enhance the co-creation of solutions to common environmental and climate challenges applied into different contexts, which can bring specific short-term benefits according to the nature of the project.	Meetings and missions can enhance the co-creation of solutions to common environmental and climate challenges applied into different contexts, which can bring long-term benefits according to the nature of the project.
		O.3.3. Joint trainings including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation	Investment on the development of trainings will strengthen the capacities of urban development and climate specialist.	Trainings in the long run can reduce costs by avoiding external technical support and enhances the development of new projects that may have a higher complexity.	Direct stakeholders that take part of the capacity training activities will be able to transfer their acquired knowledge into practical day-to day tasks relating decision making and planning for coastal resilience. Stakeholders will be capable to apply integrated knowledge, adapting their gained skills to different context and local needs,	Trainings have knock-on effects as the staff trained will be able to implement more complex projects that can lead to bring more social benefits to the communities.	No environmental short-term benefits are identified for the joint trainings.	The trainings will strengthen the capacities of staff from the transboundary governance system related to environmental protection, conservation and integrated management of the territory and coastal ecosystems, which furtherly can increase climate resilience.

## PART II. D. COST-EFFECTIVENESS

The design and implementation of the project focuses on maximizing the size of the 'concrete' interventions under component 2 to directly benefit the most vulnerable populations; thus, focusing the 'non-concrete' components (component 1 and 3) to those activities required for supporting the appropriate implementation of the 'concrete' interventions, to further develop a framework, enhancing climate resilience through spatial and land use planning (component 1) and to ensure ownership, sustainability and replication of the whole project (component 3).

### ***Cost-effectiveness rational by component***

#### ***Component 1. Strengthened spatial planning for coastal climate adaptation at different geographical scales.***

This component focuses on improving regional planning capacity, effective climate adaptation-oriented spatial planning, innovative tools and governance structures aiming to create enabling conditions for coastal adaptation. Because Ghana and Côte d'Ivoire are neighbouring countries that share a common geomorphology, environmental challenges and socio-economic dynamics, a joint planning strategy for climate adaptation represents an opportunity to benefit from the existing efforts (investments, projects, systems, etc.), to upscale and promote continuity throughout the coastal area and the time.

According to the Probabilistic Risk Profile of Ghana, the country loses 200 million dollars every year due to floods and droughts (UNISDR, 2018) while in Côte d'Ivoire reaches up to \$1.2 billion per year (World Bank, 2019). The development of spatial and land use planning is considered to be one of the most cost-effective ways to understand and respond to climate change risks and vulnerability, especially to avoid future development in risk areas (and cost associated with this potential risk, such as destroyed homes, infrastructure and assets). By applying spatial planning tools at an early stage, governments and communities can anticipate and react in due time to challenges, with results for economic savings associated to prevention instead of reaction as well as social and environmental benefits.

Climate-proof territorial spatial planning reduces climate change vulnerability, providing decision-makers with the costs and benefits of adaptation options. Integrating social cost-benefit analysis in the different plans at the regional and municipal levels will allow to anticipate climate change impacts and assess the costs and benefits of climate-proof spatial planning. This will decrease the impacts of climate change induced risks into assets and infrastructure, providing a cost-effective way to reduce country losses due to extreme weather events and other prevalent risks.

To achieve these positive impacts, the localisation of the Translational Coastal Development Strategy (1.1) into the two Sub-national Spatial Development Frameworks (1.3) and into the Community Level Adaptation Plans (1.4) will strengthen the effectiveness of the investment as it will be integrated within a community-based approach. This approach has been used across multiple cities and sectoral contexts and it has shown high cost-effectiveness compared to larger scale procurements, as it builds on community decision-making, local know-how and networks and facilitation, where the maximum value of each dollar is utilized to the maximum benefit of the community, in a transparent decision-making process. To facilitate all these, on-the-job training and national workshops will improve the efficiency of the strategies by ensuring coordination, efficiency and contradictions in administrative processes.

#### ***Component 2. Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change***

Regarding the subprojects, the design of the proposal aims to maximize the positive impacts for the communities. Besides that, whenever possible, the project will seek to achieve cost-effectiveness through economies of scale in procurement processes and contracts.

The regional scale will facilitate those activities can be developed in the two countries to achieve economies of scale. The project will also seek to develop procurement and partnerships with governments and its agencies and the private sector to minimize project costs.

Although the project aims to reduce cost of the execution of selected concrete interventions by pursuing economies of scale, the proposed community-level interventions will adapt and localised so that the interventions are manageable by communities. This will enhance ownership and sustainability of the project and to mitigate potential social and environmental risks. The project aims to select the interventions that benefit most communities and people.

The specific trainings (part of 2.3) that are planned to be implemented in the intervened areas will be delivered to communities that are in the climate frontline to increase their adaptive capacities, increasing their ability to withstand climate shocks and strengthening the management mechanisms for implementing and maintaining the adopted and further adaptation measures. Jointly to the community's role in the adaptation strategy, the supporting role of executing entities represents a key aspect of the projects' cost-effectiveness. The role of executing entities will be focused in assessing communities and establishing working relations with them, to ensure that capacity gaps are covered. They

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will also play a key role to ensure ownership of the project by the communities and to contribute to the operation and maintenance of the projects that due to its specificities cannot be directly run by the community.

### Component 3. Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities

This component focuses on improving the multilevel coordination of different government bodies, including local and national staff, and the communities within the two countries. The investment on strengthening multilevel regional coordination of administrative and planning institutions in charge of adaptation planning improves the efficiency and cost-effectiveness of developing climate action plans by reducing economic loss and duplication/contradictions in the administrative processes, reducing probability of policy misalignment and delay, and avoiding disorganization and misdirection throughout the different stages of the adaptation process. Cost-effectiveness of this component is very high. Although it represents 9% of the total project budget, it ensures alignment of policies, initiatives and institutions through joint workplans, round tables, a regional assessment, joint trainings and cross-fertilization events, creating a large ripple effect for regional, national and local climate change adaptation.

Finally, this component provides the project a solid structure to institutionalize the good adaptation practices, where replication of lessons learned and the upscaling of local interventions is focused on effective and low-cost options, which benefit countries and communities in West Africa from a cost-effectiveness point of view.

### Cost-effectiveness for subprojects of component 2

Table 11447 Early Warning System cost-effectiveness.

Subproject	Total subproject cost	Beneficiaries		Cost-effectiveness		Total cost-effectiveness (USD/Total Beneficiaries)
		Direct	Indirect	Direct (USD/Beneficiary)	Indirect (USD/Beneficiary)	
<b>2.1 Early Warning System</b>	\$1,887,333 USD	18,482	138,818	102.18	\$13.60	\$12.00 USD
<b>Assessment of alternatives (cost-effectiveness)</b>						
<b>Business as Usual</b>	Traditional adaptive measures for climate change hazards include the construction of protection structures such as dams, galleries, rock fall nets, which require longer installation time, have more impact to the environment and can be more costly than EWS <sup>70</sup> . The added value of EWS to ensure preparedness and rapid response to natural disasters is the integration of components of risk knowledge, monitoring and predicting, dissemination of information and response to warnings. In contrast to other information systems, in other countries in Africa (Burkina Faso, Ghana, Kenya and Uganda), EWS has replaced outdated and inadequate meteorological methods and improved disaster risk reduction with effective means of generating and disseminating information in a multi-scale and integrated manner <sup>71</sup> . Additionally, EWS have a high level of acceptance in flood-risk communities, as beneficiaries are allowed to save livestock, movable belongings, and health costs (estimated at up to \$1083 USD per household in Nepal Project <sup>72</sup> ).					
<b>High-technology Early Warning Systems</b>	Early Warning Systems using robust digital system with cutting-edge technology have high costs of implementation and maintenance. Additionally, they cannot ensure the end-point communication with residents due to the local context of limited communication services and internet, resulting in low cost-effectiveness. Therefore, the proposed type of EWS for this project is connected to mobile phone carriers using internet and it provides geodata analysis of the region using GIS supported through on-line platforms.					
<b>Early Warning Systems adapted to local needs.</b>	The selected Early Warning System has been strategically chosen by tailoring the technology (sirens, radio and SMS messages) to the technological context in the and adapting the system to the local knowledge, requirements and resources of communities in the coast of Côte d'Ivoire and Ghana. This can reduce implementation and maintenance cost as local communities can be trained to give periodical maintenance to the system. The strategy of implementing EWS in the shared coast of Ghana and Côte d'Ivoire while adopting risk assessment tools and quick response methodologies will also minimize damage on infrastructure and reduce costs of reconstruction. Additionally, because some of the most expensive components of EWS have already been built (e.g., earth observation satellites, global weather forecasts), the investments needed in Ghana and Côte d'Ivoire are relatively modest, which for this project is estimated around 12 USD per beneficiary. By implementing this EWS in the shared coastal area, the 21 targeted communities in Ghana and Côte d'Ivoire benefit from the existing regional communication and monitoring systems of the neighbouring countries (e.g., in the National Platform for Risk Reduction and Disaster Management of Cote D'Ivoire and the Ghana Meteorological Agency) for improved coordination and effectiveness.					

Table 12428. Integrated NBS for reducing Run-off and Adapting to Floods adaptation cost-effectiveness

Subproject	Total subproject cost	Beneficiaries		Cost-effectiveness		Total cost-effectiveness (USD/Total Beneficiaries)
		Direct	Indirect	Direct (USD/Beneficiary)	Indirect (USD/Beneficiary)	
<b>2.2 Integrated NBS for reducing Run-off and Adapting to Floods</b>	\$3,602,755 USD	88,643	56,002	\$40.63	\$64.33	\$23.91 USD

<sup>70</sup> Martina Sättele, Michael Bründl, Daniel Straub, Reliability and effectiveness of early warning systems for natural hazards: Concept and application to debris flow warning, Reliability Engineering & System Safety, Volume 142, 2015, Pages 192-202, ISSN 0951-8320, <https://doi.org/10.1016/j.ress.2015.05.003>

(<https://www.sciencedirect.com/science/article/pii/S0951832015001441>)

<sup>71</sup> <https://www.un.org/en/climatechange/climate-solutions/early-warning-systems>

<sup>72</sup> COST-BENEFIT ANALYSIS OF FLOOD EARLY WARNING SYSTEM IN THE KARNALI RIVER BASIN OF NEPAL, Kumar Rai, Rajesh; van den Homberg, Marc J.C.; Prasad Ghimire, Gopal et al. <https://www.preventionweb.net/publication/cost-benefit-analysis-flood-early-warning-system-karnali-river-basin-nepal>

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Viabile Alternatives	Assessment of alternatives (cost-effectiveness)
<b>Business as Usual</b>	Traditional built infrastructure systems (also referred to as grey infrastructure) to flood control include the use of concrete and cement to build physical barriers such as reservoirs, seawalls, channels, dams, dikes and others. Gray infrastructure is commonly used as a hard strategy to protect against flooding from waves and coastal erosion, nevertheless, when implemented in isolation and without consideration of the environment, they are poorly effective for enhancing co-benefits provided by nature. These infrastructures are costly (can cost 50.7% more than investment in NBS) <sup>73</sup> , using energy-intensive materials and requiring specialized technical staff and equipment for implementing and maintaining. Additionally, they do not integrate nor adapt to the ecosystem, and have more impact on the environment, especially in the construction phase and when the physical structures break. In contrast, NBS strengthen the natural capacity of the environment to adapt to climate change. Since it applies local resources and knowledge, restoring and maintaining becomes cheaper and can be done as soon as needed, increasing even more its own resilience.
<b>Traditional drainage system</b>	Pipe drainage systems are efficient for reducing water levels in settlements when a flood occur, nevertheless, they require high levels of investment as installation is expensive in comparison with low impact infrastructure. Traditional drainage systems have also low effectiveness for improving general landscape as they are not designed to reduce erosion, maintain biodiversity, address droughts, or stabilize other climatological occurrences. The lack of a comprehensive strategy for flood risk management can be reflected on low levels of return of investment when comparing to other solutions such as NBS.
<b>Construction of gray infrastructure</b>	Gray infrastructure is commonly used as a hard strategy to protect against flooding from waves and coastal erosion, nevertheless, when implemented in isolation and without consideration of the environment, they are poorly effective for enhancing co-benefits provided by nature. To mention, armed concrete barriers and sandbags are capable of inducing instant adaptation benefits by reducing impacts of tidal waves and sea and lagoon level rise. Implementation costs can vary depending on the material and size of the barrier, (around USD 650-\$2,000 per linear foot plus engineering services per site) <sup>74</sup> , however, they have a short lifespan. Maintenance of these constructions increases the total life-cycle cost as they need to be partially or fully replaced over time due to natural erosion, making the intervention unsustainable and ineffective on a long-term scale. Moreover, this infrastructure does not enhance other co-benefits such as sustainable income-generating activities for improving communities' livelihoods nor strengthens ecosystem services to increase communities' adaptive capacity.
<b>Nature-based Solutions</b>	The NBS proposed for this project integrate strategies according to the needs and the environmental context of each community such as bioswales, infiltration cells, seasonal bioretention basins and mangroves. This integration enhances the effectiveness of the project as the interventions generate co-benefits, strengthening one another's' resilience as one ecosystem – the common ecosystem of the coastal area of Ghana and Côte d'Ivoire. Regarding costs, the proposed strategies are cheaper thanks to the use of local materials and involvement of trained residents in the construction, restoration and maintenance works, with limited or no need of technical staff or machinery. Research shows that NBS allow saving around 9.75% on-site preparation costs, 13.08% on stormwater management costs and 37.01% on landscape development costs in comparison with grey infrastructure. In general, NBS require low initial investment and medium investment on maintenance <sup>75</sup> . The investments needed for this subproject in the coastal area of Ghana and Cote d'Ivoire is around 23 USD per beneficiary. Beyond these benefits, as NBS are designed to adapt to the environmental needs, green infrastructure multifunctionality provides more socio-economic benefits as it can be used for different purposes, (e.g., the detention basins during dry season can be used as urban spaces for integrating local activities), NBS can also improve the water cycle dynamics by filtering water to the aquifers which eventually reduces the investment on water management practices.

Table 13439. Adaptive capacity through alternative livelihoods cost-effectiveness

Subproject	Total subproject cost	Beneficiaries		Cost-effectiveness		Total cost-effectiveness (USD/Total Beneficiaries)
		Direct	Indirect	Direct (USD/Beneficiary)	Indirect (USD/Beneficiary)	
		16,800	258,709	\$186.91	\$12.14	\$11.40 USD
<b>Subproject</b>	<b>Total subproject cost</b>	<b>Beneficiaries</b>		<b>Cost-effectiveness</b>		<b>Total cost-effectiveness (USD/total Beneficiaries)</b>
		Direct	Indirect	Direct (USD/Beneficiary)	Indirect (USD/Beneficiary)	
<b>2.3 Adaptive capacity through alternative livelihoods</b>	\$3,140,158 USD	16,800	258,709	\$186.91	\$12.14	\$11.40 USD
<b>Viabile Alternatives</b>	<b>Assessment of alternatives (cost-effectiveness)</b>					
<b>Business as Usual</b>	Common measures to build flood resilience of agriculture activities, the main livelihood practice in the targeted area, focus on the protection of the plantation through built structures such as gabions, concrete barriers and sandbags. Built strategies as such are capable of inducing instant adaptation benefits by reducing impacts of tidal waves and sea and lagoon level rise, however, are costly since they require specific material, technical staff and machinery. Implementation costs can vary depending on the material and size of the barrier (around USD 650-\$2,000 per linear foot plus engineering services per site) <sup>76</sup> , however, they have a short lifespan. Maintenance of these constructions increases the total life-cycle cost as they need to be partially or fully replaced over time due to natural erosion, making the intervention unsustainable and ineffective on a long-term scale. Moreover, this infrastructure does not enhance other co-benefits such as sustainable income-generating activities for improving communities' livelihoods nor strengthens ecosystem services to increase communities' adaptive capacity. Another challenge for the livelihood practices in the coast of Ghana and Côte d'Ivoire is the salinity level of soils, which reduces the agricultural productivity and food security, limits access to drinkable water, increasing poverty rates. Common strategies are the introduction of new species of plants (which can damage the local ecosystem) and the intensified irrigation (which counts with unsustainable water consumption and have not proven effectiveness). Another measure, which has been implemented in regions in Ghana is the use of soil fertilizers (organic matter), however the return of investment has been minimal and unsuccessful to curb rising salinization. The implementation of best practices for improving agriculture yield would be partially improved, nevertheless the process of adaptation to saline soils without using halophytes (salt-resistant crops) and without using water infiltration systems is not cost-effective. In contrast, the adaptive capacity proposed through this subproject is cheaper and is capable to protect the plantation (and the communities) from floods while improving soil fertility, productivity and water management.					
<b>Improved agriculture management</b>	Improved agriculture management is focused on using soil fertilizers (organic matter) for improving agriculture soils conditions. This strategy has been implemented in several regions of Ghana with high levels of salinity, however, the return of investment has been minimal and unsuccessful to curb rising salinization. The implementation of best practices for improving agriculture yield would be partially improved, however, the process of adaptation to saline soils without using halophytes (salt-resistant crops) and without using water infiltration systems is not cost-effective.					
<b>Adaptive capacity through alternative livelihoods</b>	The proposed strategies to enhance the adaptive capacity of communities focus on the alternative incomes that promote climate resilience of communities. Counting on local materials (introduction of local salt-resilient crops and agroecology practices) and trainings (energy-					

<sup>73</sup> How Can Investment in Nature Close the Gap, IISD and UNIDO, August 2021. Available in <https://nbi.iisd.org/wp-content/uploads/2021/10/investment-in-nature-close-infrastructure-gap.pdf>

<sup>74</sup> Sea Wall Guide: What Are the Advantages and Disadvantages? (greencoast.org)

<sup>75</sup> Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, December 2007, EPA 841-F-07-006

<sup>76</sup> Sea Wall Guide: What Are the Advantages and Disadvantages? (greencoast.org)

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efficiency for cooking, blue carbon credits and resilient housing), the selected interventions are cheaper than the 'business as usual' and promote more investment return.

The introduction of salt-resilient crops and the implementation of a holistic approach for resource management will increase the cost-effectiveness of the subproject. The income generation is expected to increase by 20 to 35% in the first two years of adopting the strategy. The climate-resilient agriculture intervention will also include a socio-economic analysis that guarantees high levels of costs-effectiveness considering the business models that are currently settled in the area and the adjustments to improve them, considering the yields and the harvesting seasons. Implementing the salt-agriculture practices in the joint coastal area of Ghana and Côte d'Ivoire will generate co-benefits (environmental, social and economic) and knowledge exchange in the whole region, increasing the adaptive capacity.

Another source of income promoted by this project is the use of carbon credits; this strategy builds on the NBS interventions (specifically the mangrove reforestation), strengthening the adaptive capacity through maintenance and carbon credits training. Considering all ecosystem services, the mangrove restoration has a high cost-effectiveness obtaining benefit-cost ratios from 10.50 to 6.83 under discount rates of -2% to 8%<sup>77</sup>. In addition to this, the sequestration capacity of mangrove planted in the current project can generate minimum revenue values of \$14,098.55 USD/tCO<sub>2</sub>/year or a maximum of \$65,788.82 USD/tCO<sub>2</sub>/year, depending on the carbon offset price in the market<sup>78</sup>. By implementing the blue-carbon trainings in the common coastal area of Ghana and Côte d'Ivoire, the communities will be able to collaborate to sell the carbon credits of the common ecosystem in a coordinated and joint way to the global market.

## PART II.E. CONSISTENCY WITH NATIONAL OR SUB-NATIONAL STRATEGIES

The proposed project is supporting reaching Ghana and Côte d'Ivoire goals under the SDGs, particularly by contributing to the progressive achievement of **SDGs 6, 11, 13, 14 and 15**. Furthermore, the project has direct linkages with the implementation of the New Urban Agenda as it promotes integrated and participatory approaches involving all relevant stakeholders and all inhabitants, especially people in vulnerable situations and both genders, avoiding spatial and socio-economic segregation and gentrification, while preserving cultural heritage, protecting the environment and preventing and containing urban sprawl and climate hazards. Its objectives align as well with the Paris Agreement, particularly on articles 2, 7, 8, 11, 12, by aiming to strengthen resilience and the response to the threat of climate change, in the context of sustainable development and to eradicate poverty and reduce vulnerability.

The project is also in line with the 4 Domains of Changes of UN-Habitat Strategic Plan 2020-2023 and the flagship Programme 3: RISE UP: Resilient Settlements for the Urban Poor, by tackling issues of poverty, spatial inequality and resilient settlements (see below). The following domains of change and subdomains link to the outputs of the project.

- DoC1: Reduced spatial inequality and poverty in communities across the urban – rural continuum (2.1,2.2)
  - DoC2: Enhanced shared prosperity of cities and regions (1,3, 2.2)
  - DoC3: Strengthened climate action and improved urban environment (1.1,1.2)
  - DoC4: Effective urban crisis prevention and response (3.1,3.2,3.3)
- Flagship Programme 3: RISE UP: Resilient Settlement for the Urban Poor

### Ghana

The project will help achieving the goals of Ghana's Intended Nationally Determined Contribution 2015 (INDC) which is based on Ghana's Shared Growth Development Agenda II, the 40-year socio-economic transformational plan and the National Climate Change Policy (2013). The project will focus on building climate resilient strategic infrastructure, which is identified as a strategic area for policy action in the INDC. More specifically, it addresses the objectives, strategies and priority actions specified by the National Climate Change Adaptation Strategy from 2012. The different components will focus on the areas prioritised by the National Climate Change Policy (2013), also supporting and giving continuation to Ghana's Plan of Action on Disaster Risk Reduction and National Climate Change Adaptation Strategy (2011/2015). The components of the proposed project will support activities of the plan such as ensuring regional, national and local coordination; identification and assessment of disaster risks; use knowledge, innovation and education to build culture of safety and resilience; and reinforcing land-use planning and other technical measures to build resilience. Ultimately, the project will leverage the achievements of the National Adaptation Plan Framework 2018 (NAP) process established under the UNFCCC. In relation to sustainable urban development of cities and towns the project will be aligned with the National Urban Policy Framework (2012) and Action Plan and be consistent with the National Spatial Development Framework 2015-2035 and the pertinent Regional Spatial Development Frameworks, District Spatial Development Frameworks, structure plans and local plans.<sup>79</sup>

In the National Spatial Development Framework 2015-2035 more issues and challenges are identified, such as the need for environmental protection and conservation, more sustainable development in the coastal zones and shift from the urban sprawl trend. The project will aim at tackling these challenges as well as

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<sup>77</sup> [A meta-analysis of the ecological and economic outcomes of mangrove restoration | Nature Communications](#)

<sup>78</sup> [AF - Carbon sequestration calculations - Documentos de Google](#)

<sup>79</sup> As described in the National Urban Policy Framework of Ghana (2012)



promoting proposed strategies, like urbanisation as a driver for economic growth and poverty reduction. These issues are not only a concern at national level but also at regional level. The Greater Accra Spatial Development Framework also showcases population growth, open space degradation and urban sprawl as problems and aims at a more sustainable, liveable and safe region.

Ultimately, through improved development planning the project will assist on maintaining the ecological integrity of wetlands and other ecosystems, guiding on healthy development practices, integrating environmental considerations in sectoral structural planning, and facilitating a more efficient use of natural resources. This approach is directly aligned to main needs and issues described in the Coastal Wetlands Management Plan and the Environmental Action Plan.

Other relevant strategies are:

- Nationally Appropriate Mitigation Action
- Ghana's First (2002), Second (2006) and Third (2015) and Fifth (2020) National Communications to the UNFCCC
- Climate Change Technology Needs Assessment (2003)
- Ghana Climate Change Impacts, Vulnerability and Adaptation Assessments (2008)
- The Clean Development Mechanism
- Ghana's National Disaster Management Plan

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### ***Cote d' Ivoire***

The project will work on several of the most relevant national challenges and will be aligned with strategies from the INDC, the National Adaptation Plan, the National Environment Action Plan, the National du Développement Durable en Côte d'Ivoire dans la perspective de Rio+20, the National Development Plan 2016-2020 and 2021-2025 (and the United Nations Sustainable Development Cooperation Framework (UNSDCF) 2021-2025, to ensure alignment of the UN System with the UNSDCF), and the Programme National Changement Climatique 2015-2020. Regarding risk reduction, the main document the project will be aligned with is the Stratégie Nationale de Gestion des Risques de Catastrophes & Plan d'Action and the Cadre National des Services Climatiques. The project will support initiatives from these plans such as: improvement of disaster risk reduction and coastal areas management, elaboration of a coastal adaptation strategy, build active protection structures, ecosystems restoration, better management of natural resources, and consolidation of co-operation links between Cote d' Ivoire, the West African region and the international community. The project will also leverage the achievements of the National Adaptation Planning (NAP) process established under the UNFCCC. In relation to development the project will be aligned with the Plan National de Développement 2016-2020 and the Territorial Development Policy Framework (2006) as well as the pertinent development schemes and plans.

Regarding spatial development, at the national scale the project will be aligned with the key actions of the Territorial Development Framework adopted in 2006. This document sets a legal framework for central and local development. It ensures coherence between country, urban and sector infrastructure plans, and links national objectives with regional planning, through a participatory development process. At the district scale, the project for the Development of the Urban Master Plan in Greater Abidjan remarks managing pressure for urbanization, urban sprawl, and planning for population growth and competing land-uses, as key planning issues in the area. The document raises the concern of the continuous degradation of the environment that will take place if these issues are not tackled. This degradation will keep evolving in loss of natural forest and biodiversity assets, low quality living, increasing pollution etc. The project will align with this Plan by addressing these challenges through the different components, aiming at a more sustainable and resilient urban area. Ultimately, the project approach strongly supports the strategic assets described in the Plan National de Développement 2016-2020, such as accelerating the development of human capital and social well-being, development of infrastructure harmoniously over the national territory and preservation of the environment and strengthening regional integration and international cooperation.

For a detailed overview of project alignment with national and sub-national strategies, see Annex 6.

## **PART II.F COMPLIANCE WITH RELEVANT NATIONAL TECHNICAL STANDARDS**

In developing each component of the project, an analysis of relevant national standards was undertaken. The findings of the analysis are summarized in the tables below and reflected in the risks screening belonging to the ESMP (see risk screening regarding principle 1, law compliance, under Part II, Section L, Annex 5).

During the implementation of activities, the National Project Managers (see their role in Part III Section A) will ensure that all project activities comply with existing national technical standards. At the beginning of the project, when the sub-project implementation plans are fully developed with communities and municipalities, including detailed engineering studies, the necessary steps to comply with these standards will be detailed in addition to what is described for each country/city below.

Major national standards worth highlighting due to its relevance to the overall project are labour laws, which will be complied for all employment contracts. More specifically, no activities of the project will be initiated without ensuring that the national legislations are applied for construction activities entailing infrastructure interventions in Component 2. Applicable laws are: (i) for Côte d'Ivoire Loi n°95/15 du 12 janvier 1995; (ii) for Ghana The Labour Act No 651 of 2003.

**Côte d'Ivoire**, Table 141449, Technical Standards

Legend											
A- Requires approval by authorities			B- Subject to regulation, no approval needed			C- Requires coordination with designated authorities					
No.	Technical Standard	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	3.3
1.	Law No. 64-490 of December 21, 1964, on Plant Protection						B	B			
2.	Law No. 95-893 of October 27, 1995, on Rural Communities	B		B	B	B	B	B			
3.	Law No. 96-766 of October 3, 1996, on the Environment Code	A		A	A	A	A	A			
4.	Decree No. 96-894 of November 8, 1996, on Environmental Impact	A		A	A	A	A	A			
5.	Decree No. 97-678 of December 3, 1997, on Marine and Lagoon Pollution						B				
6.	Decree No. 98-257 of June 3, 1998, on the implementation of Law No. 97-721 of December 23, 1997, on cooperatives							A, C			
7.	Law 98-755 of December 23, 1998, on Water Code						B	B			
8.	Law No. 98-750 of December 23, 1998, on Rural Land Propriety	-	-	-	B	B		B			
9.	Decree No. 89-02 of January 1989, on the fabrication, sales and use of pesticides							B			
10.	Law No. 2003-208 of July 7, 2003, on the transfer and distribution of competence from the State to local authorities (in the field of environmental protection and management of natural resources)	B, C	B, C	B, C	B, C	-	-	-			
11.	Decree No. 2005-268 of July 21, 2005, establishing environmental protection and management of natural resources, the methods of application of law n° 2003-308 of July 07, 2003, on the transfer and distribution of powers from the State to the Territorial Communities	A	-	A	A	-	-	-			
12.	Decree No. 2005-263 of July 21, 2005, fixing in terms of civil protection, the modalities of application of Law 2003-208 of July 7, 2003.	A	B	A	A	A					
13.	Decree No. 2012-988 of October 10, 2012, establishing, attributing, organizing, and operating the National Platform for Risk Reduction and Disaster Management	B	B	B	-	-	-	-			
14.	Decree No. 2013-441 of June 13, 2013, determining the terms and conditions for the classification of water resources, hydraulic facilities and structures	B, C		B, C	B, C		B, C	B, C			
15.	Decree No. 2013-678 of 2 October 2013, on Plant Species							B			
16.	Law No. 2015-537 of July 20, 2015, on Agricultural Orientation							B, C	B, C	B, C	B, C
17.	Law No. 2017-378, of June 2, 2017, on development, protection, and integrated management of the coastline littoral	B		B	B						
18.	Law No. 2019-576 of June 26, 2019, on the Construction and Housing Code				A						
19.	Law No. 2019-675 of July 23, 2019, on Forestry Code	B, C		B, C	B, C		B, C	B, C			

**1. Law No. 64-490 of December 21, 1964, on Plant Protection**

**Alignment:** This law establishes the rules to protect plants and vegetables from parasites, describing practices allowed and forbidden. Since output 2.2 refer to replanting mangrove and output 2.3 to agriculture practices, the activities are subject to this law, regarding usage of seeds, management of soil and similar activities.

**Procedure:** During the preparation of the planting and management activities, this law must be verified.

**2. Law No. 95-893 of October 27, 1995, on Rural Communities**

**Alignment:** This law provides definition on rural communities and the governance structure, regime and functioning of rural settlements. It also sets the roles and responsibilities of rural councils and its commissions, including their relation to development projects related to the rural communities. Since the Transnational Coastal Development Strategy (output 1.1) includes various communities within 5 districts; the sub-national spatial development framework (output 1.3.) targets the communities in the Department of Jacqueville and the 9 communities refer to small settlements, the integration of their institutional organisms in the management of the territory is essential. Therefore, outputs 1.1, 1.3 and 1.4, and the related capacity building activities (output 1.2) are subject this law. The localisation of these strategies through the concrete interventions proposed in outputs 2.1., 2.2 and 2.3 are also subject to this law.

**Procedure:** the regime and the functioning of the rural settlements as established by this law will guide the preparation of the strategic plans of outputs 1.1, 1.3 and 1.4 to ensure the key entities are involved, including the rural councils; the local trainings will follow the regime and functioning of the settlements to ensure broad participation and alignment with the annual agenda. The physical interventions of output 2.1, 2.2 and 2.3 will involve the councils and the commissions to mobilise the communities.

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### 3. Law No. 96-766 October 3, 1996, on the Environment Code

Alignment: this law provides principles of the protection of the environment, including the requirement of environmental management plans, list of protected areas and animals, perimeters of protection for each type of environment and rules. It also determines requirements for plans, programmes and projects impacting the environment. Since outputs 1.1, 1.3 and 1.4 propose strategies for climate adaptation and outputs 2.1, 2.2 and 2.3 localise physical interventions, they are subject to this law.

Procedure: An Environmental Impact Assessment is required and was already developed for the physical interventions (outputs 2.1, 2.2 and 2.3) as part of the pre-assessment phase and was approved by the Ministry in charge of the Environment. Strategies and plans (output 1.1, 1.3 and 1.4) will be submitted to the Ministry in charge of Environment for approval.

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### 4. Decree No. 96-894 of November 8 ,1996, on Environmental Impact

Alignment: This decree further details the rules of the Environmental Impact Assessment, the examination and authorization process, in accordance with the law No. 96-766 of 1996 on the Environment Code. Since outputs 1.1, 1.3 and 1.4 propose strategies for climate adaptation and outputs 2.1, 2.2 and 2.3 localise physical interventions they are also subject to this decree.

Procedure: An Environmental Impact Assessment is required and was already developed for the physical interventions (outputs 2.1, 2.2 and 2.3) as part of the pre-assessment phase and was approved by the Ministry in charge of the Environment. Strategies and plans (output 1.1, 1.3 and 1.4) will be submitted to the Ministry in charge of Environment for approval.

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### 5. Decree No. 97-678 of December 3, 1997, on Marine and Lagoon Pollution

Alignment: this decree determines the forbidden actions to avoid polluting the water bodies, including penalty. Since output 2.2 proposes drainage channels and water management strategies in relation to the lagoons and ocean, the activities are subject to this decree.

Procedure: during the construction of drainage channels and during the trainings, the team will need to stress the channels cannot be linked to domestic water use. The management and maintenance activities will count with assessment of the integrity of the facilities also in relation to the origin of the water they are receiving.

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### 6. Decree No. 98-257 of June 3, 1998, on the implementation of Law No. 97-721 of December 23, 1997, on cooperatives.

Alignment: this decree updates the Law No. 97-721 of December 23, 1997, on the cooperatives. It provides the principles and details for establishing commercial entities formed as cooperatives. Since output 2.3 propose the development of cooperatives for the agricultural business models, this output is subject to the decree.

Procedure: at preparation stage of output 2.3, sensibilisation and capacity building activities will take place to raise awareness on the governance structure and functioning of the cooperatives. The structure, focal points (committees, board, etc.) and obligations will follow this decree. For the cooperative to acquire legal status and its benefits, the cooperative documents will be submitted to the entity in charge for approval at later stage of the implementation of this output.

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### 7. Law 98-755 of December 23, 1998, on Water Code.

Alignment: this law defines the conditions of water use, extraction and the instruments of management and requires the participation of key institutional bodies. Since output 2.2 and 2.3. include water-related activities (irrigation of mangrove seedlings, drainage channels, agriculture practices, etc.), they are subject to this law.

Procedure: before implementation water management facilities (output 2.2) and agriculture practices (2.3), the activities must be authorized by the Ministry of Water and Forests (MINEF).

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### 8. Law No. 98-750 of December 23, 1998, on Rural Land Propriety.

Alignment: this law defines the composition of the rural proprieties. Since the community plans (output 1.4) localise concrete interventions to be built in each community, and outputs 2.1 and 2.3 will use plots to implement the activities (EWS structures and planting activities), they are subject to definitions of public propriety and the rural land rights of this law.

Procedure: during the community planning process (output 1.4), the ownership of the land allocated for the interventions must be verified with the competent Ministries. If the land allocated for outputs 2.1 and 2.3 is private, an agreement will be created for the public use of the land.

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### 9. Decree No. 89-02 of January 1989, on the fabrication, sales and use of pesticides.

Alignment: this decree provides definition of pesticides and sets the rules of its use as well as organisms responsible for monitoring and management. Since output 2.3 promotes agricultural practices, including trainings to the community project management, maintenance the activities are subject to this decree.

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Procedure: the rules established by this decree will be incorporated to the trainings in the preparation phase of this output and the Ministry of Agriculture will be involved.

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**10. Law No. 2003-208 of July 7, 2003, on the transfer and distribution of competence** from the State to local authorities (in the field of environmental protection and management of natural resources).

Alignment: this law defines the roles and responsibilities of the 5 levels of territorial structure, including the development of planning strategies and managing the basic services, transportations, health and others. Therefore, outputs 1.1, 1.2, 1.3. and 1.4 must follow be developed with the participation of the entities, strengthening the coordination and aligning with strategies already in place.

Procedure: for the development of the Transnational Coastal Development Strategy (output 1.1), all the 5 districts and subsequent regions will lead the planning process, which will count with the participation of the Department authorities. Alignment will be made to integrate transnational strategy (output 1.1) to subnational (output 1.3) and local strategies (output 1.4), which will be led by Department Authorities and Communities, including prefet, sous-prefets and residents. Coordination will follow this law.

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**11. Decree No. 2005-268 of July 21, 2005, establishing environmental protection.**

Alignment: this decree further details the distribution of competences established in Law. No. 2003-208 of July 7, 2003, with specific focus to the environmental protection. Since outputs 1.1, 1.3 and 1.4. are about plans for environmental resilience to climate-related risks, the activities must follow this decree.

Procedure: The Transnational Coastal Development Strategy, the National Spatial Development Framework and the Community Plans will be submitted for approval to the Ministry in charge of the Environment before implementation.

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**12. Decree No. 2005-263 of July 21, 2005, fixing in terms of civil protection**, the modalities of application of Law 2003-208 of July 7, 2003.

Alignment: this decree further details the distribution of competences established in Law. No. 2003-208 of July 7, 2003, with specific focus to the civil protection and defence, including construction of centres of security and emergency, awareness raising and development of safety strategies in alignment with territorial strategies and plans. Since outputs 1.1, 1.3 and 1.4 refer to territorial plans and programmes related to climate change adaptation, and output 2.1 propose warning system, these outputs are subject to this decree. The related capacity building activities (output 1.2) will also follow this decree.

Procedure: the strategies related to civil protection and safety will involve representatives from the 5 districts and subsequent regions (for output 1.1.), and the Department of Jacqueville (for output 1.3), and the community plans with the respective Communes (for outputs 1.4 and 2.1) as well as for the capacity building activities (1.2.). The strategies will be submitted for approval to the Ministry in charge of the Civil Protection before implementation.

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**13. Decree No. 2012-988 of October 10, 2012, establishing, attributing, organizing, and operating the National Platform for Risk Reduction and Disaster Management**

Alignment: this decree establishes a national platform for risks reduction defining the functions of each entity and detailing its activities and mandate to measure and monitor risks, develop programmes and raise awareness. Since output 1.1, 1.2 and 1.3 relate to national and subnational strategies or capacity building, these outputs are subject to the decree.

Procedure: The National Platform for Risk Reduction and its Committees will be involved in the coordination to of the activities of output 1.1, 1.2. and 1.3 to align with existing risk management programmes and plans.

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**14. Decree No. 2013-441 of June 13, 2013, determining the terms and conditions for the classification of water resources**, hydraulic facilities and structures.

Alignment: The purpose of this decree is to determine the conditions and modalities for the classification of water resources, development planning related to water resources, the construction of hydraulic structures and the process to grant public utility status. Since outputs 1.1, 1.3, 1.4 relate to plannings strategies for climate adaptation, they are subject to this regulation. Since output 2.2 proposes water management solutions through NBS and output 2.3 proposes agricultural practices that require use of water, they are also subject to this decree.

Procedure: During the development of the strategies of output 1.1, 1.3 and 1.4, the list of classified resources will be considered and discussed with the Ministry in charge do the Environment and the prefets of the Departments involved (if there is a need, a survey can be carried out, in alignment with the decree). During the development of output 1.4 and in the preparation phase of outputs 2.2 and 2.3, the local water resources will be validated with before implementation.

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**15. Decree No. 2013-678 of 2 October 2013, on Plant Species.**

**Alignment:** This decree creates the National Catalogue of Species and Vegetables Variety for agriculture in Cote D'Ivoire and setting management instruments. Since output 2.3 involves planting seeds and vegetables for agriculture, this output is subject to this decree.

**Procedure:** The National Catalogue was consulted for the definition of species and prior to the implementation, the Ministry in charge of the agriculture will be involved.

**16. Law No. 2015-537 of July 20, 2015, on Agricultural Orientation.**

**Alignment:** this law established the agricultural policy, setting the authorities responsible, including the Bureau of Agriculture, the financing mechanisms and management instruments required, including development of strategic and management agricultural plan and its monitoring. It also sets the rules for the agricultural practice (use of water, land regulation, etc.) as well as for communication and information. Since output 2.3 proposes sustainable agriculture activities and the outputs 3.1, 3.2 and 3.3 strengthens the capacity of farmers, they are subject to this law.

**Procedure:** The Bureau of Agriculture, the Regional Committees of Agricultural Orientation, and the Council of Ministries in charge of Agriculture will be involved prior to the implementation of the agricultural activities to in the preparation of the capacity building and knowledge exchange activities (output 3.1, 3.2 and 3.3) to integrate with the planned activities, including the Conference of Agriculture and the biannual Journee de l'Agriculateur.

**17. Law No. 2017-378, of June 2, 2017, on development, protection, and integrated management of the coastline littoral.**

**Alignment:** this law establishes the principles and rules of protection for the integrated management of the coastal area, including the development of instruments for protection, activities and preservation strategies for hydrologic areas, lagoons, and maritime ecosystem. Since the Transnational Coastal Development Strategy (output 1.1) include 5 districts in the coastal area; the Sub-national spatial development framework (output 1.3) targets the Department of Jacqueline, and the communities of output 1.4. are all along the coastline, these outputs contribute to what the law aims to promote. These outputs are also subject to this coastline protection law regarding the rules of distance of constructions form the lagoons (even for environmental protection facilities), managing and extracting materials, etc.

**Procedure:** during the development of the strategies, the law will be consulted to ensure compliance of each activity to rules. Authorization of the activities must be requested in accordance Code of Environment.

**18. Law No. 2019-576 of June 26, 2019, on the Construction and Housing Code**

**Alignment:** this law established the principles and rules for constructions. Since output 1.4 localise concrete interventions in each community, constructive strategies will be subject this Code.

**Procedure:** for activities that involve construction, during the development of the constructive drawings the rules in the Code must be followed (height, distances, etc.). Additionally, before the construction, the constructive design will be cleared and approved by the Ministry in charge of Construction and Urbanism the to acquire the construction authorization.

**19. Law No. 2019-675 of July 23, 2019, on Forestry Code**

**Alignment:** This law provides rules of use rights and management of different types of environments (v classifies the types of forests (agro-forests, plants outside formal forests, botanic gardens, etc.) also elaborating on the agricultural practices. It encourages initiatives to reconstitute ecosystems related to forests (Chapter 3) and the creation of forests (as part of the National Forest Policy). It also establishes that plans and programmes must reflect a National Forestry Policy. Since output 1.1, 1.3 and 1.4 are strategic plans and outputs 2.2 and 2.3 involve restoration of mangrove as part of the natural ecosystem and agricultural practices, the design and implementation of these outputs are subject to this law.

**Procedure:** During the development of the plans (1.1, 1.3 and 1.4) the National Forestry Policy must be consulted to respect the forest zones and the natural environment dynamic and create new zones if needed. This will involve the Ministry in charge of the Forests. Regarding the mangrove restoration and the agriculture practices (2.2 and 2.3), the Administration of Forests will be consulted prior the implementation of the interventions for better coordination but also to identify possible other supporting activities, laws or instruments that can improve the local dynamics.

**Ghana** Table 154544. Technical Standards

Legend												
A.- Requires approval by authorities			B.- Subject to regulation, no approval needed				C.- Requires coordination with designated authorities					
No.	Technical Standard	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	3.3	
1.	National Development Planning (System) Act, 1994 (No. 480).	C	C		C	B	B	B				
2.	Land Use and Spatial Planning Act, 2016 (No. 925 of 2016)	A	A		A	A	A	A				
3.	Local Governance Act, 2016 (Act 936)				A	A	A	A				

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4.	Lands Commission Act 2008 act 767	B,C	B,C		B,C	B,C	B,C	B,C						
5.	Riparian Buffer Zone Policy for Managing Freshwater bodies in Ghana, 2011.	B,C	B,C		B,C	A								
6.	Wetlands Management (RAMSAR site) Regulation 1999.	B			B	B	B	B						
7.	Land Act, Act 1036.	B,C	B,C	B,C	B		B	B						
8.	Land Planning and Soil Conservation Act. 1957	B	B		B	B	B	B						
9.	National Disaster Management Organization (NADMO) Act 927	C	C	C	C	C	C	C	C	C	C	C	C	C
10.	Water Use Regulations, 2001, LI 1692	B		B	B		A	B						
11.	Forest Act Cap 157, 1927							B,C						
12.	Manual of Procedures for Forest Resource Management Planning							B,C						
13.	Plants and Fertilizer Act 2010, Act. 803.							B	A					
14.	Pesticides Control and Management Act (1996) Act 528							B	B					
15.	Irrigation Development Authority Regulations, 1987.							B						
16.	The Environmental Protection Agency Act, 1994 (ACT 490)	C	C	C	C	C	C	C	C	C	C	C	C	C
17.	Environmental Assessment Regulations, 1999	B		B	B	A	A	A						
18.	Ghana Water and Sewerage Corporation Act, 1965 (ACT 310)							C						
19.	2018 Ghana Building Code and Construction				B	A	A							

**1. National Development Planning (System) Act, 1994 (No. 480).**

**Alignment:** The Act defines the National Development Planning Commission (NDPC) as the coordinating body of the decentralized national development planning system and defines the function of the Commission, sector agencies, ministries, district planning authorities, and the Regional Coordinating Council. Spatial plans developed under component 1 will have to be aligned with this act to comply with the coordination system for spatial planning and the corresponding spatial planning governmental bodies.

**Procedure:** According to the National Development Planning System, the Regional Coordination Council must harmonize plans in a regional manner with national development policies, hence output 1.1 to develop a Transitional Coastal Development Strategy and output 1.3 to develop a sub-national spatial development framework in Ada East will be coordinated by this entity for further approval by the NDPC. Additionally, the 11 community level plans will be prepared in coordination with the District Planning Authority and supported by the District Planning Coordinating Unit with the monitoring and evaluation of the Regional Planning Coordinating Unit.

**2. Land Use and Spatial Planning Act, 2016 (No. 925 of 2016)**

**Alignment:** Since component 1 is focused on strengthening spatial planning for coastal adaptation, the Transnational coastal development strategy, the sub-national spatial development framework and the community level adaptation plans must follow the technical committee's advice that this act mentions, ensuring the control of physical developments in sensitive areas.

**Procedure:** The Transnational Coastal Development Strategy (output 1.1) must be approved by the NDPC. The Ada East Spatial development framework considered in output 1.2 and community level adaptation plans considered in output 1.4 must be approved by the Land Use and Spatial Planning Authority (LUSPA). Additionally, the *Regional Spatial Planning Committee* will have to approve the Transnational Coastal Development Strategy and Ada East's spatial development framework in consultation with the District assembly. A permit by the *District Spatial Planning Committee* and a review by the *Technical Sub-Committee* for the physical interventions developed for the NBS to reduce run off and the EWS will be required. *The Technical Sub-Committee* will be involved on the preparation and review of the community level plans which will be furtherly approved by the *District Spatial Planning Committee*.

**3. Local Governance Act, 2016 (Act 936)**

**Alignment:** This Act provides with respect to local government and selected matters of local development and planning in Ghana. It defines the creation of district assemblies, district planning authorities, the Regional Coordinating Councils, and other relevant governmental bodies. Since the project include the development of spatial planning instruments at a local level, District Assemblies take a major role in the process of the designing and implementation of this spatial planning instrument. The Local Governance Act includes the Instrument, 2009 (L.I 1961) on the departments of District Assemblies and their operationalization in the local government which are required to give advice during the physical interventions for output 2.2 and 2.3.

**Procedure:** Community level plans (Output 1.4) must be coordinated and approved by their corresponding District Assembly, including the observation by the District's Executive committee and the Development Planning Sub-Committee. Physical interventions will follow the approval with a written permit issued by the District Planning Authority. The District Planning Authority must approve emergency and disaster prevention plans. Additionally, according to the instrument (L.I 1961), the District Assembly's Agriculture Department will be involved in the activities prepared under output 2.3, the Natural Resources Conservation, Forestry and and Game and Wildlife Department will assist during the preparation of output 2.2 and the Disaster Prevention Department will be assisting in output 2.1 for the establishment of the EWS and to give advice in the installment of the NBS system and the mangrove plantation under output 2.2.

**4. Lands Commission Act 2008 act 767**

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**Alignment:** The Land Commissions Act defines the headquarters, branches, responsibilities, and objectives of the Lands Commission. It also defines the functions of the Regional land's commissions. The land Commission has responsibility to develop surveys and mapping products for land management, therefore activities that require the development of maps and data production will have to be revised by the Land Commission.

**Procedure:** No approval required, however activities under output 1.1,1.2 and 1.4 must follow the Lands Commission direction for ensuring land development in conformity with national development goals. The Survey and Mapping Division as part of the Commission will have to supervise the production of maps and coordinate the preparation of plans that use data.

#### 5. Riparian Buffer Zone Policy for Managing Freshwater bodies in Ghana, 2011.

**Alignment:** This standard provides comprehensive measures and actions that would guide the creation of vegetative buffers for the preservation and functioning of water bodies and vital ecosystems in the country. The project through outputs 1.1, 1.2 and 1.3 and their respective planning instruments will have to be subject to the established buffer zones, the riparian buffer zone management plans considerations and the established coordinating roles of the districts, assemblies, and agencies. This approach can ensure biodiversity protection of sensitive ecosystems.

**Procedure:** For outputs from component 1, no authorization is needed since there are no physical interventions in buffer zones, however buffer zones will have to be incorporated in the community level plans (Output 1.4) as strategical sites for conservation. For output 2.2 on NBS, mangrove plantation activities near a buffer zone (Lands adjacent to rivers, streams, lakes and wetlands) will require a riparian buffer zone management plan to guarantee the preservation of the stream channels integrity and bank stability. The plan shall be approved by the relevant river basin management institution and the concerned District Assemblies.

#### 6. Wetlands Management (RAMSAR site) Regulation 1999.

**Alignment:** In Ghana de Keta Lagoon Complex is part of a RAMSAR site therefore specific activities developed under this area must be aligned with the Wetlands Management Regulation. This include to follow the activities that are allowed and prohibited to develop in designated core areas by the Minister.

**Procedure:** Activities that include the development of the Transnational Coastal Development strategy under output 1.1, the implementation of community level plans under output 1.4 and physical interventions (Establishment of EWS under output 2.1, NBS integration under output 2.2 and alternative livelihoods activities under output 2.3) in the Keta and Anloga district which are part of the Volta region where the Keta Lagoon is located (Output 1.1 and 1.4) are subject to follow the prescriptions of this act, including proscribed and restricted activities in core zones in order to protect the integrity of the ecosystem and its elements and ensure sustainable traditional practices for its conservation.

#### 7. Land Act, Act 1036.

**Alignment:** The Act establishes a framework for registering land rights, defines interests and a customary land rights framework. The act defines the framework for land administration and management and defines demarcations, survey processes and valuation of land. The project must consider the land management system that exists in Ghana; therefore, all activities must be subject to the existing land rights.

**Procedure:** The project will follow the rights and land registration processes that are defined in this law. The transnational coastal development strategy, the subnational spatial development framework and the community level adaptation plans are subject to the land administration and management principles that are defined on this act. However, no authorization is needed to follow what it is stipulated in this act.

#### 8. Land Planning and Soil Conservation Act. 1957

**Alignment:** This Act establishes committees with powers to preserve and reclaim land and to protect water resources in approved areas of the Gold Coast. If any of the project area is designated by the minister as a *planning area*, the project is subject to recommendations for spatial planning by a established planning committee. The president by a legislative instrument may regulate reforestation activities to the designated planning areas

**Procedure:** None of the targeted regions and community areas have been declared planning areas. The project is subject to follow this act if at any point the intervened areas are defined as such. No authorization is required.

#### 9. National Disaster Management Organization (NADMO) Act 927

**Alignment:** This Act establishes the National Disaster Management Organisation and defines its functions and powers. The project will have to be aligned with the NADMO overall guidance throughout the activities. For boosting climate resilience and reducing disaster risk through the spatial development frameworks developed under component 1, the project will comply with the prescriptions set by the NADMO which are sustained by Act 927. These will guarantee that the novel frameworks are supported by previous risk planning strategies and plans. Additionally, the Establishment of the EWS and the mangrove plantation for reducing flood risks will have to be subject to the recommendations and coordination by the NADMO.

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Procedure: Overall the NADMO will coordinate international support provided through this project as established on its functions under this act, this include their participation in the coordination of technical trainings that will be prepared under component 3. The National Disaster Management Committee (NDMC) and the Reigional Disaster Management Committe (RDMC) will coordinate the development of the Trasnational Coastal Development Strategy under output 1.1. The -Spatial development framework for Ada East under output 1.3 and the community levels plans under output 1.4 will be coordinated by the RDMC. Additionally, the community level plans, the establishment of the EWS and the mangrove plantation activities will be prepared in coordination with the respective District Disaster Management Committe where the interventions will be implemented. No authorization is required prescribed by this law.

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#### 10. Water Use Regulations, 2001, LI 1692

Alignment: The use of water following the principles that determine its efficient management will be procured as it is stipulated on the Water Use Regulation when preparing the Spatial Planning Instruments (1.1 and 1.3 and 1.4), focusing on the protection of water bodies, and enhancing its access as an elemental public good to be considered during urban and rural development planning. Additionally, activities under output 2.4 for increasing adaptive capacities through climate resilient agriculture require water consumption. Water consumption for mangrove watering in the nursery must follow the prescriptions under these regulations.

Procedure: Persons that are benefited by climate-resilient agriculture practices may require a permit from the Water Resources Commission for agricultural use *except* for subsistence agricultural water use for land not exceeding 1 hectare. For environmental water use (watering mangrove plantations) a permit is required through an application form with the appropriate administrative and processing fee. Spatial planning instruments under component 1 are subject to follow the water regulations to ensure the hydrological sustainability of the targeted areas.

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#### 11. Forest Act Cap 157, 1927

Alignment: The Forest act provides for the protection of forests which is essential to develop Output 1.4 (Community plans) and 2.2 (NBS including mangrove planting). It also establishes the dependencies that are responsible of managing the forestry activities, which will be coordinating jointly with the stakeholders of this project the mangrove restoration in the targeted areas.

Procedure: The project will have to be subject to the forest reserve regulation. Since no clearing, cutting, or burning on a land as part of a forest reserve is expected in any of the outputs, no authorization is required according to the Forest Act Cap.

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#### 12. Manual of Procedures for Forest Resource Management Planning

Alignment: Output 2.1 will be subject to comply with the established measures on the Manual of Procedures for Forest Resource Management Planning which includes prescriptions for plantation procedures, seedlings production, establishment of nurseries and overall considerations for forest management and processes to include strategic and operation plans in forestry activities

Procedure: Mangrove planting under output 2.1 will comply with the existing Forest Reserve Management Plans procedures. For the mangrove plantation, the EI and UN-Habitat will have to work in coordination with the District Forest Officers to ensure the maintenance and proper management of the reforestation activities.

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#### 13. Plants and Fertilizer Act 2010, Act. 803.

Alignment: This Act makes provision with respect to plant health and protection from pests and diseases, the importation and exportation of plant material, the production and marketing of seeds, the quality control of seeds, and the control on the manufacture and use of, and trade in fertilizers. The project is subject to this act during activities from output 2.2 for the plants used in the mangrove plantation and output 2.3 through the climate-resilient agriculture materials to use.

Procedure: No plants are expected to be imported for any of the subprojects. If climate-resilient seeds are imported under output 2.3, an application will be filled for seed variety registration to the Minister of Agriculture accompanied with a defined fee. Additionally seed samples must be introduced after being tested and approved by a designated officer in accordance with the International Seed Testing Association. Finally, for the accreditation, seeds will have to follow the requirements and procedures on the advice of the National Seed Council and the Ministry of Agriculture. No approval is required for organic fertilizers which are the ones expected to use in agriculture activities.

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#### 14. Pesticides Control and Management Act (1996) Act 528

Alignment: To be considered for agriculture activities in output 2.3 and mangrove planting on output 2.2, as it establishes the registered pesticides for legal use and regulations for its proper management.

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Procedure: No pesticides will be imported, exported, or manufactured therefore no approval is required. Agriculture activities will use natural pesticide approaches in the climate-resilient plots, nevertheless this project is subject to this law in accordance with the restricted, suspended and banned pesticides and its classification in Ghana.

#### 15. Irrigation Development Authority Regulations, 1987.

Alignment: This regulation establishes the Irrigation Development Authority, defines functions, and powers of the Authority and provides for its administration. These regulations need to be considered for the implementation of Output 2.3 to allocate water rights and obligations to consumers that implement irrigation practices (mainly for agriculture) in accordance with the specified terms within the Act.

Procedure: The board of the Irrigation Development Authority will regulate the use of water reservoirs for the irrigation activities under output 2.3 linked to alternatives livelihoods through climate-resilient agriculture; No authorization is needed under this standard.

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#### 16. The Environmental Protection Agency Act, 1994 (ACT 490)

Alignment: This Act establishes the Environmental Protection Agency and establishes the National Environment Fund. The project must be aligned with the environmental framework and the governmental bodies in charge of managing ecosystems and the impact of human activities on them. Therefore, all components, specially output 2.1, 2.2 and 2.3 that include physical interventions must consider the guidance of the EPA.

Procedure: The act is not explicit on a required approval from the agency; however, the project must be regulated and subject to the EPA considerations to secure the protection and improvement of the quality of the environment.

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#### 17. Environmental Assessment Regulations, 1999.

Alignment: The integration of the Environmental Impact Assessment in the project cycle is essential for providing environmental information at key stages. Early results of an EIA - called in Ghana Environmental and Social Management Framework (ESMF)- may indicate practical design changes that would avoid or reduce adverse environmental impacts or better benefit from environmental benefits. A screening procedure carried out by the government determines if the physical interventions in component 2 must be subject to an ESMF. As a result, the Mangrove restoration and the NBS drainage system require an EIA, therefore, a comprehensive report has been integrated including the assessments of both interventions so as for the establishment of Early Warning Systems under output 2.1 and Climate-resilient agriculture practices through output 2.3 of alternative livelihoods for climate adaptation.

Procedure: The procedure starts with the completion of a unique EA1 Registration Form which was due for all subprojects and screening by the EPA. UN-Habitat has already initiated the permit process. Additionally, a processing and permit fees need to be paid before issuance of the permit. A draft ESMF has already been prepared and submitted for the consideration of the Ghana EPA. Comments for finalization have been received and are being addressed for finalization of the report and final issuance of the permit on payment of permit fees. An authorization (Development and Building permit) has been requested from each District (Ada East; Ada West and Anloga/ Keta Municipal Assembly).

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#### 18. Ghana Water and Sewerage Corporation Act, 1965 (ACT 310)

Alignment: Since the project includes the implementation of drainage channels, micro infiltration cells and seasons bioretention cells that reduce run-off water under output 2.1, the Ghana Water and Sewerage Corporation (WSC) must be involved in the process of implementation due to its attributes described in the act.

Procedure: No authorization is required; however, the project is subject to the activities the corporation is responsible for, including the research for water and sewerage and the establishment, operation and control of sewerage systems, hence activity 2.2 must be implemented with the validation of the WSC.

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#### 19. 2018 Ghana Building Code and Construction

Alignment: The community level adaptation plans (O1.4) and the process of spatializing the pilots under outputs 2.1, 2.2 and 2.3 require following the construction code including requirements on site development, special inspections, regulations on usage of materials and flood-resistant elements.

Procedure: Developments planned under output O.1.4 as part of the adaptation plans are subject to this standard. The establishment of EWS (O.2.1) and their location in buildings and the construction of drainage channels, infiltration cells and bioretention basins require an authorization by the head of the Works department. The nurseries for mangrove (O.2.2) are subject to this code in the requirements of wood for construction.

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## PART II.G DUPLICATION WITH OTHER FUNDING SOURCES

Table 164612. Relevant projects, lessons learned and complimentary potential

Relevant projects/programme, executing entity and budget	Lessons learned (relevant for proposed interventions)	Complementary potential And non-duplication
<b>West/East Africa</b>		
<p>West Africa Coastal Areas Management Programme (WACA)<sup>85</sup> – WB</p> <p>Duration: 2015 – on going. Budget: US\$300 m</p> <p>Three pillars: (1) Strategic investment planning; (2) Knowledge, information, and capacity building; (3) Country and regional engagement and resource mobilization.</p>	<p>There is strong political support in Côte d'Ivoire. Process is slower in Ghana – multi-sector risks assessment still to be finalized.</p> <p>A study was conducted to define strategic orientations and a multisectoral investment plan for the commune of Grand Lahou. The study highlighted that coastal erosion has a negative impact on the economic, social and sustainable development of Grand Lahou. Based on the results from the study, strategic orientations for the commune were developed.</p>	<p><b>Complementary potential</b></p> <p>WACA focuses on 8 countries in West Africa, including Côte d'Ivoire and Ghana. WACA suggested to cooperate on strengthening the spatial planning component in Grand-Lahou (Côte d'Ivoire), which will allow to integrate lessons learned through the WACA Knowledge sharing on coastal management in West Africa Coastal Areas</p> <p>There is clear will to coordinate and share lessons learned. WACA also suggested to consider working together on coordinate on the multi-sector assessment in Ghana.</p> <p><b>Non-Duplication</b></p> <p>In Côte d'Ivoire, interventions mostly focus on Grand-Lahou. Apart from the collaboration on Grand-Lahou, the current proposal focuses on different target areas in Côte d'Ivoire. Concrete intervention sites in Ghana are not known yet.</p>
<p>Projet Régional d'Investissement pour la Résilience des Zones Côtières d'Afrique de l'Ouest (WACA-ResIP)</p> <p>Duration: 2017 – ongoing</p> <p>The project aims to strengthen the resilience of coastal communities and assets in six countries: Benin, Côte d'Ivoire, Mauritania, Sao Tome and Principe, Senegal and Togo.</p>	<p>Halfway through, the following elements have been accomplished: Development and strengthening of collaborative work between the national, regional and international levels; Mutualization of competences between the regional implementing institutions and better coordination of investments and interventions; Finalization of studies for the realization of infrastructures and of the feasibility studies for the establishment of the Coastal Observatory (Observatoire Régional du Littoral Ouest Africain); Adoption of additional protocols to the Abidjan Convention and their internalization; Updating of the West African coastal master plan (Schéma Directeur du Littoral Ouest Africain).</p>	<p><b>Complementary potential</b></p> <p>The project WACA ResIP also has the objective of improving risk management by mainstreaming climate change adaptation. The current proposal will build on the West African Coastal Master Plan developed under WACA ResIP. Collaboration will also be sought with the Coastal Observatory that is yet to be established under WACA ResIP, which will enhance and provide a tool to share knowledge on coastal phenomena.</p> <p><b>Non-duplication</b></p> <p>Even though both projects focus include Côte d'Ivoire, there is no geographical overlap on local interventions investment. The project focuses on the city of Grand-Lahou and certain surrounding villages, in particular from Lahou-Kpanda; Ekpossa; Likpiassie; Groguida; Noumouzou; Old Braffedon; Braffedon new and N'zida Zoukouboli. Furthermore, while the WACA-ResIP project has a large regional scope, by covering six different countries, the current proposal focuses more strongly on strengthening the transboundary cooperation of Ghana and Côte d'Ivoire.</p>
<p>West Africa biodiversity and climate change (WA-BiCC) – USAID.</p> <p>Duration: 2015-2021</p> <p>WA-BiCC addressed both direct and indirect drivers of natural resource degradation to improve livelihoods and natural ecosystems across the region. WA BiCC worked on increasing the capacity of institutions on three core thematic components: Combatting Wildlife Trafficking; Increasing Coastal Resilience to Climate Change, and; Reducing Deforestation, Forest Degradation, and Biodiversity Loss.</p>	<p>The WA BiCC programme ended in February 2021. The website of the programme now serves as a repository for key learning resources.</p> <p>Lessons learned from the programme highlight that transboundary management of shared natural resources can be achieved by bringing the two sides together on a regular basis, especially the technical teams, and allowing for ongoing discussion.</p>	<p><b>Complementary potential</b></p> <p>The WA-BiCC programme was implemented in West Africa, including both Côte d'Ivoire and Ghana. The programme generated knowledge and actions on coastal resilience and local-level risk management which represent interesting inputs for the current project proposal.</p> <p><b>Non-Duplication</b></p> <p>The Wa-BiCC programme strengthened capacities of national government institutions to address coastal climate impacts. Capacity trainings developed under the current proposal should build on this knowledge to further enhance capacities at different institutional levels. WA-BiCC project lead climate change adaptation activities in Sierra Leone and in the Fresco Coastal Landscape (Côte d'Ivoire). Thus, regarding target areas for concrete interventions, there is no overlap of target areas.</p>
<p>Mami Wata project<sup>86</sup> - by GRID-Arendal. Political and implementing partner: Secretariat of Abidjan Convention.</p> <p>Implementing entity: UNEP Duration: 01/2016-06/2022 Budget: 3,763,305 €.</p> <p>The objective of the Mami Wata project is to strengthen the capacities of the member countries of the Abidjan Convention to manage their marine and coastal environments in an integrated and ecosystem-based manner.</p>	<p>Mami Wata has built institutional and technical planning capacity related to marine management and implemented projects in Benin, Côte d'Ivoire and Ghana. The projects provided proof and learning opportunities for integrated ocean management.</p> <p>The project has highlighted the will of Ghana and Côte d'Ivoire to work together on coastal management.</p>	<p><b>Complementary potential</b></p> <p>Both projects have spatial and piloting components. The current proposal can build on the dynamics, lessons learned, knowledge productions and good practices identified through the Mami Wata project.</p> <p>As part of the Mami Wata project, various consultations were organized to raise awareness and involve stakeholders in the implementation of a Marine Spatial Plan for Grand-Bassam. A spatial management plan is being finalized and will be submitted to the Government for approval and implementation. This work will be very useful for developing the community-level adaptation plans in that area. In Ghana, the project team developed a Marine Spatial Plan for the municipalities of Ahanta West, Nzema East, Jomoro and the Ellembelle District and organized the validation of the proposed spatial scenarios.</p> <p>Furthermore, under the Mami Wata project, ministries from Ghana and Côte d'Ivoire met online to approve the preliminary documents for a transboundary marine protected area (MPA) between Assinie (Côte d'Ivoire) and Half Assini (Ghana). The project team proceeded by implementing tools for Integrated Ocean Management before starting the process of creating the transboundary MPA. Within this framework, the two countries are finalizing a transboundary Marine Environmental Status Report (MESR) and a description of the transboundary Ecologically and/or Biologically Significant Area (EBSA). Contact with UNEP has been established in order to facilitate information sharing on the progress realized.</p> <p><b>Non-Duplication</b></p> <p>Even though both projects cover the same countries, as well as similar topics, the current proposal will address resilience through a different sector: urban and territorial planning as a tool for climate adaptation. The current proposal will build on the dynamics created under the Mami Wata project to continue efforts towards strengthening transboundary cooperation between Ghana and Côte d'Ivoire and developing spatial plans and concrete interventions at the local level. Both projects include planning activities in the Grand-Bassam area. The plans developed under the current proposal, which include communities of Grand-Bassam, will take into account</p>

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		the Marine Spatial Plan developed through the Mami Wata project. Contact with UNEP has been established in order to facilitate information sharing on the progress realized.
<p>Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin Duration: 2019 – ongoing Budget: USD 7,920,000 Funded by: AF</p> <p>The project is implemented in Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo. The components of the project are: (1) Develop capacity and established frameworks at the local, national and regional levels to ensure risk informed decision-making; (2) Develop concrete adaptation and environmentally friendly actions with an integrated approach; (3) Strengthening policy and institutional capacity for integrated flood and drought management at the local, national and transboundary levels</p>	<p>Some 60 rural and urban pilot sites have been identified with the support of national agencies in the six countries of the Volta Basin. The design of the EWS is progressing more slowly than expected. Lack of progress in making key decisions regarding the system design has delayed the actual implementation of the VoltAlarm EWS.</p> <p>Significant challenges have been identified in the interaction between national agencies from different countries. This shows that there are challenges for collaboration between countries that need to be managed for transboundary projects.</p>	<p><b>Complementary potential</b> Both projects address risk management, flooding and will implement EWS to reduce disaster risks in vulnerable communities. Furthermore, both projects include a transboundary approach. Projects can share knowledge on best practices for flood management and risk reduction. Furthermore, the project in the Volta Basin can serve as a basis for strengthening community-level engagement and transboundary cooperation.</p> <p><b>Non-Duplication</b> Pilot sites in the project include: Akosombo dam (Ghana), Upper East Region (UER) and Bui region (Côte d'Ivoire). There is no geographic overlap since the project focuses on the Volta Basin, which covers mostly inland zones, while the current proposal focuses on coastal adaptation.</p>
<p>Reversing Ecosystem and Water Degradation in the Volta River Basin (REWarD-Volta River Basin)</p> <p>Implementing entity: UNEP, IUCN Duration: 2022 – ongoing Budget: USD 82 288 202 Funded by: GEF</p> <p>The project as four components: (1) Improvement of knowledge base and development of management tools for informed decision-making process; (2) Strengthening of transboundary planning, regional and in-country coordination and capacity; (3) Strengthening of resilience of ecosystems for sustainable livelihoods in the Volta basin; (4) Knowledge management and sharing, and effective M&amp;E</p>	No lessons learned reported yet	<p><b>Complementary potential</b> Both projects cover topics related to water management and the use of ecosystem-based approaches. The project in the Volta River Basin will produce International Waters knowledge products, while the current proposal includes the generation of knowledge product on best practices for coastal adaptation through spatial planning, EWS, NBS and alternative livelihoods development. Sharing these knowledge products with the partners of each project would allow to increase dissemination of learnings in the region. Furthermore, both projects are looking to strengthen cooperation and information sharing at a transboundary scale.</p> <p><b>Non-Duplication</b> The scale covered by the two projects is different, as the REWarD project focuses on the Volta basin. Concrete transboundary interventions under the REWarD are planned at the Oti sites between Togo and Ghana. Both projects include a component for the implementation of EWS. However, the REWarD project will focus broadly on droughts, while the current proposal promotes a more individual and integrated approach by covering flooding and drought-related hazards, adapting the EWS to the local context of each community.</p>
<p>Promoting Climate-Smart Agriculture in West Africa</p> <p>Implementing entity: Banque Ouest Africaine de Developpement Duration: 2020 – ongoing Budget: USD 14,000,000 Funded by: AF</p> <p>The project consists of three components: (1) Strengthening knowledge and technical capacity through regional and local interactions for the promotion of agriculture practices resilient to the adverse effects of climate change; (2) Scaling up best practices related to climate change adaptation in agriculture and pastoralism at the local and regional level; (3) Knowledge Sharing on Resilient Agricultural Best Practices Related to Climate-Smart Agriculture</p>	No lessons learned reported yet	<p><b>Complementary potential</b> Complementarity in between the two projects can be seen with regards to the activities related to adapting the agricultural sector to climate change. Both projects will build capacities and implement concrete interventions in this area. Thus, projects can share their best practices on climate resilient agriculture (water management, soil rehabilitation, etc.).</p> <p><b>Non-Duplication</b> The thematic scope of the projects is very different, as the climate-smart agriculture project focuses purely on the agricultural sector and mostly rural communities, while the current proposal promotes an integrated approach for adapting coastal settlements to climate change, combining spatial planning with concrete interventions that include NBS and alternative agricultural practices.</p> <p>Furthermore, there is no geographic overlap. The geographic scope of the project on climate-smart agriculture covers five countries (Benin, Burkina Faso, Ghana, Niger, Togo). In Ghana, the area covered by the project includes the Upper East, Upper West and Northern regions, which are all located in the northern part of Ghana. The current proposal has a strong transboundary focus on Ghana and Côte d'Ivoire, looking primarily at the coastal regions of the two countries.</p>
<p>Using Marine Spatial Planning in the Gulf of Guinea for the implementation of Payment for Ecosystem Services and Coastal Nature-based Solutions Implementing entity: FCWC Duration: 2021 – ongoing Budget: USD 12,000,000 Funded by: GEF</p> <p>The project has three main components: (1) Marine Spatial Planning in Togo, Ghana and Côte d'Ivoire; (2) Payment for Ecosystem Services in Togo, Ghana and Côte d'Ivoire; (3) Coastal and Marine Nature-Based Solutions Scheme in Togo, Ghana and Côte d'Ivoire</p>	No lessons learned reported yet	<p><b>Complementary potential</b> The parallel work done by the two projects will help scale up adaptation interventions in Ghana and Côte d'Ivoire. In particular, the projects can share knowledge and best practices on the NBS interventions that will be implemented, in order to strengthen the case for NBS and contribute to the scaling up of NBS during and after the projects.</p> <p><b>Non-Duplication</b> Both projects include Ghana and Côte d'Ivoire. The location of concrete NBS interventions in the GEF-funded project is not official yet. Regarding planning activities, the GEF-funded project will focus on establishing marine spatial plans, while the current proposal focuses on spatial and community-level plans, with a stronger focus on settlements.</p>
<p>Strengthening of the enabling environment, ecosystem-based management and governance to support implementation of the Strategic Action Programme of the Guinea Current Large Marine Ecosystem</p>	Project will probably start towards the end of 2022 and will then provide information on the progress realized.	<p><b>Complementary potential</b> Both projects will develop mechanisms for transboundary knowledge sharing related to environmental and socio-economic issues. The development of an integrated and harmonized approach for knowledge</p>

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<p>Implementing entity: UNEP, FAO, UNDP UNIDO Duration: To start Budget: USD 18,167,960 Funded by: GEF</p> <p>The project's components are: (1) 1. Strengthening of regional governance and regional and national capacities; (2) Strengthening of fisheries governance and management in an ecosystem context; (3) Assessments, stakeholder and interministerial consultations</p>		<p>sharing within the two projects would be of value in order to develop a coherent and long-lasting mechanisms for knowledge sharing among the countries.</p> <p><u>Non-Duplication</u> The geographic scope of the two projects is different, as the GEF-funded project is a regional project that covers the exclusive economic zones of 16 countries in the Guinea Current Large Marine Ecosystem (GCLME). Furthermore, the GEF-funded project focuses mainly on biodiversity issues and the adaptive management in fisheries and aquaculture sectors.</p>
<p>Building Climate Resilience into Transboundary Infrastructure projects</p> <p>Implementing entity: Ministry of Environmental and Sustainable Development Duration: 2016 - ongoing Funded by: African Climate Change Fund (ACCF)</p> <p>The project will enhance knowledge and capacity and facilitate partnerships for climate-proofing African infrastructure projects. Furthermore, it will integrate climate-resilience into two transboundary infrastructure projects.</p>	<p>The project strengthened the capacities of climate change stakeholders from Regional Member Countries through regional workshops in Togo for the West Africa region on integrating climate resilience into two transboundary infrastructure projects.</p>	<p><u>Complementary potential</u> The projects complement climate resilience in different regions of the Abidjan-Lagos coastal corridors. Both projects are looking to facilitate and develop transboundary projects in the region, with a focus on climate change. Projects can share knowledge on best practices for transboundary cooperation.</p> <p><u>Non-Duplication</u> There is no geographical overlap regarding infrastructure projects, as the ACCF project focuses on the Togo and Benin section of the Abidjan-Lagos Coastal Corridor for a road infrastructure project; and the Batoka Gorge Hydropower project in Zambia and Zimbabwe.</p>
<p>Coastal Fisheries Initiative - West Africa (CFI-WA) Implementing entity: UNEP, FAO Duration: 2020 - ongoing</p> <p>The Coastal Fisheries Initiative (CFI) is a global effort to conserve marine resources and ensure that coastal fisheries continue to play a crucial role in society by contributing to food security and economic and social development. The CFI operates in the West African nations of Cabo Verde, Côte d'Ivoire and Senegal. The project focuses on small-scale coastal fisheries and mangrove restoration.</p>	<p>No lessons learned reported yet</p>	<p><u>Complementary potential</u> The project used three techniques of management of mangrove ecosystems in the local intervention sites: restoration / planting on degraded areas; assisted natural regeneration and the setting in defence. As part of the project, a study on the functions, goods and ecosystem services and evolution through a diachronic mapping of mangrove ecosystems in Côte d'Ivoire and Senegal was realized.</p> <p><u>Non-Duplication</u> The intervention sites of the CFI-WA project are close to the villages in the regions of Sassandra in Côte d'Ivoire and the Saloum Delta in Senegal. Thus, there is no geographic overlap regarding the intervention areas of the two projects.</p>
<p>Scaling up climate-smart agriculture In East Guinea Bissau.</p> <p>Duration: 2020 - ongoing Budget: USD 9,979,000. Funded by: AF / BOAD</p> <p>The project activities are structured around 4 components, including: (1) Development of technical and institutional capacities to address increased climate risks in adaptation planning and practices; (2) Improving resilience of existing agricultural production systems; (3) Dissemination of knowledge on lessons learned; (4) Project implementation cost.</p>	<p>No lessons learned reported yet</p>	<p><u>Complementary potential</u> Both projects work on increasing resilience to climate change, the one in Guinea Bissau with a focus on agriculture. Lessons learnt and knowledge can be shared in between the two projects regarding interventions on climate-smart agriculture and extremely vulnerable groups (women, elderly and children). Both projects include activities focusing on the dissemination of knowledge generated during the projects. The manuals and documents on best practices and measures for climate-smart agriculture that will be produced under the project in Guinea Bissau represent valuable inputs for the project in Ghana and Côte d'Ivoire.</p> <p><u>Non-Duplication</u> There is no geographical overlap regarding the two projects. Furthermore, the Guinea Bissau project mainly focus on the agriculture and farming sector, while the current proposal promotes an integrated approach covering interventions for increasing the climate resilience of settlements through a combination of EWS, NBS and alternative practices, including climate-resilient agricultural practices.</p>
<p>Reducing vulnerability and increasing resilience of coastal communities in the Saloum Islands (Dionewar), Senegal</p> <p>Duration: 2018 - ongoing Funded by: AF</p> <p>The specific objectives are to: (1) Improve the resilience of the productive sectors; (2) Reduce the vulnerability of populations and natural habitats to hazards through the establishment of structures to better regulate flooding and fight against land salinization; (3) Enhance Communal Development Planning through integration of climate change, setting up local conventions and documenting lessons learned.</p>	<p>No lessons learned reported yet</p>	<p><u>Complementary potential</u> Both projects work on coastal erosion management and flood risk reduction. Complementarity can be achieved through knowledge sharing from interventions that aim at tackling similar challenges, especially for climate-resilient agriculture and flooding.</p> <p><u>Non-Duplication</u> There is no geographical overlap regarding the two projects. Furthermore, the project in Senegal has a local scope, as it focuses on the Island of Dionewar, while the current proposal focuses on increasing capacities and planning for climate adaptation at various scales, from the local to the regional level.</p>

<p>Reducing Vulnerability to Climate change in North West Rwanda through Community Based Adaptation</p> <p>Duration: 02/2014-02/2019 Budget: USD 9,366,982 Funded by: AF / Ministry of Natural Resources (MINIRENA)</p> <p>The project had 3 components: (1) Adaptation to climate change through integrated land and water management to support climate-resilient production and post-harvest systems; (2) Support for the transition from exploitive farming practices to sustainable diversified livelihoods; (3) Capacity building of local institutions.</p>	<p>The project relocated 200 households from high-risk zones after being affected by flooding and landslides. It also improved the farming conditions through the creation of ditches for water rainwater retention, allowing local people to cultivate land that was not cultivable before the project. The project also created off-farm jobs , generated income and improved access of farmers, especially women farmers, to banks.</p>	<p><u>Complementary potential</u> The project can incorporate lessons learnt from this project regarding erosion and flood control measures. Furthermore, the project may integrate lessons learned regarding ways to support the transition towards climate-resilient production systems and sustainable and diversified livelihoods. <u>Non-Duplication</u> There is no geographical overlap regarding the two projects.</p>
<p>Enhancing resilience of communities to climate change through catchment-based integrated management of water and related resources in Uganda</p> <p>Duration: 05/2016 - ongoing Budget: USD 7,751,000 Funded by: AF</p> <p>The project has three components: (1) Establishing Frameworks for Climate Resilient Catchment Management; (2) Implementing concrete adaptation actions for resilient and sustained ecosystems, control of floods and landslides across agricultural landscapes and diversification of livelihood strategies; (3) Building capacities to support local communities and managing knowledge.</p>	<p>To accelerate the adaptive capacity of communities and other stakeholders to climate change, the project has set up three demonstration centres.</p> <p>The demand for alternative livelihood options is high among affected households. Faced with limited budget, there was a need to prioritize the most vulnerable households.</p> <p>The consultancy-based methodology used by the project is a good approach for knowledge transfer to the communities and project staff.</p>	<p><u>Complementary potential</u> Projects may benefit from sharing knowledge regarding water management and flood control. Furthermore, projects may exchange on good practices for stakeholder participation and engagement, to enable collective planning, engagement and active participation of local communities. <u>Non-Duplication</u> There is no geographical overlap regarding the two projects. Furthermore, the project in Uganda focuses more on the rural population, while the current proposal focuses on increasing the resilience of settlements.</p>
<p>Adaptation to Coastal Erosion in Vulnerable areas in Senegal Implementing entity: Centre for Ecological Monitoring (CSE) Duration: 01/2011-01/2015 Budget: US\$ 8,619,000 Funded by: AF</p>	<p>Reduced exposure of vulnerable communities to coastal erosion through physical interventions, policies and regulations. Physical participatory interventions and trainings were implemented. Challenges with implementation (due to the lack of baseline data, nature of activities undertaken, etc.), with management and monitoring (lack of capacity, quantitative indicator, etc.). Beneficiaries have taken ownership of the project, including the ongoing maintenance of the coastal protection measures constructed. This is partly due to the extensive communication and awareness campaigns conducted as part of the project.</p>	<p><u>Complementary potential</u> The project will apply the lessons learnt from this Senegal project regarding involvement of local communities and technical knowledge from interventions that aim at tackling same challenges. The current proposal may also adopt similar approach to create the conditions that allow for local ownership of the project and the maintenance of infrastructures after the end of the project (communication, capacity building). <u>Non-Duplication</u> There is no geographical overlap regarding the two projects.</p>

Relevant projects/programme, executing entity and budget	Lessons learned (relevant for proposed interventions)	Complimentary potential And non-duplication
<p>Ghana</p> <p>Ghana-Netherlands Universities Volta Delta Design Project</p> <p>Delta Alliance Ghana Wing</p>	<p>Focus on sustainable management of the Volta Delta including coastal engineering, policy, institutions, and livelihoods.</p>	<p><u>Complementary potential</u> Delta Alliance will cooperate also on the urban lab Ongoing collaboration: Ghana Delta Wing / The Development Institute / students conducted the community assessments The project will maximize the use of findings from Delta Alliance Both projects will complement on transboundary strategies <u>Non-Duplication</u> The Volta Delta Design Project work with upstream communities of rivers Tordzie and Kplikpa (Blikpa); which are not included in our target areas</p>
<p>Global Alliance for Green and Gender Advocacy This project is in its second phase of building capacity for gender and environmental justice community organizations to better engage duty bearers on sustainable management of the Keta Lagoon Complex Ramsar site Both ENDS/MoF Netherlands and the Development Institute</p>	<p>Find ways to Empower community gender and environmental justices' groups</p>	<p><u>Complementary potential</u> The project works with the Development Institute to make use of their gender approach <u>Non-Duplication</u> Both projects have different core objectives, GAGGA is focused on women empowerment at decision-making level. UN-Habitat project will make use of this gender advocacy as an input on the resilience strategies</p>
<p>Economic Empower of Women and Youth Both ENDS/Global Green Grants/ Women 2030 and The Development Institute</p>	<p>Skills training in soap making and reed weaving into bags etc. and setting up of Village Saving and Loans Association have shown to be successful</p>	<p><u>Complementary potential</u> The project works with the Development Institute to empower women and youth and to promote gender equality <u>Non-Duplication</u> The Development Institute project focuses mainly on women empowerment training and skills training, no spatial planning are included.</p>

Enhancing community food security through management of saline soils Salt Farm Texel, Netherlands/ Crop Science Dept. Univ. of Ghana and The Development Institute	Initial feasibility done for a potential area to manage soil salinity and introduce salt resistant vegetable/crops but no funding secured yet.	<u>Complementary potential</u> The project will use findings and work together with the Development Institute to enhance the management of saline soils and water <u>Non-Duplication</u> Both projects have different thematic area of focus
Community conservation & pro-poor tourism Project Wildlife conservation in Ada and Anloga/ Keta Calgary Zoo/ DI and The Development Institute	Eggs of turtles also affected by erosion; therefore, they try to monitor erosion in Ada and Anloga/ Keta Protection of Turtles and whales, Manette, Sitatunga) through Marine protection area (MPA) concept and livelihood/ tourism	<u>Complementary potential</u> The project will identify hotspot areas along with the Development Institute and Wildlife conservation and align efforts UN-Habitat will work together with the development institute and Wildlife conservation to monitor coastal erosion and enhance livelihood options
Livelihoods and community management systems The Development Institute / IUCN-NL/Both Ends	TEEB studies Coastal communities ready to engage in building resilience for themselves through setting of community conservation areas and planting of mangroves	<u>Complementary potential</u> The project will work with the Development Institute to ensure areas for safe haven in times of disaster are zoned out <u>Non-Duplication</u> Both projects have different focus; conservation and designation of safe havens.
Sustainable Delta Management The Development Institute and Delta Alliance	Assessment of the Volta delta (Current doc) The need for Adaptive Delta Management and a governance and management system for the Volta Delta	<u>Complementary potential</u> The project would be working with the Development Institute to implement adaptive management through land use Spatial planning <u>Non-Duplication</u> Both projects have different focus; land use and spatial planning and delta management.
Sustainable Land and Water Management Project in Ghana <sup>87</sup> - WB 07/2014-ongoing	Still ongoing	<u>Complementary potential</u> Lessons learned from improved sustainable land and water management practices will be incorporated into the approach of the project <u>Non-Duplication</u> The project will focus on spatial planning at large scale which is not included in the WB project The WB project has a different target area: Northern Savannah region
Increased Resilience to Climate Change in Northern Ghana through the Management of Water Resources and Diversification of Livelihoods <sup>89</sup> - UNDP / AF 2016 - 2020	At start-up phase. Project will monitor lessons learned regarding livelihoods	<u>Complementary potential</u> Knowledge sharing regarding water management in Ghana Both projects will support different regions in Ghana on building climate change resilience <u>Non-Duplication</u> The project will focus on Southern areas not included in the UNDP/AF proposal The project will address resilience through a different sector: urban and territorial planning as a tool for climate change adaptation
UN-Habitat National Priority Planned City Extension in the Greater Accra Region	Strategic Development Framework for the physical plan for the extension of the urbanized area inside Ningo-Prampram District	<u>Complementary potential</u> The project will support inputting coastal erosion and climate change impacts in plan for the coastal area of the Ningo-Prampram District Coordination to align resilient development strategies <u>Non-Duplication</u> The city extension project only focuses on Ningo-Prampram District
Accra on the Greater Accra Resilient and Integrated Development (GARID) project - WB 05/2019-ongoing	Focus on Odaw basin in Accra Metropolitan area where 200 people died due to floods Most of the floods are caused by a combination of high tide and increased discharge. Erosion of lagoons and settlements does not only occur from the seaside but also from the river side	<u>Complementary potential</u> The project will use assessed hotspot mapping and hydrologically modelled of all basins in GA-region and flood hazard and risk maps for the spatial plans. <u>Non-Duplication</u> The project will not include Odaw basin as a target area
Ghana Government Livelihood Empowerment Against Poverty (LEAP) Programme	Cash-outs can help the most vulnerable, but drug use is difficult to change	<u>Complementary potential</u> Map all areas where the government (plans) to intervene and cooperate Consider cash for work approach for certain interventions Lessons learned from enhanced livelihood options of vulnerable groups will be integrated <u>Non-Duplication</u> The project will address poverty through a different mechanism, urban and territorial planning
Sustainable fisheries project USAID and Hen Mpoano	Effective stakeholder engagements through one-on-one discussions and focus group discussions promotes high participation. Effective stakeholder engagements through communication (peer to peer discussion, study tour, focus group discussions) enhance behavioural change communication. Ownership is key to project success.	<u>Complementary potential</u> The project will incorporate the lessons learned from the Sustainable fisheries project regarding stakeholder engagements and participation Fishermen are part of the targeted groups <u>Non-Duplication</u> USAID Project focuses on fisheries management through policy and institutional strengthening, which the project does not focus on
Sustainable Fisheries Management project EU and FoN / Care Int.	Recently launched so no lessons learned	<u>Complementary potential</u> Fishermen are part of the targeted groups <u>Non-Duplication</u> Focuses on ensuring sustainability of marine fisheries resources, which UN-Habitat does not focus on.
MWH Ada coastal protection works 1st and 2nd phase <sup>90</sup> - Ghana government / Deme Concluded in 2015	It is working at the beginning and the end of the stretch	<u>Complementary potential</u> Lessons learned from these interventions should be integrated in the project approach

US\$ 183 m 15 Groynes over 14.7 km stretch	It is very expensive; thus, the UN-Habitat project should propose affordable interventions with results that come close	Non-Duplication UN-Habitat could focus on livelihood enhancement /protection affords at the lagoon site
MWH Keta coastal protection works Concluded 2002 / 2003 US\$ 52 million 6 Groynes over 6,5 km stretch	It is working at the beginning and the end of the stretch It is very expensive; thus, the UN-Habitat project should propose affordable interventions with results that come close	<u>Complementary potential</u> Lessons learned from these interventions should be integrated in the project approach <u>Non-Duplication</u> UN-Habitat could focus on livelihood enhancement /protection affords at the lagoon site
Integrated climate risk management for adaptation to climate change 2015-2018 GIZ	Ensure vulnerable population groups, private businesses and governments against financial risks from extreme weather events.	<u>Complementary potential</u> Both projects work on increasing resilience to climate change in Ghana. They complement each other by working on different sectors. <u>Non-Duplication</u> The GIZ project works on risk management through insurance solution and other financial mechanisms.
Ghana Community Resilience Through Early Warning Systems 2013-2018 UNDP	Build capacities within the country to reduce disaster risk.	<u>Complementary potential</u> Both projects work on building resilience in the country and the project can get input from their hazard mapping and vulnerability assessments <u>Non-Duplication</u> The UNDP project focuses on providing resilience through early warning systems for natural disasters.
Adaptation of agro-ecosystems to climate change 2012-2017 GIZ	Define agricultural sector policy and national support measures for the adaptation of land use systems to climate change.	<u>Complementary potential</u> Both projects work on ensuring food security under climate change in different areas of the country. Both projects work on capacity building to climate change adaptation. <u>Non-Duplication</u> No geographical overlap. GIZ project works on savannah and transitional region. The GIZ project is focused on farming.
Landscape Restoration and Ecosystem Management for Sustainable Food Systems Project in West Africa – WB/ not started. Implementing entity: Environmental Protection Agency, Ministry of Lands and Natural Resources.	Not started	<u>Complementary potential</u> Both projects work with integrated resources management and agriculture practices. <u>Non-Duplication</u> Geographical area of the and concentration food system differ from the proposed project.

Relevant projects/programme, executing entity and budget	Lessons learned (relevant for proposed interventions)	Complimentary potential And non-duplication
<b>Côte d'Ivoire</b>		
Urban Resilience and Solid Waste Management Project Funded by: World Bank Four components: (1) Flood risk mitigation infrastructure and services; (2) Improvement of solid waste management infrastructure and services; (3) Project management support; (4) Contingent Emergency Response.	No lessons learned reported yet	<u>Complementary potential</u> Both projects include a focus on mitigating the negative impacts of flooding, using NBS and urban drainage. Both projects also include early warning systems (EWS) and urban planning activities. <u>Non-Duplication</u> The World Bank funded project focuses strongly on waste management but aims also to address current and future flood risk in the city of Abidjan and selected secondary cities, including Grand-Bassam. The current proposal includes the development of NBS for flood reduction in several communities, among which four are in Grand-Bassam. Communication with the Ministry of Sanitation, which is the implementing entity of the World Bank project, will be reinforced regarding the component 2 of the current proposal in order to align the projects' work and avoid duplication of interventions.
MPA Grand Béréby Supported by: UNEP	Grand-Béréby is the first Marine Protected Area (MPA) in Côte d'Ivoire. This area was chosen as a pilot site, in view of the creation of a network of MPAs in Côte d'Ivoire. Over 500 young people and women were trained in 22 community workshops. The training modules focused on the challenges of reforestation of this ecosystem and reforestation techniques. However, reforestation operations could not be carried out due to budgetary constraints. 100 households were equipped with improved stoves and more than 300 women and girls were sensitized to the use of this equipment.	<u>Complementary potential</u> The project is a good local example of an integrated approach to coastal ecosystem conservation, combining awareness raising activities, reforestation, improved stoves and alternative energy sources, among others. A similar approach will also be applied through the current proposal and can thus build on lessons learned from the MPA in Grand Béréby. The final evaluation report was provided to UN-Habitat for this purpose. <u>Non-Duplication</u> There is no geographic overlap. The MPA of Grand-Béréby, located in the region of San Pedro, covers an area of about 2,600 km <sup>2</sup> and includes the villages of Roc, Mani, Kablaké, Pittiké, Dahoua, Taki, Ménolé, Ouro, Pétit Digboé, as well as the surrounding localities.
Comoé River mouth (part of Cocody Bay rehabilitation project) – Côte d'Ivoire government and Morocco No funding yet	Not started yet but Deltares study is useful to understand dynamics	<u>Complementary potential</u> Opportunities to integrate Deltares studies into the approach of the project <u>Non-Duplication</u> The project will not focus on Grand-Bassam river mouth
Climate finance readiness in Côte d'Ivoire Ministry of Environmental and Sustainable Development 2016 African climate Change Fund (ACCF)	Advanced climate finance readiness at national level.	<u>Complementary potential</u> Both projects could collaborate on capacity building on climate change at national level Mobilization of resources to fight against climate change (objective of ACCF project) could support replicability of successful intervention of UN-Habitat project <u>Non-Duplication</u> ACCF project only focuses on climate finance
Emergency Infrastructure Renewal Project	The incorporation of local labour and women integration has proven to provide a positive social impact for people in the project area.	<u>Complementary potential</u> The project will incorporate and complement interventions from World Bank on basic infrastructure improvement: urban transport, water supply, sanitation and waste management.

World Bank 2012-2020	The project aimed at supporting economic and social development of the municipality.	<u>Non-Duplication</u> No geographical overlap
Cocody Bay rehabilitation Marchica Med Company. OPEC Fund. 2014- ongoing	Ecological review of the lagoon Ébrié and the Bay of Cocody. Cocody Bay Master Plan	<u>Complementary potential</u> The project will integrate strategies and plans from the Cocody Bay master plan <u>Non-Duplication</u> The project doesn't target Cocody bay
Abidjan integrated sustainable urban planning and management <sup>91</sup> –  Implementing entity: Ministry of Environment and Sustainable Development, Autonomous District of Abidjan. Duration: 2015 – ongoing. Budget: \$38,355,954 Funded by: GEF	Not lessons learnt reported yet.	<u>Complementary potential</u> Coordinate on working on establishing an urban observatory with an urban planning data base. Coordinate on working on a city-wide drainage and climate change adaptation strategy for the Greater Abidjan area <u>Non-Duplication</u> The project will focus on improving urban planning and management in other departments
Strengthened Environmental management System for Coastal Development to meet Rio Convention Objective - GEF Ministry of Environment MINESUDD. 11/2013 – 03/2018. Budget: \$1,250,000	Environmental Management Information System (EMIS) for decision making on coastal zone development. Piloting the use of improved environmental information systems for better decision making related to coastal zone management	<u>Complementary potential</u> The project will incorporate the GEF project lessons learned and database for the analysis and decision making on coastal resilience <u>Non-Duplication</u> The GEF project only focuses at policy and governance level
Protection of mangroves through the creation of firewood plantation <sup>92</sup> UNDP. 2008-2009	Deforestation linked to firewood supply for urban areas is becoming an increasingly significant problem in Côte d'Ivoire. Successful experience in creating a firewood park demonstrates that this model can be a solution for sustainable firewood management in urban areas, while also generating income for poverty alleviation. In coastal zones, these firewood parks can also contribute to preserve the mangrove ecosystem and increase the awareness of the communities involved.	<u>Complementary potential</u> The project will contribute to the protection and restoration of mangroves ecosystems. Gender mainstreaming as part of the GEF project will enhance effectiveness of gender inclusive activities as part of this project <u>Non-Duplication</u> In Anan village (Bingerville). No geographical overlap. To address environmental protection, this project will focus on spatial planning
Increasing Rural Communities' Adaptive Capacity and Resilience to Climate Change in Côte d'Ivoire  Implementing entity: International Fund Agricultural Dev Duration: 2022-ongoing Funded by: AF	No lessons learned reported yet	<u>Complementary potential</u> Complementarity in between the two projects can be seen with regards to the activities related to adapting the agricultural sector to climate change. Both projects propose to implement concrete interventions in this area. In the case of the project in Côte d'Ivoire, the project proposes the implementation of a set of concrete adaptation interventions targeted to 3 profitable agricultural production systems (rice, cassava and cocoa) in the Bandama basin. <u>Non-Duplication</u> The thematic and geographic scope of the two projects is different, as the project in Côte d'Ivoire will focus on agricultural production in rural communities in the Bandama Basin. The current proposal promotes an integrated approach for adapting coastal settlements to climate change, combining spatial planning with concrete interventions that include NBS and alternative agricultural practices.
Adapting to climate change and increasing the resilience of the population in south-west Côte d'Ivoire 2012-2016 GIZ	Increase resilience to climate-related risks and stabilise livelihoods.	<u>Complementary potential</u> The project also aims at protecting and adapting income sources. The project will learn from their practice especially on agriculture cultivation. <u>Non-Duplication</u> No geographical overlap. GIZ projects works in the south-west of the country. The GIZ project focuses on food security and food supply. The GIZ project does not focus on coastal erosion impacts.
Pilot training center project for agroecology/agroforestry in a Voluntary Nature Reserve in Tomassé  Implementing entity: NATURAL PACT	No lessons learned reported yet	<u>Complementary potential</u> The project will create a voluntary nature reserve to develop a set of integrated activities around a pilot training centre in agroecology/agroforestry and a demonstration farm. The priority objective is to train people in the fields of agroecology/agroforestry and to create income-generating activities for local communities. Complementarity could be considered for activities related to climate resilient agriculture, exploring opportunities for joint training and sharing of knowledge products. <u>Non-Duplication</u> The agricultural centre represents a very localized intervention with primarily a knowledge generating and training objective, while the current proposal has a larger geographic scope and will implement concrete interventions in several communities.
System da Alerte Precoce (SAP) Not started/Conceptualisation stage	This project works at the national scale and is at the concept note stage. PNUD, SODEXAM, the government a Green Climate Fund are engaged.	<u>Complementary potential</u> The Project will collect in meteorological information and share with the responsible sectors (energy, agriculture, health ministries). The SAP works at the strategic and coordination level. The (national scale) information from SAP can be combined with the information from the subproject of EWS to strengthen the resilience and generate knowledge.

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## PART II.H LEARNING AND KNOWLEDGE MANAGEMENT

All the planned activities from each component will include the generation and synthesis of the built knowledge during the planning and implementation of the project, facilitating the creation of tangible and non-tangible knowledge products. These knowledge products will be further disseminated through mechanisms and platforms designed to facilitate the adoption of generated knowledge at different levels, including community, subnational, national, and transboundary levels within the African region but also at different global contexts.

All three components include capacity training activities and generation of knowledge focused on:

- Transferring new knowledge and share experiences between the direct involved stakeholders.
- Use of new knowledge and experiences in other context-specific projects.

Under **component 1**, the implementation of **Transnational Coastal Development Strategy**, two subnational spatial development frameworks and community-level plans will trigger a process of learning-by-doing through **urban** and **spatial planning activities**. These will be done in collaboration with experts in the field, multi-level governmental coordination, academia, and participatory approaches. The generated **knowledge products** will include step-by-step handbooks on how to prepare specific level-based spatial planning instruments for climate adaptation, the training materials used in the capacity building activities, which are focused on linking climate resilience and urban planning in coastal regions and a compilation on lessons learned during the development of the Transnational Coastal Development Strategy, the sub-national level spatial frameworks plans and the community level adaptation plans which can be transferred to different regions and contexts.

Under **component 2**, **concrete interventions** and **alternative practices** are complemented with **specific trainings** to guarantee the sustainability of the selected transformative solutions. This, together with the community adaptation plans (O1.4) can enhance their maintenance and proper management, as well as to diffuse cross-cutting knowledge to enhance sustainable livelihoods and increase coastal resilience of human settlements to climate risks. It is important to highlight that the generated knowledge will include how *traditional native knowledge* (local organizing principles, technical skills, and procedures) is applied in combination with *novel technical solutions*.

Locally, **project demonstration sites** and **training centres** will contribute from the start and in an on-going way, to sharing lessons and training among the communities. To enhance gender equality practices, a women quota for participation will be applied for each training. At the same time, outcomes from community consultations regarding women challenges, vulnerabilities and opportunities will be incorporated in the training agenda. Additionally, **knowledge products** (videos, infographic, technical reports) will be generated to disseminate the experiences and the built knowledge beyond the intervened area. With these products the built knowledge can reach a wide number of audiences interested in topics related to climate adaptation, specifically in coastal regions.

**Component 3** is focused on **coordination** and **cooperation** between Ghana and Cote d'Ivoire. The activities framed under this component have the potential to generate regional knowledge and capitalize on best practices and lessons learned (cross-fertilization activities). This component also includes as a **knowledge product** the development of a digital platform linked to the Abidjan Convention in which the knowledge products from all three components- following validation of the Steering Committees - will be compiled to make the outputs accessible.

### How will knowledge management be procured?

The knowledge generation and dissemination will be done in collaboration with regional stakeholders, national governments, local governments, technical partners, and local communities. The knowledge products will be structured by the Execution Entities, systematized by the Project Supervision and Coordination Unit and disseminated by the Execution Entities and UN-Habitat. For the sake of continuous learning from the proposed sub-projects and initiatives at the local, national and regional levels, as well as fostering knowledge transfer and sharing, the learning and knowledge management strategy of the proposed project is inspired by **UN-Habitat's Results Based Management Framework** which focuses on achieving results, improving performance, integrating lessons learned into management decisions and monitoring and reporting on performance. The **Regional Project Implementation Unit (RPIU)** includes a **M&E and Communications Officer** who will coordinate the overall knowledge management and project communication. The Officer will work in close collaboration with the **Abidjan Convention**, which as Execution

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Entity of outputs 3.1, 3.2 and 3.3 is tasked with generating, extracting, systematizing, and transferring lessons learnt and generate capacity to adapt to climate change. The project will also use a participatory monitoring process, which will enable the beneficiary communities to work directly with the project's M&E and Public Information officer, to highlight issues in delivery and to strengthen adaptation benefits, including in replication and sustaining the project's gains.

Table 174743: Knowledge products per output

Expected concrete output	Knowledge products	Potential knowledge user
O.1.1 One <b>Transnational Coastal Development Strategy</b> for the joint planning and management of the coastal area of Ghana and Cote d'Ivoire	According to the process that was followed to prepare the Transnational Spatial Development Framework, development of a <b>handbook</b> explaining the steps to develop a (TSDP), including the particularities that must be considered. These can be used not only in a regional scale, but it can be adapted to other regions.  <b>Transnational Coastal Development Strategy Report</b>  <b>Webinars</b> on the development of transboundary spatial plans.	Multi-level urban planning authorities, policy makers, urban planners, climate change specialists with keen interest on understanding the planning, design, and implementation of transboundary spatial plans for enhancing climate resilience.
O.1.2. National and subnational level capacity building activities for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience	<b>Training materials</b> (PPP, workshops materials) developed during the implementation of the capacity building activities. Training materials will be related to the strengthening coastal climate adaptation through SDF.  <b>1 Training manual</b> focused on increasing capacities for climate adaptation in coastal ecosystems.	The training manual and materials will be accessible for those who would like to increase their coastal climate adaptation capacity through spatial development frameworks.
<b>O1.3 Two sub-national spatial development frameworks are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire)</b>	<b>2 Spatial Development Frameworks</b> with adapted SDF methodology with climate change adaptation focus to the West African (Ghanian and Ivorian context) and including collected data, matrix of functions and spatial framework  <b>Webinars</b> on the development of transboundary spatial plans.  According to the process that was followed to prepare the sub-national spatial development frameworks, development of a <b>handbook</b> explaining the steps to develop a SDF, including the particularities that must be considered. These can be used not only in a regional scale, but it can be adapted to other regions of the world.	The handbook can be used by policy makers, academia, technical experts, NGOs, civil organizations, agencies, and other audience interested on understanding the process of implementing spatial development frameworks with an emphasis on coastal climate resilience.
O.1.4. <b>Community level adaptation plans</b> (11) in Ghana e (10) in Cdl are developed with the purpose of spatializing the pilots and ensuring an integrated climate-change adaptation strategy within the planning practice of the community.	<b>1 case study report</b> summarizing the lessons learned of the community level adaptation plans, including a SWOT matrix of the preparation of community levels plans.	The report will be useful for policy makers, academia, technical experts, NGOs, civil organizations, agencies, and other audience interested on learning more about the implementation of community adaptation plans.
O.2.1. Early warning systems (EWS) for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire	<b>1. Technical report</b> on the implementation of EWS, where it is described the methodology, technical procedure and the challenges and opportunities of the implementation process  <b>1 video</b> showing the implementation of the EWS and how the project benefits the communities with the interventions. People from the community will be interviewed for preparing the video.  <b>1 infographic</b> on the implementation of EWS	The videos and infographic will be useful to understand and see the results from the implementation of EWS. The technical report will give a more specific and detailed insight of the technical issues of the EWS and the socioeconomic and governmental factors that worked as barriers and gaps during its implementation. This will be useful for policy makers, academia, technical experts, NGOs, civil organizations, agencies, and other audience interested on the implementation of disaster risk response and climate resilience interventions.
<b>O.2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities</b>	<b>1 Technical report</b> on the implementation of NBS and the blue carbon project, where it is described the methodology, technical procedure and the challenges and opportunities of the implementation process  <b>1 video</b> showing the implementation of the EWS and how the project benefits the communities with the interventions. People from the community will be interviewed for preparing the video.  <b>1 Infographic</b> on the implementation of NBS for climate adaptation in human settlements.	The videos and infographic will be useful to understand and see the results from the implementation of NBS. The technical report will give a more specific and detailed insight of the technical issues of the NBS and the socioeconomic and governmental factors that worked as barriers and gaps during its implementation. This will be useful for policy makers, academia, technical experts, NGOs, civil organizations, agencies, and other audience interested on the implementation of NBS and EbA.
O.2.3. Adaptive capacity through alternative livelihoods is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions	<b>1 Technical report</b> on the implementation of alternative practices, where it is describing the methodology the challenges and opportunities of the implementation process.  <b>1 video</b> showing the implementation of the EWS and how the project benefits the communities with the interventions. People from the community will be interviewed for preparing the video.  <b>1 infographic</b> on the implementation of alternative practices	The video and infographic will be useful to understand and see the results from the implementation of alternative practices. The technical report will give a more specific and detailed insight of the technical issues on climate resilient agriculture and the socioeconomic and governmental factors that worked as barriers and gaps during its implementation, hence it will be useful for policy makers, academia, technical experts, NGOs, civil organizations, agencies, and other audience interested on climate resilient agriculture practices.

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O.3.1 <b>Compilation and dissemination of lessons learned</b> and best practices on climate change adaptation in coastal West Africa with Abidjan Convention as <b>regional knowledge platform</b> .	1 on-line knowledge platform- <b>repository linked to the Abidjan Convention website</b> to share learning materials, lessons learned, best practices and design, operationalization, execution and evaluation of plans and projects.  <b>1 Report with 40 lessons learned</b> , and best practices compiled and shared at a regional scale related to coastal climate adaptation and gender transformative.	The online knowledge platform will be an open access website and will be targeted to policy makers, academia, technical experts, NGOs, civil organizations, agencies, and other audience interested on climate resilience and urban planning.
O.3.2. <b>Cross-fertilization activities</b> among Ghana and Cote d'Ivoire at different scales for <b>sharing experiences</b> on project's implementation, and fostering cooperation on coastal adaptation	<b>1 Report with 20 lessons learned</b> on the cross-fertilization activities focused on sharing ecosystem-based adaptation experiences in human settlements.	The report will be useful for policy makers, academia, technical experts, NGOs, civil organizations, agencies, and other audience interested on reviewing a summarize of lessons learned focused on ecosystem-based adaptation and the experiences of its implementation in western Africa.
O.3.3. Joint trainings including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation	<b>Training materials</b> developed during the implementation of the capacity building activities. Training materials will be related to the strengthening of for coastal climate adaptation through SDF.  <b>1 Training manual</b> focused on improving transboundary governance and planning for coastal climate adaptation.	The training materials and manual will be accessible for those who would like to replicate into a different context and challenges the implemented transboundary governance system trainings.

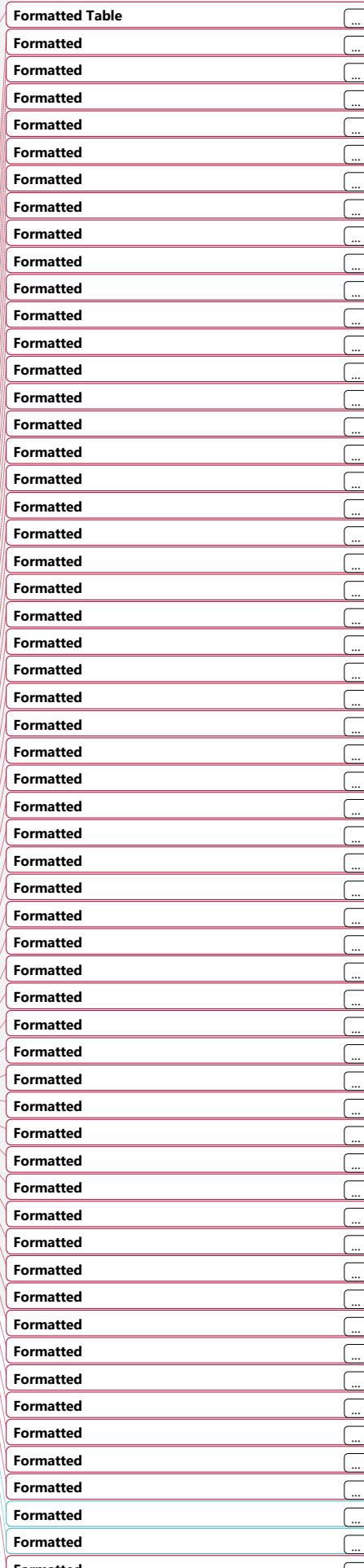
## PART II.I CONSULTATIVE PROCESS

For the project preparation, from 2016 to 2022 UN-Habitat has implemented several meetings and consultation workshops in both countries to:

- Align with National, sub-national and local priorities (see prioritized targeted areas and activities in Annex 2: Subprojects).
- Avoid duplication with other projects from government, UN agencies, NGOs, etc. and use lessons learned (showed in Part II.G Duplication with other Funding Sources).
- To comply with standards, rules and regimentations (showed in Part II. F Compliance with Relevant National Technical Standards).
- Identify specific needs and possible concerns of marginalised and vulnerable groups (see outcomes in Annex 3 Consultation and participants list, activities and further details in Consultation Details).
- Identify potential environmental and social risks and impacts (see alignment with national requirements for conducting EIA consultations in Annex 4 Gender Policy and Cross-Cutting Issues).

Table 181844. List of stakeholders consulted. For more details, including outcomes, see Annex 3.

Stakeholders	Ghana	Principle choice for consultation					Methods
		Call	To align with government priorities	To avoid duplication with other projects	To comply with standards, rules and regulations	To identify specific needs, possible concerns vulnerable groups	
Ministry of Environment, Science, Technology and Innovation (also on gender).	x		x	x	x		Private meetings + workshops
Wildlife Division from the Forestry Commission indirectly involved in the project implementation							
Environmental Protection Agency (EPA)	x			x		x	Private meetings + workshops
Ministry of Local Government and Rural Development.	x	x	x				Private meeting
Municipal District Assemblies in Tema, Ningo Prampram, Ada West, Ada East, and Anloga/ Keta	x	x	x		x		Private meetings + workshops
Land Use Spatial Planning Authority	x	x		x			Private meetings + workshops
Ministry of Food and Agriculture	x	x	x	x			Private meetings + workshops
SODEXAM		x	x			x	Private meeting
Fisheries Commission	x	x	x	x			Private meeting
Traditional councils	x	x			x	x	Private meetings + workshops
UNDP	x		x		x	x	Private meetings + workshops
UNCDF	x		x		x		Private meetings + workshops
UNICEF (gender)	x	x	x			x	Private meeting
UN Women (gender)	x	x	x			x	Private meeting
UNEP/Abidjan Convention	x		x		x		Private meeting
FAO		x	x				Private meeting
Development Institute/ Ghana Delta Alliance Wing	x		x		x		Private meetings + workshops
Hem Poano NGO	x		x		x		Private meeting
Mangrove Grower's Association	x				x	x	Workshops
Farmers Association	x				x	x	Workshops
USAID/ CRC/URI	x		x		x		Private meeting
PACT	x		x		x		Private meeting
Tetra Tech	x		x		x		Private meeting
Spatial Solutions	x		x		x		Private meeting
Dutch Embassy	x		x				Private meeting
University of Ghana	x			x			Private meeting
Targeted communities	x	x	x	x	x	x	Public meetings + workshops
Ministry of Environment and Sustainable Development (MINEDD) (also on gender)		x	x	x	x		Private meetings + workshops
Agence Nationale de l'Environnement (ANDE)		x		x		x	Private meeting



Ministry of Interior (DGDDL)	x	x		x			Private workshops
Ministry of Construction, Housing and Urban Planning (MCLU)	x	x	x	x			Private meetings + workshops
Municipalities of Cocody, Jacqueville, Grand Bassam and Port Bouet (Technical services)	x	x	x		x		Private meetings + workshops
École d'architecture D'Abidjan	x			x			Private meetings + workshops
Université Felix Houphouët Boigny, Abidjan / CURAT (remote sensing and GIS)	x			x			Private meeting
African Development Bank (AfDB)	x		x		x		Private meeting
World Bank	x		x			x	Private meeting

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The conceptualisation of this project builds on existing collaborations with the Government of Ghana as well as requests for support from both countries. In **2016**, the first consultations with relevant stakeholders (Ministries, municipalities, international organisations, AF focal points, etc) were held to define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans).

For the concept note stage of this project, in **November and December 2017**, field consultations and private meetings took place both in Cote d'Ivoire and Ghana. Private meetings with representatives from ministries, district governments, NGO's, Universities, and other relevant stakeholders were conducted to identify main climate change challenges and needs; proposal priorities and target areas; and existing projects in target areas to avoid duplication. During the field consultations, a combination of structured questionnaires and focus group discussions (with special attention to women, youth and other vulnerable groups) were applied to further collect specific information such as:

- Target population, poverty rates, means of livelihoods, gender-disaggregation (women and youth), vulnerable groups (elderly and disabled) and their specific challenges and needs. Results are under Part III.C Measures for Environmental and Social Risk Management, as well as under the Feasibility sheets from the ESIA.
- Climate change-related hazards, risks, impacts and vulnerabilities. Results are in Annex 2 Vulnerability Analysis.
- Barriers to adapt to the identified impacts.
- Community assets.

The field consultations took place in cooperation with the Development Institute/ Ghana Delta alliance Wing in Ghana, and with the École d'Architecture in Côte d'Ivoire.

For the proposal stage, **during 2018**, private meetings were held with leading ministries and districts in both countries to discuss the project approach as well as the implementation and coordination mechanisms. At community level, target group discussions were also held to agree on the list of priority interventions. Some of the proposed interventions were excluded due to cost inefficient (high costs), non-feasibility due to environmental risks (e.g. erosion generation in other areas) and non-preference of beneficiary groups. In some discussions, new interventions were suggested by the communities (e.g. mangrove restoration). During this effort, special attention was put to ensure these activities will equally benefit and empower women, youth and vulnerable.

**During 2019**, to detail the interventions, their operability, management and sustainability, further private meetings and discussions were conducted with communities, ministries, UN agencies and other stakeholders. In addition, to validate all project components for the proposal submission, workshops with all national, regional and local stakeholders were held for two days. These consultations included key community representatives: chiefs, women and youth organizations, elderly, fishermen, farmers etc.

**In 2020**, for the full proposal development phase, accredited consultants conducted the feasibility assessments, and environmental and social risks screening and impact assessment in both countries. These assessments followed national and AF requirements (e.g. consultations with all beneficiary groups to identify potential risks and impacts, including specific possible concerns of women and youth).

**In December 2021**, a new mission to Ghana and Côte d'Ivoire took place to validate the physical interventions and their location through field visit to the 21 targeted communities. A new round of private meetings with relevant entities of the government (ministries, planning department, district assemblies, prefectures, municipalities, etc.) were also held to update on the project development, exchange on existing similar projects and gather.

**In 2022**, different bilateral meetings and discussions with governments (ministries, planning department, district assemblies, prefectures, municipalities, etc.) took place to including more technical information and refining technical details on the project development. Additionally, working sessions with the executing entity and their technical team to improve the subprojects interventions and update information at community level.

For all the consultations with the communities, special attention was given to the inclusion of vulnerable groups to understand specific needs in the resilience building process, as part of the gender responsive strategy of the project. This was done through identified community-based representatives of women, elderly, youth and children and disabled. For example, in Ghana, there were participants from women and youth groups such as GAGGA Youth, DUNENYO and NUGORLI.



- Wokumagbe (Country: Ghana; District: Ada West)  
**Main challenges:** Lack of sanitation and drainage system, sea level rise, heavy rainfall, change in the rainfall patterns, accumulation of sediments in the lagoon and limited sources of livelihood.  
**Community's adaptation suggestions:** none.
- Akplabanya (Country: Ghana; District: Ada West)  
**Main challenges:** Lack of sanitation and drainage system, polluted lagoon, accumulation of sediments in the lagoon, limited sources of livelihood and floods.  
**Community's adaptation suggestions:** Dredging of lagoon, sandbags on the ocean line and drainage system.
- Goi (Country: Ghana; District: Ada West)  
**Main challenges:** Lack of sanitation and drainage system, accumulation of sediments in the lagoon, floods, and drought.  
**Community's adaptation suggestions:** dredging of lagoon, sandbags on the ocean line and drainage system.
- Kewunor-Azizanya (Country: Ghana; District: Ada East)  
**Main challenges:** floods, accumulation of sediments in the lagoon, change of environmental characteristics with the new water points.  
**Community's adaptation suggestions:** dredging of lagoon.
- Agorkedzi/Atiteti (Country: Ghana; District: Anloga-Keta)  
**Main challenges:** Lack of sanitation and drainage system, polluted lagoon, accumulation of sediments in the lagoon, floods, heavy rainfall events, change in the rainfall patterns and sea level rise.  
**Community's adaptation suggestions:** dredging of lagoon, sandbags on the ocean line, drainage system and mangrove.
- Agbledomi (Country: Ghana; District: Anloga-Keta)  
**Main challenges:** Lack of drainage system, accumulation of sediments in the lagoon, drought, floods, change in the rainfall patterns, sea level rise and soil salinization.  
**Community's adaptation suggestions:** sandbags on the ocean line and mangrove.
- Dzita (Country: Ghana; District: Anloga-Keta)  
**Main challenges:** Lack of drainage system, accumulation of sediments in the lagoon, drought, salinity, floods, risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization.  
**Community's adaptation suggestions:** drainage system.
- Whuti (Country: Ghana; District: Anloga-Keta)  
**Main challenges:** Accumulation of sediments in the lagoon, drought, salinity, floods and risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization  
**Community's adaptation suggestions:** drainage and sandbags.
- Lagbati/Lashibi (Country: Ghana; District: Anloga-Keta)  
**Main challenges:** Accumulation of sediments in the lagoon, drought, soil salinity and compactness, floods of agriculture land, risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization.  
**Community's adaptation suggestions:** dredging of the lagoon and mangrove reforestation.
- Woe (Country: Ghana; District: Anloga-Keta)  
**Main challenges:** Accumulation of sediments in the lagoon, drought, soil salinity and compactness, floods of agriculture land, risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization.  
**Community's adaptation suggestions:** dredging of the lagoon and elevated agriculture system and training.



Cote D' Ivoire:



- Tegbi (Country: Ghana; District: Anloga-Keta)  
**Main challenges:** Accumulation of sediments in the lagoon, drought, soil salinity and compactness, floods of agriculture land and risen temperature.  
**Community's adaptation suggestions:** move agriculture land and create irrigation system.

- Mondoukou (Country: Côte d'Ivoire; District: Grand-Bassam)  
**Main challenges:** High waves intensity, flooding due to storms and sea/ lagoon level rise, warmer temperature, decrease of fish, clandestine fishing (inadequate quantities).  
**Community's adaptation suggestions:** mangrove plantation, safe haven construction and drainage system.

- Quartier France (Country: Côte d'Ivoire; District: Grand-Bassam)  
**Main challenges:** Sea level rise, accumulation of sediments in the lagoon, soil saturation, agriculture in saturated soil and floods  
**Community's adaptation suggestions** vegetation barrier in the lagoon

- Azuretti (Country: Côte d'Ivoire; District: Grand-Bassam)  
**Main challenges:** flooding, coastal erosion, pollution, sedimentation of the lagoon, lack of employment and education facilities.  
**Community's adaptation suggestions:** mangrove to regulate and reduce flooding, sandbags to block water, dragging, pen culture.

- Vitre 2 (Country: Côte d'Ivoire; District: Grand-Bassam)  
**Main challenges:** Lack of drainage system, warmer temperature, decrease of fish, sediment accumulation and water level rise.  
**Community's adaptation suggestions:** Mangrove plantation and pen culture.

- Grand-Jack (Country: Côte d'Ivoire; District: Jacqueline)  
**Main challenges:** Lack of drainage system, accumulation of sediments in the sea, floods, change in the rainfall patterns, drought and sea level rise.  
**Community's adaptation suggestions:** Drainage system

- Attoutou B (Country: Côte d'Ivoire; District: Jacqueline)  
**Main challenges:** Accumulation of sediments in the lagoon, drought, floods affect agriculture, change in the rainfall patterns and lagoon level rise.  
**Community's adaptation suggestions:** Mangrove restoration, dragging and pen culture.

- Koko (Country: Côte d'Ivoire; District: Jacqueline)  
**Main challenges:** Flooding, sediment accumulation and water level rise.  
**Community's adaptation suggestions:** EWS to guide agriculture, safe haven construction, community centre.

- Tiemen (Country: Côte d'Ivoire; District: Jacqueline)  
**Main challenges:** Land speculation, decrease of fishing, polluted lagoon, accumulation of sediments in the lagoon, risen temperature, change in the rainfall patterns, drought.  
**Community's adaptation suggestions:** Pen culture, mangrove restoration.

- Tefredji (Country: Côte d'Ivoire; District: Jacqueline)  
**Main challenges:** Flooding, lack of sanitation, lack of drainage system, coastal erosion, lagoon level rise, sediment accumulation  
**Community's adaptation suggestions:** Mangrove and drainage channels.

- Taboth (Country: Côte d'Ivoire; District: Jacqueline)  
**Main challenges:** flood, erosion, sediment accumulation, soil saturation and salinization, lagoon level rise, lack of fishes.  
**Community's adaptation suggestions:** mangrove plantation.

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The Complete national feasibility assessment, ESIA-ESMP and consultation reports are available on request

## PART II.J JUSTIFICATION OF FUNDING REQUEST

The proposed project components, outcomes and outputs fully align with national and local government priorities and gaps identified, with identified community and vulnerable groups needs and with the Adaptation Fund outcomes as stated in the Adaptation Fund results framework. This alignment has resulted in the design

of a comprehensive approach in which the different components strengthen each other and in which outputs and activities are expected to fill identified gaps of Côte d'Ivoire's, Ghana's and West Africa's current climate change response. The project aims at maximizing the funding amount for the concrete community-based adaptation interventions (under component 2) directly benefitting local communities and the two countries. Funding allocation to the other (softer) components is required to support the effective execution and sustainability of component 2 and to make sure that knowledge and lessons learned are shared and ready to be replicated and scaled up in Ghana, Cote d'Ivoire and West Africa. The table below provides a justification for funding requested, focusing on the full cost of adaptation reasoning, by showing the impact of AF funding compared to no funding (baseline) related to expected project outcomes.

Table 194945. Overview of impact of AF funding compared to no funding (baseline) related to expected project outcomes

Outcomes	Baseline (without AF)	Additional (with AF)	Comment and alternative adaptation scenarios
<p>Under project component 1. National government staff, as well as local level staff, have created enabling conditions for enhancing coastal adaption.</p>	<p>Currently, no transnational planning and management of the coastal area for climate adaptation between Ghana and Cote d'Ivoire exists.</p> <p>National and subnational level governments have limited capacity to develop strategies and concrete interventions to address climate adaptation using spatial development instruments and tools.</p> <p>Existing plans at sub-national and district/department level do not include climate-change consideration and initiatives for climate action and do not currently support climate adaptation, which does not allow for a mainstreamed and medium-long term approach to address climate change impacts.</p> <p>Detailed / specific climate change threat and hazard risk and impact information / evidence is not available (and integrated in strategic coastal management and spatial / land use plans for the coastal areas in Côte d'Ivoire and Ghana. At the same time, technical staff is not trained to use existing tools to integrate climate change into the planning practice.</p> <p>Communities both in Ghana and Cote d'Ivoire do not have integrated and participatory medium-long term plans to respond to the climate change hazards of floods, extreme rain events to enhance their adaptive capacity to climate change. As a result, these vulnerable communities are not implementing strategic physical and ecosystem interventions focused on enhancing climate change resilience, leading to an increase in future climatic threat.</p>	<p>A transnational coastal development strategy for climate adaptation has been developed for the joint planning and management of the coastal areas of Ghana and Cote d'Ivoire, resulting in an integrated long-term engagement of both governments to take joint evidence-based adaptation action, as well as ensuring that adaptation measure in the coastal area of one country do not result in negative impacts on the other country due to lack of understanding, planning and management of transnational climate-related hazards.</p> <p>Capacities at the national and subnational level for climate change adaptation mainstreaming in spatial planning instruments has been developed resulting in government officials being able to advance and develop strategies, interventions and finance for climate resilience.</p> <p>Climate resilience considerations are now included in sub-national and district/department plans, scaling up the number, adequacy and long-term perspective of climate adaptation initiatives.</p> <p>Thanks to the on-the-job trainings, technical staff will be fully aware of the potential of spatial planning tools and data., empowerment and sustainability of the outputs will be ensured. On top of this, after the project, the freshly trained technical staff will be able to transfer the new climate-change related knowledge to other professionals.</p> <p>Most vulnerable communities in both Ghana and Cote d'Ivoire now have participatory community level adaptation plans that, building on the interventions funded by this project, are able to additionally identify climate adaptation projects that the community develops with the support of local governments and ensure the sustainability of the interventions long-term.</p> <p>All these impacts have created the enabling conditions for Ghana and Cote d'Ivoire to enhance national and local capacities for climate resilience as well as the strategies and plans at the different scales that ensure integrated long-term adaptation actions as well as enhanced and transnationally aligned climate adaptation governance and policies.</p>	<p>A scenario with a weak regional approach that does not use spatial planning and the different scales of plans (transnational, subnational, community) to mainstream and integrate climate adaptation at the different scales would increase the risk of adaptation measures in one country that result into impacts in other countries' coastal areas, due to lack of transnational planning and management and the lack of evidence-based transnational data and strategies that would result from that scenario.</p> <p>Furthermore, the possibility to leverage and scale up the requested funding by the project would be missed if spatial planning instruments would not be used, as they are the tools that ensure that additional interventions and enabling mechanisms would be in place to ensure that transnational, subnational and community climate adaptation interventions are lined up after the three and a half years of duration of the project. One dollar invested on climate adaptation spatial planning generates an average of over 50 USD in climate adaptation project portfolio.</p>
<p>Under project component 2. Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements and have acquired the capacity to manage and ensure durability of the realised pilots.</p>	<p>Municipal level governments, communities and local stakeholders have limited understanding of climate change induced risks affecting settlements and have not identified integrated and concrete interventions for climate adaptation planning and design. They have limited understanding on management and maintenance needs of climate change related interventions, as well as limited ownership over the process to plan, develop, operate and maintain possible interventions on early warning systems, integrated nature-based solutions and adaptive capacity.</p>	<p>Integrated concrete interventions for climate adaptation are built in 21 vulnerable settlements in Ghana and Cote d'Ivoire. The project outputs benefit the vulnerable population by protecting their lives, properties, assets and livelihoods through integrated interventions in early-warning systems, nature-based solutions and adaptive capacity through alternative livelihoods.</p> <p>Though the participatory approach communities develop ownership over the interventions, allowing them to better understand climate hazards, operate and maintain the projects, while at the same time creating a community governance structure able to scale-up and replicate further interventions.</p>	<p>Alternatively, interventions could target only capacity building and awareness raising for climate adaptation. However, the effects of climate change in the vulnerable settlements are predicted to be so severe that, considering the lack of skills, low financial capacity and physical conditions of the settlements, physical interventions are absolutely required to protect lives, property, assets and livelihoods.</p> <p>Alternative adaptation scenarios are resettlement, construction of large, more expensive physical infrastructure. These large-scale interventions have the risk of not being community driven and appropriate, which would lead to adaptation benefits for fewer people with higher project costs and a greater chance of negative social and environmental impacts.</p> <p>Without activities related to this outcome, there is a risk that subprojects will not be replicated by communities and that local context will keep importing solutions from other contexts, that do not fit their needs as much as locally designed solution may do.</p>

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<p>Under project component 3. Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary any climate-related hazards</p>	<p>Good practices and compilations of lessons learnt are scattered and non-systematic. In addition, there is a lack of mechanisms to share and transfer locally designed successful solutions and to capitalize success of local experiences and share it within the West African region with other countries suffering similar climate related hazards.</p> <p>Regional institutions, and national governments in the region (as well as the private sector and other relevant stakeholders) have limited knowledge of drivers of climate change and potential adaptation strategies. Knowledge and data on climate adaptation is limited, and in the instances that it exists, is fragmented. Tools are limited but exist, but there is poor capacity to choose the most suitable ones that are not usually adapted to the specific local and climate adaptation context.</p> <p>The current institutional set up does not promote cross-fertilization activities between Ghana and Cote d'Ivoire, therefore exchanges on successful project implementation are scattered and limited.</p> <p>Trainings on coastal climate adaptation are limited and do not reach a sufficient number of government officials and relevant actors. There are, in addition, no trainings focused on the transboundary governance systems and collaboration between the different governance scales for climate adaptation. Exchanges between government official of different countries are limited and ad-hoc, with limited opportunities for networking, collaboration, exchange and peer-to-peer learning.</p>	<p>The combination of spatial planning, concrete project implementation and enhance coordination and knowledge management has produced a systematic and localised repository of good practices and lessons learnt that are specific and successfully applied for Ghana and Cote d'Ivoire, and that are ready to be shared and deployed in other countries in the West African region upon localisation.</p> <p>The concrete projects on early-warning systems, integrated nature-based solutions and adaptive capacity through alternative livelihoods have been documented throughout the execution phase with detailed knowledge products that elaborate on the technical, social, legal, financial and environmental aspects of the interventions, producing a detailed and structured corpus of practical knowledge for the replication of similar interventions.</p> <p>The cross-fertilisation activities between Ghana and Cote d'Ivoire have brought throughout a period of 42 months the relevant regional and national stakeholders together to discuss and agree on common strategies and actions for climate adaptation. These activities have set up a discussion platform and governance structure that enables meaningful cooperation between the national and local institutions leading on climate adaptation.</p> <p>Trainings focusing on climate change adaptation at the transboundary, national and local scales have fostered the creation of a connected community of practice for climate adaptation and allowed government officials and communities to learn from practical examples on climate change adaptation that they are ready to apply to other locations. The regional and transboundary focus of the project has ensured that interventions at the regional level are coherent between Ghana and Cote d'Ivoire, and that policy, governance and concrete interventions are done in a coherent manner that does not generate negative impacts in neighbouring countries.</p>	<p>Without coordination raising activities, regional investments and strategies with the potential to adapt climate change, may not be fully integrated in national policies and (spatial plans) and the potential may be lost. Or even worse, such strategies and plans may conflict with national level ones.</p> <p>Without activities related to enhanced transboundary cooperation and coordination, there is a risk that interventions and planning practices will not be replicated and sustained in Ghana and Cote d'Ivoire and in West Africa</p> <p>Additionally, knowledge will not be shared between countries which will limit the potential for replication of successful adaptation interventions and increase the risk of developing interventions that generate negative impacts in countries along the coastline.</p> <p>Without the training component the transboundary networking, community of practice, collaboration and peer-to-peer learning and exchange would not take place, and not enough government officials in key positions would be trained and gain a clear understanding of designing, executing and monitoring climate adaptation interventions.</p>
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## PART II.K SUSTAINABILITY

Project sustainability is essential to ensure long-term impacts and benefits in the region, even after the completion of all planned activities. To this end, this project will focus on ensuring cross-sectoral, transnational and multi-level institutional engagement, strengthening communities' capacities and ownership throughout the different phases of the project. In combination, the three project components will ensure the sustainability of the achievements and dynamics created, through a combination of planning frameworks for coastal development, concrete adaptation interventions and enhance cooperation between Ghana and Côte d'Ivoire. To further guarantee sustainability after project completion, the technical expertise of local and national stakeholders will be strengthened through trainings to facilitate the implementation of the plans and the operation and maintenance of the infrastructures created. This transfer of knowledge and experience will also help governments to adapt created systems (e.g., EWS) if needed and to upscale best practices to other areas that may face climate risks in the near and more distant future. Considering the total cost of adaptation, the project will enhance economic opportunities, new sources of income and financial mechanisms. This will ensure that additional funding from other donors will not be needed to achieve the project's objectives and that the results of the project will be sustainable in the long term.

### Sustainability by component

Table 202046. Sustainability by component

#### Component 1. Strengthened spatial planning for coastal climate adaptation at different geographical scales

Component 1 focuses on the development of planning frameworks at multiple scales, from community to transnational level. These planning frameworks and related capacity trainings will set the ground for long-term strategic spatial development considering the climate-related hazards in the coastal zones of Ghana and Côte d'Ivoire, thus allowing both countries to use planning as a tool for coastal climate adaptation. Component 1 should be considered in combination with the other components of the project, as planning processes will build on lessons learned from Component 2 to scale up concrete interventions, and knowledge and best practices will be shared through Component 3.

**Output 1.1: Transnational Coastal Development Strategy** Through the transnational strategic spatial development plan, the project will seek to move beyond traditional planning processes that are often limited to official administrative boundaries. Successful climate adaptation requires planning at new scales, which take better into account the interconnected nature of coastal territories and ecosystems. The transnational planning activities will result in the development of a common spatial guidance document for Ghana and Côte d'Ivoire. However, just as importantly, the output will foster long-term cooperation between the two countries on climate adaptation and will set an example of transnational cooperation for the region.

**Output 1.2: National and subnational level capacity building activities** Through national-level capacity building and on-the job trainings for local staff, capacities of national and sub-national governments will be developed to enhance the use of specific planning methods, also emphasizing the monitoring methodologies that allow to follow-up on the planning implementation. Enhanced knowledge and strengthened capacities, as well as personnel and data will remain within the national and subnational governments of both countries, which will facilitate the further implementation of the strategic plans, as well as the replication of the planning process in other regions. UN-Habitat will support the planning process, bringing in additional technical expertise and the experience. UN-Habitat will also look at fostering its collaboration with both governments as a long-term partner.

**Output 1.3: Sub-national spatial development frameworks** The development of spatial development frameworks at subnational level will focus on reducing exposure to climate hazard and preventing development in hazard-prone areas. LUSPA in Ghana and MMDAs in Côte d'Ivoire will lead the development of the plans with the support of UN-Habitat. A comprehensive approach will be pursued in which all three dimensions of sustainability (social, economic, and



environmental) are integrated, assessing among others land rights and financial opportunities for concrete adaptation interventions. The plans will not only have an impact in the short term but will guide medium and long-term decision-making linked to spatial planning to allow for resilient development and growth.

Furthermore, lessons learned will be shared with LUSPA and the MMDAs to ensure that future planning processes can build on the experience of the project to facilitate planning linked to climate adaptation.

**Output 1.4: Community level adaptation plans** The Community level adaptation plans will create local-level climate adaptation strategies, as an integral part of the existing planning processes and practices of the communities. The plans will look at replicating and upscaling concrete local level interventions, building on lessons learned from Component 2 (subprojects). The plans will also foster participation of local stakeholders and facilitate access to financial mechanisms. Local governments will thus gain additional technical and community engagement skills, as well as new opportunities for implementing climate adaptation interventions in the future.

All in all, spatial planning and the related capacity building activities will allow to foster the project's sustainability by systematizing and upscaling physical activities and good practices from Component 2 (see below), managing land-use to better adapt to climate hazards and impacts, identifying hotspots of risk for prioritizing future interventions, promoting the development of economies in "safe" areas, and fostering transnational cooperation. For all outputs, spatial plans and frameworks require effective implementation, monitoring mechanisms and regular review/updates based on new challenges and dynamics. Plans and planning frameworks will be developed in collaboration with national and local governments to ensure that the results align with the long-term objectives and engagement of the institution (including allocation of staff and equipment for the implementation of plans). Output 1.2 focuses specifically on providing trainings to national and local-level governments to build the necessary capacities that will allow to ensure the long-term sustainability of the planning activities. The planning component will also provide support for national funding allocation and accessing international funding sources, which will allow for the long-term implementation of plans, the upscaling of interventions and the further development of cooperation initiatives between Ghana and Côte d'Ivoire.

## Component 2. Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realised pilots

The activities implemented under Component 2 include physical interventions and it is essential to ensure the long-term sustainability of these interventions, including necessary maintenance and effective strategies to avoid the deterioration of the created infrastructure. It is important to highlight that the project interventions will be adapted to the local context of each community and will build on the analysis of the soil and hydrodynamic characteristics, in order to ensure technical and environmental sustainability. At the same time, the component includes trainings that will increase the knowledge and capacities of local governments and the population. This transfer of knowledge and capacities will enable local stakeholders to adapt created systems (e.g., identification of new safe areas or evacuation routes for EWS) and upscale successful interventions (NBS, climate resilient agriculture, etc.) to other areas facing climate risks in the nearer or more distant future. In that way, interventions are flexible and can evolve under the control of local stakeholders to adapt to changing climate and environmental dynamics. The sustainability of the proposed interventions should also be considered in combination with the planning activities of Component 1, which will allow for replication and upscaling of best practices, even after the project ends.

### Output 2.1: Early warning systems (EWS)

- **Social:** EWS will enable communities to adapt to major climate-related events (e.g., coastal flooding) through the development of evacuation plans and routes and the identification of safe areas. Participatory mapping and identification of evacuation centres and routes has been conducted through participatory mechanisms will help to. This has contributed to build ownership during the preparation phase of the project and has raised awareness of the importance of EWS from the beginning of the project. In addition, regular awareness campaigns, drills and training after the project start will build the capacity of the local population to respond effectively to disasters and disseminate early warnings and drought information to key stakeholders. The sustainability of the EWS will be ensured through regular exercises, awareness activities and organized maintenance of equipment (alarms in particular).
- **Financial:** The project will support the integration of local EWS into existing national disaster risk management structures. Thus, after during the project the national, district/department and local offices and departments in charge of DRR and early warning systems in Ghana (National Disaster Management Organisation NADMO) and Cote d'Ivoire (Ministry of Environment and Sustainable Development) will be a key stakeholder in the execution of the component and will be part of activities to ensure integration of the project inside of the institutional systems and processes. Once the project ends, collaboration between local governments, district / department and national entities responsible for disaster risk reduction and management will ensure the continued financial and technical support needed for the long-term management of EWS, including equipment maintenance and data collection. The local and national institutions in charge of DRR will absorb the EWS Central Data Management created under this output in order to keep the climate-related data and timely and effective information to allow government take to take preventive actions in order to lower their impact and put together an effective and efficient dissemination of timely hazardous events and risks. The integration of local EWS into national and regional structures will also reduce the costs of operating and maintaining EWS over the long term. In addition, the project will support the creation of a community emergency response teams, composed of local volunteers who have been trained to respond to local disasters, assisting communities and guiding neighbours to safe locations. The involvement of volunteers will enhance ownership of the project and, at the same time, reduce implementation costs, thus ensuring financial sustainability.
- **Environmental:** The meteorological information and data collected will enable risk management decisions to be made based on accurate information and will strengthen community resilience by warning local populations about flood risk and enabling the communities to better cope with drought-related crisis situations, and on the other hand to avoid overexploitation of natural resources to compensate for losses due to floods or drought. In addition, EWS will provide useful data not only for crisis preparedness and management, but also for scientific studies aimed at better understanding hydrometeorological phenomena (hydrological model calibration, provision of input data to regional climate models, etc.). In turn, the data generated will be used to re-evaluate the suitability of identified evacuation routes and safe areas in the future, in order to adapt them to changing dynamics and evolving flood risk areas.
- **Technical:** The EWS will be developed taking into account the local context of each community as well as traditional knowledge of the local population. Information and warnings for the local population will be shared via local radios, mobile messages and specific communication mechanisms based on the local context of each community. Evacuation routes and safe areas will be defined based on possible existing mechanism and informal systems already in place. The project will also develop the necessary technical expertise of local staff, allowing for autonomous management and maintenance of the EWS in the long term, even after the project ends. Municipal technicians and other relevant local stakeholders, including police, military, civil authorities, health authorities, geophysical agencies, telecommunication organization, media, schools and education facilities within target areas will be trained on the use of the EWS-related equipment and/or information.
- **Institutional:** The project will strengthen existing institutional linkages for EWS information sharing and establish new ones where they don't exist. Main responsibility for the management and operation of EWS and related equipment will be given to the local authorities. However, the project will also support the integration of local EWS into existing national disaster risk management structures. Thus, after the project ends, collaboration between local governments and national entities responsible for disaster risk management will ensure the continued financial and technical support needed for the long-term management of EWS, including equipment and data collection. In Ghana, the institutions to be engaged in the process are the Hydrological Services Department (HSD), the Ghana Meteorological Agency (GMet), the Water Resources Commission (WRC) and the National Disaster Management Organisation (NADMO), specifically the emergency Operations Centre (EOC). In Côte d'Ivoire, the institutions to be engaged in the process are authorities in charge of DRR. The project will support the sharing of early warning information and data between the local

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governments and national institutions. EWS Central Data Management will be created to (i) collect the data generated, (ii) effectively and rapidly disseminate the information, and (iii) share information with relevant institutions in charge of DRR. The system will connect to relevant agencies via internet to provide detailed weather information and warnings. The project will seek to implement L-Alert, which is a disaster information sharing system where prefectures use a shared platform for sending out local disaster information via multiple media channels.

**Output 2.2: Integrated NBS for reducing run-off and adapting to floods**

- **Social:** NBS for flood risk reduction will be using local materials and easy construction techniques that enable the community to maintain the facilities in the long term. The planned maintenance of the NBS infrastructure will be integrated into existing daily routines, covered by local staff and the local population (gardening, cleaning the public spaces, etc.). The participatory approach that is proposed has the potential to build community ownership, leading the community to protect and preserve the interconnected system of natural spaces in the long term (e.g., daily surveillance, channels cleaning activities), thus making the intervention more prone to success. Specific trainings will allow to build capacities among local staff and community members for monitoring and maintenance of the infrastructure, but also to assess and identify areas that could receive new infrastructure to adapt to changing dynamics of floods or new risk zones that could emerge in the future. Additionally, the project includes awareness raising activities to develop a sense of responsibility for preserving the NBS, and especially the reforested mangrove areas. Finally, the project will develop a Resources and Livelihood Management plan for the protection and management of common resources, to be reviewed every two years.

**Financial:** The NBS implemented as part of the project are a cost-efficient solution for flood risk reduction, as materials used for the NBS and capacity building activities will come from local sources and are low-cost (sand, gravels, vegetation). This will also allow to reduce costs linked to the material needed for possible repair and maintenance work in the future (e.g., after extreme rain events). The project will engage community volunteers, which will be trained on the maintenance of the infrastructure, which will reduce the costs of the maintenance after the project ends. Training of trainers will take place to promote maintenance of systems (and prevent mowing), how to use the retention basin during dry season and how to profit from the vegetation planted. Regarding mangrove reforestation, financial sustainability will be achieved through the contribution of restored mangrove ecosystems to enhancing local livelihoods (e.g., fishing and mollusc selling activities), in combination with the Blue Carbon Project and the provided carbon offsets revenues (see output 2.3). The current budget of the proposal allocates funding for the technical reports which must be prepared as part of the carbon project development procedure (e.g. Development of Project idea note, project design document) to apply for a carbon certificate, so as the costs of validation and registration of the project by an accredited carbon entity and the costs of annual monitoring and reporting expenses (also called Carbon Project Operational Costs) for the initial three years of the project, the allocated cost for this process is \$ 210,000 USD. After this period, the project will become self-sustainable and use their own generated revenues to cover reporting and monitoring costs while creating retrofits for the communities generated by the carbon offsets. During the project implementation, the project will liaise with different government institutions in order for it to be included in the national and local budget and work together to identify other sources of funds to replicate those activities in other locations and to cover the low-cost maintenance of this output.

To include in the national budget/ local budget for regional  
Work together to identify other sources of funds to

- Chana Water and Sewerage Corporation (WSC);
- The project will work with the communities and the relevant national authorities (e.g., the Ghana Water and Sewerage Corporation) to identify ways of allocating budget to the maintenance of the created NBS infrastructure.

- **Environmental:** NBS will help communities adapt to the impacts of climate change, particularly flooding and heavy rainfall. At the same time, NBS will restore degraded natural environments and provide new natural spaces within the communities, which also benefit the local biodiversity. NBS, in particular the reforested mangrove buffer zones, will also help to protect existing ecosystems and coastal natural degradation in the long-term by reducing the impact of climate-related hazards, such as soil erosion. NBS interventions will use local resources, thereby reducing the distance and emissions associated with the transport of construction materials. To ensure that communities use the most adapted local species for possible future planting activities, a list of adapted plants and collection sites will be provided to each community. Also, assessment of hydrodynamics and soil characteristics will be developed as a first step of reforestation activities. This will include calculating water flows and salinity levels, assessing tidal changes and circulation, transport and dispersal of biochemical organic and inorganic materials, local biodiversity interactions and ecological dynamics. The assessment will allow to select to right species and adapt the reforestation process to the conditions of the local environment, thus making it more sustainable. Finally, the sustainability of the mangrove reforestation activities implemented under output 2.2 will be further supported by the activities implemented under output 2.3, which focus on the development of alternative livelihoods. Output 2.3 will target the root causes of mangrove deforestation, in particular the cutting of wood for cooking (for self-consumption or sale of food). This output will provide alternative sources of income (Blue Carbon Project, climate resilient agriculture, etc.) and raise awareness about alternative energy sources and energy efficient cooking solutions.

- **Technical:** The project will apply an integrated approach to NBS development, where a combination of the most relevant NBS will be implemented in each community, depending on the local context and adaptation needs. The aim is not to have stand-alone pilots, but to transfer to communities the knowledge and skills to implement transformative and integrated projects for coastal adaptation. In addition, the technical approaches for NBS implemented under the project will be adapted to the local context and will be complemented/reinforced by traditional knowledge. Technical sustainability will also be achieved by planting local species, which are adapted to the local climate, soil and hydrodynamic characteristics. For mangrove reforestation, technical sustainability depends on two main factors: appropriate species and site selection. Therefore, as a first step, the hydrodynamics and general conditions of the ecosystem will be analysed on site. This will allow to adapt the planting process to the dynamics of the local environment. The project will design a process for long-term monitoring of NBS interventions by the local government and specialized agencies to ensure the sustainability of the implemented activities. Lessons learned regarding the development of an integrated NBS approach for coastal adaptation and mangrove reforestation under climate change will be documented and shared to guide future interventions.

- **Institutional:** NBS will be implemented in collaboration with local governments to enhance project ownership and support the long-term monitoring and possible replication of interventions. For mangrove reforestation activities, in Ghana, the concept of the CREMA (Community Resource Management Areas) will be applied. The community will manage the mangrove areas with equal participation and access. Target beneficiaries will have access to the lagoons with the pre-condition to sustain it within a changing climate framework, based on a signed performance-based agreement. The CREMA will be the responsible entity for sustaining this project over time, including mangrove monitoring activities for guaranteeing the sustainability of the Blue Carbon Project. In Côte d'Ivoire, community committees will be set up to coordinate community participation for the reforestation operations and the monitoring. The blue carbon project will be prepared following the project development requirements and technical standards that exist to develop a smallholder and community carbon project, so the local communities become the primary beneficiaries of the climate, environmental and socioeconomic co-benefits of the mangrove restoration. Communities through the establishment of local committees and with the technical support of the EI will prepare the documentation to apply for a carbon certificate which must follow a validation and registration process. This guarantees the access to sell carbon offsets in the voluntary carbon market. The local communities in coordination with the EI will apply to a community-managed carbon certificate which is given to projects that follow the characteristics of the mangrove restoration activities framed under component 2. The carbon project will use the parameters already defined in this proposal including the measured capacity of mangrove to capture CO<sub>2</sub>, the population of the local communities and the hectares to be restored through reforestation.

**Output 2.3: Adaptive capacity through alternative livelihoods**

- **Social:** Outcome 2.3 has a strong socio-economic focus, as it seeks to increase social resilience to climate change through alternative incomes and livelihoods. Working on livelihoods will allow to address socio-economic conditions that are intrinsically linked to climate adaptation, and that need to be addressed in order to make adaptation options viable and sustainable. Through this outcome, community groups will benefit from a series of

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trainings focused on land and water management, soil fertility, energy options for cooking, carbon credits and resilient housing. The trainings will equip local people and staff with new skills and knowledge, with long-term impacts on food security, environmental conservation and DRR.

**Financial:** The project will contribute to diversifying and enhancing incomes of the local population in two main ways: (i) the project will help farmers adopt climate-resilient agriculture strategies to avoid potential income losses due to climate-related hazards (e.g., salt intrusion); (ii) the project will provide support for the development of a Blue Carbon Project, allowing communities to economically benefit from mangrove reforestation and preservation. As part of the climate-resilient agriculture activities, the project will carry out an analysis of the socio-economic conditions for integrating new crops, including an analysis of the market potential and the development of sustainable economic models for salt resilient crops. Additionally, the project will engage community farmers which will be trained on the maintenance of the infrastructure, reducing the costs of the maintenance after the project ends. Training of trainers will involve farmers within the communities to promote maintenance of the infiltration trenches systems, wells, as well on how to use the drip irrigation equipment and toolkit for soil sampling. After the project ends, the training centers can be used by farmers in activities such as storage of agriculture products, agriculture trainings, selling products and renting for other purposes. Additionally, the government through the responsible local and regional agriculture authorities are going to support the management of the training centre after the post-project phase for keeping agriculture activities on-going.

- **Environmental:** The project will promote solutions that help the local population adapt to climate change and, at the same time, preserve the natural environment and reduce the pressure on natural resources. In that way, the project will contribute to the long-term environmental sustainability of adaptation options. With regard to climate resilient agriculture strategies, the project will promote for example rainwater harvesting and agroecology approaches (e.g., crop rotation, soil regeneration). Trainings will also focus on the post-harvest process, particularly cooking, which is one of the root causes of mangrove deforestation. The project will raise awareness about energy alternatives and energy-efficient solutions that allow to reduce the use of mangrove wood for cooking.
- **Technical:** In order to increase the resilience of agricultural practices and secure key livelihoods for communities, the project will transfer knowledge on (i) improving soil fertility, (ii) introducing salt-resistant crops, (iii) promoting improved water management strategies, and (iv) improving agricultural land management. Each year, the project will train 60 lead farmers in the implementation of climate-resilient agricultural techniques. The project will also provide assistance for crop selection and establish demonstration plots. The technical knowledge generated by this project, including on salt-resilient crops and water infiltration systems, will be documented and shared with the local population and national institutions.
- **Institutional:** Local and national governments will be strongly involved in activities related to the Blue Carbon Project and climate resilient agriculture, to ensure that the momentum created continues after the end of the project. With regard to the Blue Carbon Project, the project will support the development of a concept note and relevant technical studies (carbon inventory). However, the project will also ensure that the governments have the necessary skills to implement the Blue Carbon Project once it is accepted and validated by the crediting entity. For climate resilient agriculture activities, the project will collaborate with local governments through the Agriculture Community Centres (ACC).

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### Component 3. Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities

For Component 3, the emphasis will be on creating the enabling conditions for long-term collaboration on coastal climate adaptation between Ghana and Côte d'Ivoire. In addition, lessons learned, and best practices will not only be shared between the two countries, but also made available online through publications and a knowledge platform. Thus, the project will contribute to the increase and sharing of knowledge on climate adaptation in coastal areas, which will also allow for replication and scaling up of the tested interventions.

**Output 3.1: Compilation and dissemination of lessons learned and best practices.** The project will provide new knowledge on a variety of topics related to coastal adaptation in West Africa, including spatial planning for climate adaptation at different scales, EWS, NBS for flood risk reduction, resilient agriculture techniques, blue carbon projects, energy alternatives and efficient cooking solutions. The project will ensure that lessons learned, and new knowledge generated are documented and made accessible to project partners, as well as to other partners in the region and internationally. This will be done through the development of publications and the setting up of a knowledge platform to upload and exchange best practices on coastal climate adaptation at community, sub-national, national and transnational levels. For the implementation of output 3.1, UN-Habitat and its implementing partners will collaborate with the Abidjan Convention, which provides a platform for experience sharing at the regional level.

**Output 3.2: Cross-fertilization activities among Ghana and Côte d'Ivoire.** Transnational cooperation for climate adaptation is essential for developing effective strategies that transcend official administrative boundaries and take into account the continuity of ecosystems. In addition, transnational cooperation facilitates the exchange of knowledge about shared climate hazards and possible adaptation options. Ghana and Côte d'Ivoire face similar climate risks, including floods and coastal erosion. Outcome 3.2 aims to create the conditions under which the joint work initiated under the project will strengthen sustainable cooperation between the two countries, even after the project ends. Through transnational exploratory missions and joint meetings, staff and experts from both countries will be able to meet and develop a better understanding of the similarities and differences of their countries with regard to coastal climate adaptation. In each country, focal points will be designated who will be responsible for taking forward the transnational cooperation, in particular for the implementation of the transnational coastal development strategy.

**Output 3.3: Joint trainings including technical staff from both countries.** To ensure that the plans and planning frameworks developed under Component 1 are followed by concrete actions, the project will make sure that both countries have the necessary capacities for the implementation and monitoring of planning instruments at different geographic scales (community level, subnational level, national level, transnational level). The trainings provided to staff from Ghana and Côte d'Ivoire will focus on planning for coastal climate adaptation, as well as on transboundary governance.

## PART II.L ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

The proposed project fully aligns with the Adaptation Fund's Environmental and Social Policy (ESP) and its 15 principles. To align with these policies and related guidelines, this section provides a brief summary of the risks assessment outcomes, which are shown in detail in Annex 6 (ESP). The environmental and social risk screening, assessment and ESMP are presented in Annex 6 at two levels. The first level is general, analysing all three components of the project. In general, proposed coordination activities, spatial and land use planning, community planning, trainings and workshops and knowledge management activities under Components 1, 2 and 3 have been categorized as low risk. Steps will be taken to ensure that no environmental or social impacts can occur. The second level zooms into the activities belonging to outcome 2 (subprojects) because the activities include physical interventions and require a technical and detailed analysis of risks and mitigation measures.

The risk screening was done through combination of (i) desk research; (ii) meetings and discussions with external experts and representatives from agencies relevant for specific principles (UN Women, ILO, WWF, etc.); and (iii) on-site community surveys and public consultations. The project fully complies with all applicable national laws and regulations (see Part II, Section F), focuses on marginalised and vulnerable groups, positively discriminates in favour of women, incurs no infringement on human rights and health, plans no resettlement whatsoever, and does not affect indigenous people (none present). With regards to the subproject implementation, activities have been designed to minimise potential risks by selecting numerous, small scale and very localised interventions, proposed and managed by the communities themselves (where possible), in cooperation and under guidance of UN-Habitat. Other relevant information regarding consultation processes, gender policy and vulnerable groups, and the detailed description of the subprojects are presented in annexes 3, 4 and 5 respectively.

The summary below outlines the findings of the preliminary screening process to identify and evaluate potential environmental and social impacts and risks of proposed interventions. The 15 safeguard areas outlined in the Adaptation Fund's ESP have been analysed during the screening process. As shown in Part II.I and Annex 4, consultations have been conducted to identify potential environmental and social risks and impacts and to identify specific vulnerable groups, including their needs and possible concerns. A draft gender baseline, containing disaggregated data and specific approaches for women and youth, has been developed (see Annex 5).

Activities under outcome 2 represent 'concrete' interventions, including physical interventions, and as such, some interventions have the potential, without an environmental and social safeguarding system, to create negative environmental and social impacts. As such, some interventions under this outcome fit into the medium (B) risk category. Annex 6 provides an overview of risk screening and impact assessment outcomes conducted in both Ghana and Côte d'Ivoire. For both countries, risks screening sheets have been completed for each proposed project activity. Besides that, accredited consultants prepared country specific ESIA-ESMPs and consultation reports in compliance with the AF ESP and GP and national requirements for conducting ESIA. The outcomes have been consolidated in the proposal. Please find here the weblinks to the country-specific reports: Ghana ESIA-ESMP report and Côte d'Ivoire ESIA ESMP report.

Due to the nature of the activities under outcome 2, the entire project has been categorized as a medium risk (Category B) project. Therefore, ESMPs have been developed, including risk and impact mitigation measures for all risks identified. The country specific ESMPs can be found in the country reports and in the summary/overall ESMP in Annex 5. Because of the risk management measures in place, no further assessments are required as per the table below.

The project has been designed to generate positive economic, social, and environmental impacts, including specific inputs from women and marginalized and vulnerable groups of the target communities and by incorporating best practices from other projects. The adaptation measures proposed have been selected together with the communities and local authorities, making sure that they are culturally appropriate.

The table below aligns with table 1 in Annex 5. Initial risks were identified, their impacts assessed, and mitigation measures proposed. Therefore, no further assessment is required for compliance, apart from specific risk management for identified risks.

Table 212447. Risk Screening Results against all Adaptation Fund ES Principles

Checklist of environmental and social principles	No further assessment required for compliance	Further risk management required for compliance →
Compliance with the Law	x	
Access and Equity		x
Marginalized and Vulnerable Groups		x
Human Rights	x	
Gender Equity and Women's Empowerment		x
Core Labour Rights		x
Indigenous Peoples	x	
Involuntary Resettlement	x	
Protection of Natural Habitats		x
Conservation of Biological Diversity		x
Climate Change		x
Pollution Prevention and Resource Efficiency		x
Public Health	x	
Physical and Cultural Heritage	x	
Lands and Soil Conservation	x	

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As described previously in Part II, Section C, the project has many benefits both social and environmental, and meets the national standards, as mentioned in Section F above. Different stages of the risk screening

and the ESMP itself were presented for public disclosure and results are available online for public consultation. A public grievance mechanism has been put in place for the entire duration of the project. This will allow any affected stakeholder to raise concerns, anonymously if they wish, to the community leaders on the local coordinating committee, the project team or the PMC. The primary alternative means for affected beneficiaries and/or community members to raise grievances confidential telephone number (for details, please see the "Grievance Mechanism" section under Annex 6). In addition to the grievance mechanism, local staff will be trained to have an 'open-door' policy with communities, so that communities can discuss any aspect of the project at any time. This less formal mechanism will also enable project staff to listen to communities' concerns or ideas and promote them in the implementation of the project. More formal consultations and workshops held at local and national levels throughout the project implementation will also serve as a means for stakeholders to raise concerns or suggests with the project's implementation.

### PART III: IMPEMENTATION ARRANGEMENTS

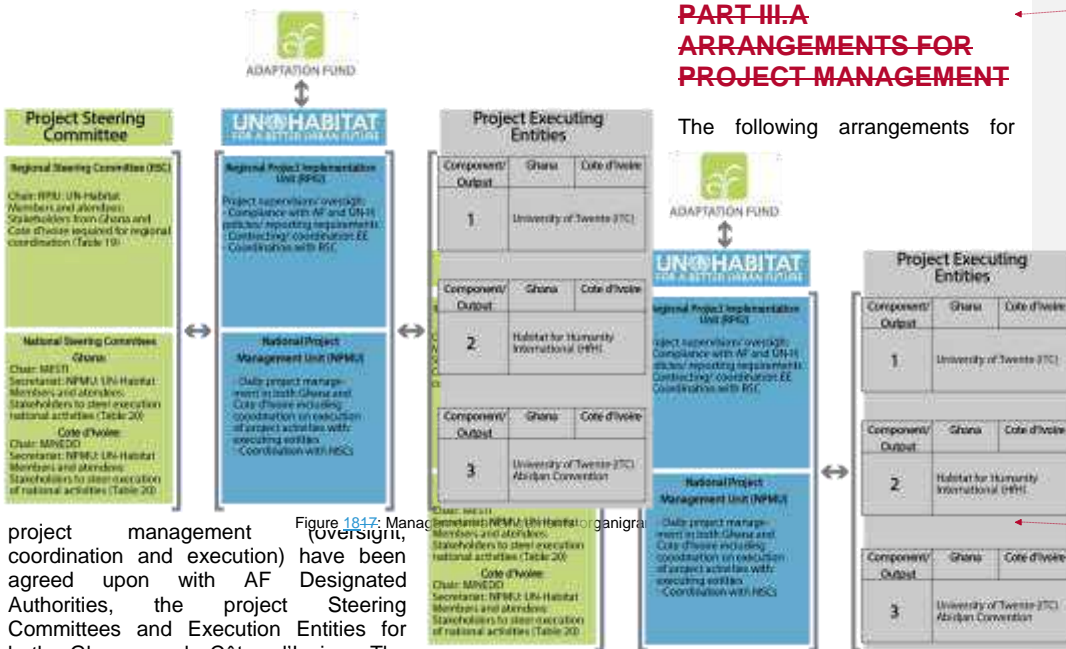
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#### PART III.A ARRANGEMENTS FOR PROJECT MANAGEMENT

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#### PART III.A ARRANGEMENTS FOR PROJECT MANAGEMENT

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The following arrangements for

project management (oversight, coordination and execution) have been agreed upon with AF Designated Authorities, the project Steering Committees and Execution Entities for both Ghana and Côte d'Ivoire. The organigram in Figure 17 shows how the project will be implemented and executed at the regional, national and local level. As UN-Habitat is the Multilateral Implementing Entity (MIE) of the project, UN-Habitat will be responsible for the overall implementation of the project, including contracting of executing entities (EE),

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overall compliance with AF and coordination with project stakeholders through the project Steering Committees.

Table 222218. Project Management Structure

Multilateral Implementing Entity (MIE)	Level of involvement	Description, roles and responsibilities
UN-Habitat	Regional National Local	UN-Habitat, as MIE for this project, will recruit and establish the Regional Project Implementation Unit (RPIU) and the National Project Management Units of Ghana and Cote d'Ivoire (NPMU). UN-Habitat will be in charge of overall compliance with AF and UN-H policies and reporting / M&E requirements, including safeguarding system, contracting and coordination of Regional Project Implementation Unit and National Project Management Units and overall approval of agreements of Cooperation with Executing Entities. The Regional Project Coordinator based in Abidjan (Cote d'Ivoire) recruited for the project will have the overall implementation responsibility for the project and will report to the Senior Human Settlements Officer (SHSO) responsible for West Africa of the Regional Office for Africa (ROAf) of UN-Habitat. The SHSO responsible for West Africa reports directly to the UN-Habitat Regional Director for Africa.
Project Units (inside UN-Habitat)	Level of involvement	Description, roles and responsibilities
Regional Project Implementation Unit (RPIU)	Regional	The RPIU will coordinate the implementation of the project at the regional level and will be based in Abidjan (Cote d'Ivoire). The unit will be established by UN-Habitat in consultation with the project Regional Steering Committee and led by the (1) Regional Project Coordinator. The unit will be comprised by (1) Administrative and Financial Assistant / (1) Safeguarding System AF compliance specialist, (1) M&E Communication and Gender specialist. Responsibilities: <ul style="list-style-type: none"> <li>- Facilitate the coordination, supervision, oversight, monitoring and evaluation of the overall project implementation at the different levels (regional, national and local) with the National Project Management Units (NPMU), including supervision, oversight and backstopping of the various Executing Entities;</li> <li>- Ensure project compliance with the AF and UN-H policies and reporting requirements;</li> <li>- Produce progress reports every 6 months and financial reports every 12 months to be submitted to the donor (Adaptation Fund);</li> <li>- Develop, manage and monitor all contractual agreements with the different Executing Entities listed in this table, as well as for national/international consultants, including terms of reference, work plans, budgets and payment schedules, and perform payments upon progress;</li> <li>- Ensure budgeting and financial management, with the support of UN-Habitat administration</li> <li>- Carry out regular project monitoring at all levels (regional, national and local/city level), ensuring compliance and quality control in accordance with UN-Habitat and AF standards and requirements;</li> <li>- Chair the Regional Steering Committee, including coordination and preparation of meetings, meeting minutes and follow-up of decisions and approvals reached during the RSC meetings.</li> <li>- Organise the mid-term and the independent terminal project evaluations;</li> <li>- Coordinate overall knowledge management and project communication;</li> <li>- Facilitate inter-country communication and cooperation for positive projects outcomes;</li> <li>- Management of the ESMP, monitoring of progress of all project activities, including measures to comply with the ESP, risks mitigation measures and GP. As part of the Regional Project Implementation Unit, the Regional Project Coordinator will have oversight / final compliance responsibility for the whole project.</li> <li>- Ensure UN-Habitat's project logistics and operations in both countries, including travel, vehicle operations, office space, communications and office supplies.</li> </ul>
National Project Management Units (NPMU) in Ghana (1) and Côte d'Ivoire (1)	National Local	At the national and local level, project implementation will be supported through National Project Management Units (NPMUs). The units will be established by UN-Habitat in consultation with the National Steering Committees and will be responsible for daily project management in Ghana and Côte d'Ivoire, including coordination of the execution of project activities by the Executing Entities. The National Project Management Units will comprise: (1) National Project Manager / (1) Administrative and Financial Assistant. The Regional Project Coordinator will play the role of National Project Manager for Cote d'Ivoire. Responsibilities: <ul style="list-style-type: none"> <li>- In country daily management of project, including supervision, oversight and backstopping of the national and local components, outputs and activities of the Executing Entities;</li> <li>- Supervise the preparation of annual work plans by the Executing Entities, that will be later on submitted to the RPIU for review and submitted to the National Steering Committee (NSC) for approval of national components and Regional Steering Committee (RSC) for approval of regional components at least two weeks prior to their meetings.</li> <li>- Supervise the work of the Executing Entities at the country level, as per the signed contractual agreements with UN-Habitat, concerning project Components 1, 2 and 3 and ensure quality control of all outputs being produced at the national/local level;</li> <li>- Supervise EE in the drafting of terms of reference for national consultancies to provide specific/punctual technical assistance and training &amp; capacity building to facilitate project implementation;</li> <li>- Monitor the progress of all project activities at the national/local level, as per the requirements of the ESMP and provide timely advice and/or support to overcome any difficulties, including proposing strategies to recover from eventual delays in implementation;</li> <li>- Act as Secretariat at the National Steering Committees, coordinating meetings, organising agendas and project documentation for the NSCs;</li> <li>- Prepare the 6-month progress reports at the country level to be submitted to the Regional Project Implementation Unit (RPIU) for review and integration in the overall 6-month project reports;</li> <li>- Ensure coordination with Regional Project Implementation Unit as well as with National Steering Committees (NSCs)</li> <li>- Ensure UN-Habitat's project logistics and operations at the country level, and in coordination with the RPIU, including travel, vehicle operations, office space, communications and office supplies.</li> </ul>
Executing Entities	Level of involvement	Description, roles and responsibilities
Executing Entity Faculty of Geo-information Science and Earth Observation (ITC)	Regional National Local	The University of Twente, through the Faculty of Geo-information Science and Earth Observation will execute specific project component (1), outputs (3.2 and 3.3) and its respective activities under the direct supervision of the Regional Project Implementation Unit (RPIU) and the National Project Management Unit (NPMU) in Ghana and Côte d'Ivoire. The University of Twente team will be composed of a combination of international and national staff, including spatial planning experts, GIS experts, climate change experts, sociologists, economists, community mobilisers based in Ghana and Cote d'Ivoire. Responsibilities: <ul style="list-style-type: none"> <li>- Overall project execution responsibility for component 1 and outputs 3.2 and 3.3.</li> </ul>

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University of Twente		<ul style="list-style-type: none"> <li>- Development of transnational development framework, subnational spatial frameworks, deliver national workshops in Ghana and Cote d'Ivoire and develop community plans</li> <li>- Develop the cross-fertilisation activities between Ghana and Cote d'Ivoire for exchanging experiences from projects and</li> <li>- Develop joint trainings for transboundary governance systems and planning for coastal climate adaptation in Ghana and Cote d'Ivoire</li> <li>- Develop and manage contractual arrangements with contractors;</li> <li>- Prepare the 6-month progress reports at the country level to be submitted to the National Project Management Unit (RPIU) for review and integration in the overall 6-month project reports;</li> <li>- Attend Steering Committees and prepare project execution progress updates for respective components;</li> <li>- Produce technical project reports to be uploaded to the project knowledge management platform</li> </ul>
Executing Entity Habitat for Humanity International (HfH)	Regional National Local	<p>Habitat for Humanity International will execute specific project component (2), outputs and its respective activities under the direct supervision of the Regional Project Implementation Unit (RPIU) and the National Project Management Unit (NPMU) in Ghana and Côte d'Ivoire.</p> <p>As a global non-government organisation Habitat for Humanity (HfH) Regional Office is located in Nairobi, and it was presence in West Africa through a country office established in Abidjan, and previous presence and projects executed in Ghana.</p> <p>The Habitat for Humanity team will lead the execution of component 2 through a team of regional, national and local experts, including engineers, architects, community organisers, communications experts. The national team will be led by the Chief of Party supported by a technical lead on climate adaptation, operations lead, infrastructure manager, environmental safeguards manager, MEAL manager, community development and safeguarding manager, finance and administration manager, procurement and logistics officer, finance officer and a driver.</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> <li>- Overall project execution responsibility for component 2.</li> <li>- Develop and establish, in collaboration with communities early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire</li> <li>- Set up awareness raising activities and trainings to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Cote d'Ivoire</li> <li>- Build drainage channels in 9 communities of Ghana and 6 Communities of Cote d'Ivoire</li> <li>- Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana</li> <li>- Reforest mangrove systems to minimize the impact of floods in 10 communities in Cote d'Ivoire</li> <li>- Set up resilient agriculture activities through dedicated plots and one training centre in 6 communities in Cote d'Ivoire</li> <li>- Train local staff and communities regarding project management, maintenance, and climate adaptation activities</li> <li>- Develop and manage contractual arrangements with contractors;</li> <li>- Prepare the 6-month progress reports at the country level to be submitted to the National Project Management Unit (RPIU) for review and integration in the overall 6-month project reports;</li> <li>- Attend Steering Committees and prepare project execution progress updates for respective components;</li> <li>- Produce technical project reports to be uploaded to the project knowledge management platform;</li> </ul>
Executing Entity Abidjan Convention	Regional	<p>The United Nations Environment Programme is designated as the Secretariat of the Abidjan Convention. AbC is a leading institution in the regional coordination between governments and on conventions, including on Marine and Coastal ecosystems and climate change resilience. The Abidjan Convention's geographic scope is the marine environment, coastal zones and related inland waters. AbC mandate makes it a fit-for-purpose organization to facilitate knowledge sharing and management in the West African Region, organize round-tables for regional bodies to enhance coordination in climate change related issues and organize trainings on data and tools for climate change adaptation.</p> <p>The Abidjan Convention will execute specific project output (3.1) and its respective activities under the direct supervision of the Regional Project Implementation Unit (RPIU) and the National Project Management Unit (NPMU) in Ghana and Côte d'Ivoire.</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> <li>- Overall project execution responsibility for output 3.1.</li> <li>- Organise one regional workshop for experience sharing of national coastal climate adaptation</li> <li>- Set up of a knowledge platform to upload and exchange best practices at the local, subnational and national level, regarding coastal climate adaptation</li> <li>- Prepare and disseminate publications on lessons learned and best practices implemented in the two countries and dissemination of guidelines</li> <li>- Develop and manage contractual arrangements with contractors;</li> <li>- Prepare the 6-month progress reports at the country level to be submitted to the National Project Management Unit (RPIU) for review and integration in the overall 6-month project reports;</li> <li>- Attend Steering Committees and prepare project execution progress updates for respective components;</li> <li>- Produce technical project reports to be uploaded to the project knowledge management platform;</li> </ul>
<b>Steering Committees</b>	<b>Level of involvement</b>	<b>Description, roles and responsibilities</b>
Regional Steering Committee (1) (RSC) (see table 23 for membership)	Regional	<p>The Regional Steering Committee (RSC) is the overall decision-making body in terms of project coordination and orientation, responsible to provide institutional and technical direction to the project, ensuring that the regional component of the project is aligned with national priorities and that it delivers the planned regional synergies.</p> <p>It will meet once a year at the regional level and will have the following responsibilities:</p> <ul style="list-style-type: none"> <li>- Define main strategies and provide overall policy guidance, recommendations and orientations for project implementation and coordination;</li> <li>- Review, discuss and provide substantive comments and main recommendations to the annual narrative reports prepared and presented by the Executing Entities during the annual PSC meetings;</li> <li>- Review, discuss and approve the annual work plans submitted by the Executing Entities;</li> <li>- Review any deviations and consider amendments to work plans and contractual arrangements.</li> <li>- Define the main strategies and provide overall policy guidance, recommendations and orientations for project implementation and coordination throughout the implementation period;</li> <li>- Providing political and technical inputs to ensure smooth implementation of the project from start to completion, including providing advice on how to deliver project outputs and the achievement of project outcomes in a timely matter in line with national and sub-national strategies and technical standards;</li> <li>- Advise on project compliance with AF and UN-H policies and reporting / M&amp;E requirements, incl. safeguarding system;</li> <li>- Facilitate the required coordination with relevant ministries and authorities.</li> </ul>
National Steering Committees (NSC) in Ghana (1) and Cote d'Ivoire (1)	National Local	<p>The National Steering Committees (RSCs), one in Ghana and one in Cote d'Ivoire will discuss the status of project implementation at the national level and provide guidance and recommendations for the next 6 months, including adaptive management decisions for all project activities occurring within the country.</p> <p>It will meet twice a year and report to the RSC by a representative attending its annual meeting and being provided a specific slot in the agenda.</p>

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(see table 24 for membership)		In both Ghana and Côte d'Ivoire, The National-level Project Steering Committees have been established, and chairs, co-chairs and members have already been identified and agreed upon. These Committees have already been functioning to support the development of this project proposal, including approving proposed Project Execution Entities, activities, budgets, etc. Responsibilities: - Provide political and technical direction to the country specific project activities from start to completion, and alignment with government agendas. - Review, discuss and provide substantive comments and main recommendations to the annual country specific narrative reports prepared and presented by the Executing Entities; - Review, discuss and approve the country specific annual work plans submitted by the Executing Entities; - Define the main strategies and provide overall policy guidance, recommendations and orientations for project implementation and coordination throughout the implementation period at the national level; - Advise on project compliance with AF and UN-H policies and reporting / M&E requirements, incl. safeguarding system at the local and national levels;
<b>Project Technical Committee (PTC)</b> (1) in Côte d'Ivoire (see table 25 for membership)	National Local	During the consultations, workshops and co-development of the project document in and Côte d'Ivoire, the formation of a Project Technical Committee (PTC) was also requested at the national level, <b>only in Côte d'Ivoire</b> . Members were identified and listed in the table 25. The function of the PTC is to provide technical guidance and ensure alignment of the project with a broader number of technical stakeholders including government and sectorial institutions. The Project Technical Committee will meet twice per year. In Côte d'Ivoire, given the more consultative and broader approach to stakeholder engagement, the creation of a Project Technical Committee (PTC) has been requested. The function of the PTC is to provide a technical platform to include additional substantive stakeholders to be consulted on a more regular basis and provide an additional forum other than the national Project Steering Committee, with a more decision-making function. The PTC will be a consultative body whose recommendations will be non-binding and includes as members a broader range of stakeholders: national and local government, government specialised agencies, technical centres, international organizations and NGOs. The participatory processes, stakeholder engagement and consultations conducted in Ghana have considered sufficient the creation of Regional and National level Project Steering Committees (PSC). The Project Technical Committee has been considered as an additional institutional layer that Ghana aims at addressing as part of the National level Project Steering Committee.

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Table 232319. Stakeholders in the project steering committees

Regional Steering Committee (RSC)	
Stakeholders: The RSC will be gender-balanced and represented by the following institutions	
	Regional
Regional Project Implementation Unit (UN-Habitat)	Chair
Ghana MESTI (EPA, LUSPA, AF Focal point)	Member
Ghana NDPC	Member
Ghana MLGRD (RCC)	Member
Côte d'Ivoire MINEDD	Member
Côte d'Ivoire MI (Cabinet)	Member
Côte d'Ivoire MPD (Cabinet)	Member
University of Twente	Attendee
Habitat for Humanity International	Attendee
Abidjan Convention	Attendee
<b>Total</b>	<b>7 + 3 Attendees</b>

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Table 242429. Stakeholders in the project steering committees

National Steering Committees (NSC) in Ghana and Côte d'Ivoire		
Stakeholders: The NSC will be gender-balanced and represented by the following institutions		
	National	Côte d'Ivoire
	Ghana	
National Project Management Units (UN-Habitat)	Secretariat (1)	Secretariat (1)
Ghana MESTI (EPA, LUSPA, AF Focal point)	Chair (1)	
Ghana NDPC	Co-chair (1)	
Ghana MLGRD (RCC)	Member (1)	
Ghana MLGRD (target MMDAs)	Member (1)	
Ghana MWS (WRC)	Member (1)	
Ghana MWH (HDS)	Member (1)	
Ghana MSDI (CDA)	Member (1)	
Ghana MLNR (FC)	Member (1)	
Ghana MOFAD (IFMD)	Member (1)	
District of Ada East	Member (1)	
District of Ada West	Member (1)	
District of Keta / Anloga <sup>80</sup>	Member (1)	
Execution Entity University of Twente	Attendee (1)	
Execution Entity Habitat for Humanity Ghana	Attendee (1)	
Côte d'Ivoire MINEDD		Chair (1)
Côte d'Ivoire MI (Cabinet)		Co-Chair (1)
Côte d'Ivoire MPD (Cabinet)		Member (1)
Côte d'Ivoire Ministère de la Ville (Cabinet)		Member (1)
Côte d'Ivoire MCLU (Cabinet)		Member (1)
Côte d'Ivoire MNADER (Cabinet)		Member (1)
Côte d'Ivoire MTL (Cabinet)		Member (1)
Côte d'Ivoire MEF		Member (1)
Côte d'Ivoire MMG		Member (1)
Côte d'Ivoire Ministère des Ressources Animales et Halieutiques (Cabinet)		Member (1)
FIRCA		Member (1)
Côte d'Ivoire Secteur Privé (CGECI)		Member (1)
Execution Entity University of Twente		Attendee (1)
Execution Entity Habitat for Humanity Côte d'Ivoire		Attendee (1)
<b>Total</b>	<b>13 + Secretariat</b>	<b>14 + Secretariat</b>

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<sup>80</sup> In 2019, the western part of the Keta District was split off to create **Anloga District**; thus the remaining part has been retained as Keta Municipal District.



Table 252524. Stakeholders in the Project Technical Committee (PTC) (only for Cote d'Ivoire and upon request of Adaptation Fund Designated Authority of Cdl)

Stakeholders (number of representatives): The PTC will be gender-balanced and represented by the following institutions	Côte d'Ivoire
Côte d'Ivoire ANGIL/PNGEC/WACA	Chair (1)
Côte d'Ivoire MINEDD/DLCC-PNCC	Member (1)
Côte d'Ivoire Point Focal FA	Member (1)
Côte d'Ivoire Cabinet du Premier Ministre / Plateforme Nationale de Réduction des Risques et de gestion des Catastrophes	Member (1)
Côte d'Ivoire MPD/DGAT	Member (1)
Côte d'Ivoire MI/DGDDL	Member (1)
Côte d'Ivoire MIRAH/Direction de l'Aquaculture et de la Pêche (DAP)	Member (1)
Commune Grand-Bassam	Member (1)
Commune Jacquville	Member (1)
Community Representatives (máx. 5)	Member (5)
Côte d'Ivoire Centres of Excellence: CURAT, WASCAL	Member (2)
Côte d'Ivoire MCLU DGUF	Member (1)
FIRCA	Member (1)
UN-Habitat	Member (1)
Execution Entity University of Twente	Member (1)
Execution Entity Habitat for Humanity Cote d'Ivoire	Member (1)
<b>Total</b>	<b>26</b>

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### Execution of project components and outputs, approval and monitoring

Table 262622. Stakeholders role and responsibility per component and output

Project Components	Expected Concrete Outputs	Executing Entity	Approval of outputs	Monitoring and Evaluation
<b>Component 1 -</b> Strengthened spatial planning for coastal climate adaptation at different geographical scales	O.1.1 <b>One Transnational Coastal Development Strategy</b> for the joint planning and management of the of coastal area of Ghana and Côte d'Ivoire	Faculty of Geo-information Science and Earth Observation (ITC) – <b>University of Twente</b>	Regional Project Steering Committee (RSC)	Regional Project Implementation Unit (RPIU) – UN-Habitat
	O.1.2. National and subnational level <b>capacity building activities</b> for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience	Faculty of Geo-information Science and Earth Observation (ITC) – <b>University of Twente</b>	Regional Project Steering Committee (RSC)	Regional Project Implementation Unit (RPIU) UN-Habitat
	O.1.3 <b>Two sub-national spatial development frameworks</b> are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire)	Faculty of Geo-information Science and Earth Observation (ITC) – <b>University of Twente</b>	National Project Steering Committee G + Cdl (NSC)	National Project Management Unit G + Cdl (NPMU) – UN-Habitat
	O.1.4. <b>Community level adaptation plans</b> (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community.	Faculty of Geo-information Science and Earth Observation (ITC) – <b>University of Twente</b>	National Project Steering Committee G + Cdl (NSC)	National Project Management Unit G + Cdl (NPMU) – UN-Habitat
<b>Component 2 -</b> Sustainable development, implementation, and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change	O.2.1. <b>Early warning systems (EWS)</b> for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire	<b>Habitat for Humanity International (HHI)</b>	National Project Steering Committee G + Cdl (NSC)	National Project Management Unit G + Cdl (NPMU) – UN-Habitat
	O.2.2. <b>Integrated NBS for reducing run-off and adapting to floods</b> and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities	<b>Habitat for Humanity International (HHI)</b>	National Project Steering Committee G + Cdl (NSC)	National Project Management Unit G + Cdl (NPMU) – UN-Habitat
	O.2.3. <b>Adaptive capacity through alternative livelihoods</b> is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions	<b>Habitat for Humanity International (HHI)</b>	National Project Steering Committee G + Cdl (NSC)	National Project Management Unit G + Cdl (NPMU) – UN-Habitat
<b>Component 3 -</b> Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities	O.3.1. Compilation and dissemination of lessons learnt and best practices on climate change adaptation in coastal West Africa through the regional knowledge platform of the Abidjan Convention	<b>Abidjan Convention</b>	Regional Project Steering Committee (RSC)	Regional Project Implementation Unit (RPIU) – UN-Habitat
	O.3.2. Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for sharing experiences on project's implementation, and fostering cooperation on coastal adaptation	Faculty of Geo-information Science and Earth Observation (ITC) – <b>University of Twente</b>	Regional Project Steering Committee (RSC)	Regional Project Implementation Unit (RPIU) – UN-Habitat
	O.3.3. Joint trainings including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation	Faculty of Geo-information Science and Earth Observation (ITC) – <b>University of Twente</b>	Regional Project Steering Committee (RSC)	Regional Project Implementation Unit (RPIU) – UN-Habitat

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### Ghana government stakeholders for the project

Table 272723. Overview main stakeholders and roles and responsibilities in Ghana

Government Stakeholder			
Main	Sub + Commissions	Role and responsibility (policy / M&E, implementation, etc)	Project / Supervision modality
Ministry of Environment, Science, Technology and Innovation (MESTI) - Executing Entity	AF DA Environmental Protection Agency (EPA)	Sustainable development (policies and regulatory framework, especially environmental) AF focal point	Member RSC Chair PSC at national level AF DA – AF focal point EPA – Policy advise and coordination, including ensuring project activities' compliance to national environmental standards ToR for EIMP
	Land Use and Spatial Planning Authority (LUSPA)	Land Use and Spatial Planning	Member NSC Technical input, supervision and approval of spatial plans
National Development Planning Commission (NDPC)		Development planning and strategy (finance and medium-term development plans)	Member RSC and NSC. Align / coordinate with (+ monitoring) national development planning plans
	Regional Coordination Council (RCC)	Good governance and balanced development of Metropolitan / Municipal/	Member RSC and NSC as MLGRD through RCC-MMDAs: Align Mid-term development planning with development of spatial plans (LUSPA)

Ministry of Local Government and Rural Development (MLGRD)	Metropolitan, Municipal and District Assemblies (MMDAs) and communities	District Assemblies (i.e. decentralisation) (policies and regulatory framework)	
Ministry of Water and Sanitation (MWS)	Water Resource Commission (WRC)	Regulate and manage the sustainable utilization of water resources	Member NSC WRC – Policy advice and coordination, esp. related to components 1 and 3
Ministry of Works and Housing (MWH)	Hydrological Department Services (HDS)	Programming and co-ordination of coastal protection works, construction and maintenance of storm drains countrywide and the monitoring and evaluation of surface water bodies in respect of floods.	Member NSC HDS – Policy advice, coordination, esp. related to component 1
Ministry of Special Development Initiatives (MSDI)	Coastal Development Authority (CDA)	Spearheading development in coastal regions	Member NSC FC – Policy advice, coordination, esp. related to component 1 and 2
Ministry of Lands and Natural Resources (MLNR)	Forestry Commission (FC) (incl. mangroves)	Sustainable management and utilization of Ghana's lands, forests, wildlife and mineral resources for socio-economic growth and development.	Member NSC FC – Policy advice, coordination
Ministry of Fisheries and aquaculture development (MOFAD)	Inland Fisheries Management Division (IFMD) Fisheries Scientific Survey Division (FSSD) Fisheries Commission	Promotion of accelerated Fisheries Sector Development as a viable economic segment	Member NSC IFMD – Policy advice and coordination
District Assembly of Ada East, Ada West and Anloga/ Keta (Executing Entity)	Technical Department	Supervision, coordination and monitoring of interventions	Member NSC Support and supervise the local execution of component 2.

### Côte d'Ivoire government stakeholders for the project

Table 282824. Overview main stakeholders and roles and responsibilities in Côte d'Ivoire

Stakeholder	Role and responsibility (policy / M&E, implementation, etc)		
Main	Sub + Commissions	Government	Project / Supervision modality
<b>Government</b>			
Ministry of Environment and sustainable Development (MINEED) – <i>Ministère de l'Environnement et du Développement Durable</i>	AF DA Agence Nationale de l'Environnement (ANDE) Agence Nationale de Gestion intégrée du Littoral Ivoirien Direction de la Lutte contre le Changement Climatique (DLCC) Programme National du Changement climatique (PNCC) Programme National de Gestion de l'Environnement Côtier (PNGEC)	Sustainable development (policies and regulatory framework, especially environmental) AF focal point	Member RSC and NSC AF DA – AF focal point ANDE – Policy advice and coordination, including ensuring project activities' compliance to national environmental standards)
Ministry of Interior – <i>Ministère de l'Intérieur (MI)</i> (Executing Entity)	Direction Générale de la Décentralisation du Développement Local (DGDDL) – Collectivité Territoriale Direction Générale d'Administration et du Territoire.	Good governance and balanced development of Metropolitan / Municipal / Department collectivities (policies and regulatory framework) Support and approval of plans	Member RSC and NSC Ministry of Interior through DGDDL and collectivite Territorial: Coordination and approval of plans .
Ministry of Planning and Development – <i>Ministère du Plan et du Développement (MPD)</i> (Executing Entity)	Direction Générale d'Aménagement du Territoire (DGAT)	Planning development	Member RSC and NSC Directorate General for Territorial Planning – Coordinate execution component 2, including plans oversight and approval (support the development of local plans (Plan de Développement local and development of Manuel de planification du développement et guide pratique de planification locale) Agreement of Cooperation (AoC) with NPMU.
Ministry of the City- <i>Ministère de la Ville</i>		Assistance and advise to cities; Development and approval of urban planning tools, liaising with Ministry of Plan and Ministry of Construction.	Member NSC Policy advise and coordination, including development and approval of urban planning tools.
Ministry of Construction Housing and urban planning – <i>Ministère de la Construction, du Logement et de l'Urbanisme (MCLU)</i>	Direction Générale de l'Urbanisme et du Foncier (DGUF) Direction du logement et de la Copropriété	Planning development	Member NSC DGUF - Policy advise and coordination, including development and approval of urban planning tools
Ministry of Agriculture and Rural Development – <i>Ministère de l'Agriculture et du Développement Rural (MAD)</i>		Sustainable management and utilization of Côte d'Ivoire's Agriculture lands for socio-economic growth and development.	Member NSC Policy advise and coordination Member PSC at national level Policy advise and coordination
Ministry of Tourism and Recreation – <i>Ministère du Tourisme et Loisir (MTL)</i>			Member NSC Policy advise and coordination

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Ministry of water and forests- Ministères des eaux et Forêts (MF)		Sustainable management and utilization of Côte d'Ivoire's forests, wildlife and Water resources for socio-economic growth and development.	Member NSC Policy advise and coordination
Min de l'Int ; Collectivité Territoriale (Mairies and Conseil Régional) - Jacqueline and Grand-Bassam (Executing Entity)	Direction des services techniques Department of Public Works	Planning Development Local government: Coordination, stakeholder engagement, participatory processes, community engagement, execution oversight and control	Supervision execution component 1 on spatial plans Coordinate execution, validation and execution support of component 1 and 2.
<b>Non-government</b>			
CURAT: Centre of Excellence - University for Research and GIS - University Félix HOUPHOUËT-BOIGNY		Coastal climate change issues – Elaboration of Coastal and climate change studies	Member PTC at national level. Technical advice for project execution
FIRCA		The Interprofessional Fund for Agricultural Research and Advice (FIRCA), was created by decree No. 2002-520 of December 11, 2002. It is an instrument inspired by the provisions of law No. 2001-635 of October 9, 2001 establishing the Agricultural Development Fund (FDA). The FIRCA ensures, in the sectors of plant, forestry and animal production, the financing of the programs for research and knowledge management	Support in the execution of component 2 Directly supervised by EE and overall supervision by UN-Habitat

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### Legal and financial arrangements

Ministries and institutions of Ghana and Cote d'Ivoire have signed commitment letters for their engagement in the project. Upon project approval, UN-Habitat and the Ministries of Environment (with the AF DAs) in Ghana and Côte d'Ivoire will sign a joint **Memorandum of Understanding** to which this Project Document will be attached, to ensure that all partners are fully committed to the project.

UN-Habitat will contract Execution Entities (University of Twente, Habitat for Humanity International and the Abidjan Convention) to execute the project at the regional, national and local scales. The legal instrument will be **Memorandum of Understanding (MoU)** (non financial) and/ **Agreements of Cooperation (AoC)** (financial), and **UN to UN agreement** with the UNEP - Abidjan Convention.

The Agreement of Cooperation will be drafted by the Regional Project Implementation Unit in collaboration with UN-Habitat Regional Office for Africa (ROAf) and cleared by UN-Habitat's HQ.

For the UN-to-UN agreements with Abidjan Convention, overheads will be passed through from the 7 percent PSC from the project cycle management fees, so there will be no double charges, as the common UN practice for project execution.

UN-Habitat's **Implementing Partner Management Process (IPMP)** will be used to align with policies, procedures and templates to use in the selection and management of Implementing Partners contracted by UN-Habitat through Agreements of Cooperation (AoC) to execute projects. The IP Management process defines the 18 steps from planning to evaluation through which UN-Habitat engages with Project Execution Entities.

Executing Entities will be allowed, upon agreement with IE, to establish collaborations and contractual relations with public sector, private sector and NGOs for the specific fulfilment of components of the project and within the assigned budget.

The Regional Project Implementation Unit will develop an operational manual that clearly outlines the roles and responsibilities of the key project stakeholders and contains all the necessary tools, forms and templates required to administer the project. The operation manual will be shared with the National Project Management Units for inputs and compliance. While UN-Habitat takes responsibility of audits in line with AF requirements (each year), all contractors will be required to have 'external' audits of their budgets. The contractors will also be required to support the independent final evaluation.

### Roles and responsibilities for environmental and social risks management / AF ESP and GP compliance

The Regional Project Implementation Unit (RPIU) will be responsibility for environmental and social risks management, including implementation of the Project ESMP. An AF and UN-H policies and reporting compliance expert will be part of the RPIU. This expert will also supervise Executing Entities on the implementation of the Project ESMP. Guidelines showing how to comply with the AF ESP and GP will be shared with all execution entities and they will be guided during the execution, including monitoring. A Safeguarding system compliance expert will also be part of the RPIU. Monitoring staff part of the RPIU will require expertise in social risk management and be familiar with the AF safeguarding system. The RPIU will be backstopped by UN-Habitat HQ, with experts on climate change, human rights, environmental and social

risks managements and gender policies. UN-Habitat has rolled out its Environmental Social Safeguards System 3.1 at the institutional and project level. A dedicated ESSS Officer as well as an ESSS implementation team will additionally support the role of the RPIU and NPMU.

In both Ghana and Côte d'Ivoire, government stakeholders responsible for compliance to national environmental and social policies and standards will be part of the Regional- and National Steering Committees, as well as government gender focal points.

All project-related ToR's and contracts will include clauses stating contractors will need to comply to the AF ESP, especially principle 1 (law), 4 (human rights), 5 (gender), 6 and 13 (labour and safety) and the AF GP.

Adaptive management: when changes in project activities or additional activities are required, these will need to go through a new risks screening and impact assessment process in compliance with AF, UN-Habitat and national policies and standards. When this is required, this will be led by the RPIU and the Regional Steering Committee would need to approve the changes.

#### Launch of the project

At the launch of the project, UN-Habitat's, together with the UNEP Abidjan Convention will organize an **inception workshop** inviting members of the Regional Steering Committee, Executing Entities and other relevant stakeholders. The project approach and the proposed outputs and outcomes of the project will be presented and discussed with the purpose to solicit feedback and inputs in a participatory manner. Comments and feedback will be incorporated in project frameworks and workplans. The Inception Workshop aims to:

- A. Enhance participants' understanding of the project objectives and activities and take ownership of the project.
- B. Discuss and confirm the organizational structure of the project, including roles and responsibilities.
- C. Confirm / agree upon project monitoring framework and workplan.
- D. Confirm / agree upon project risks management framework.
- E. Discuss and agree upon project knowledge management framework and plan.
- F. Confirm / agree upon the project Environmental and social Risks Management Plan.
- G. Agree on the annual work plan for year one.

The inception workshop will be organized within four months of signing the project agreement between the Adaptation Fund and UN-Habitat.

### PART III.B MEASURES FOR FINANCIAL AND PROJECT RISK MANAGEMENT

Under guidance of the Regional Project Coordinator, supported by the National Project Manager, M&E Officers will monitor the status of financial and project management risks, including those measures required to avoid, minimize or mitigate these risks, throughout the project (please see also Part III.D).

The table below gives an overview of overall potential project management and financial risks, an assessment of the significance of the pertaining risks in terms of likelihood and impact and outlines measures that have been embedded in the project design in order to manage and/or mitigate these risks.

Table 292925. Overview of financial and management risks and measures to mitigate risks.

Potential risks	Likelihood (1-5)	Impact (1-5)	Mitigation measures	Indicator to verify
<b>Institutional</b>				
1 Delay of project start-up because critical staff is not in place and / or lengthy contracting process, incl. negotiations with execution entities	3 Med	3 Med	1.1 UN-Habitat appointed critical staff at UN-H Regional Office for Africa (ROAf) and Urban Practices Branch (UPB) to start the process required to start the project, incl. putting project staff in place and preparing the inception workshop immediately after signed project agreement between UN-Habitat and the AF; 1.2 Most execution entities have been identified and proposed project activities and budgets have already been agreed upon. 1.3. UN-Habitat commits to organise the inception workshop within three months of the signed project agreement between UN-Habitat the AF 1.4. Recruitment of project staff is initiated prior to project inception as well as the drafting of TORs, procurements and logistics (travel and office space)	▲ The inception workshop was organised within three months of the signed project agreement between UN-Habitat;  - Execution entities to execute activities in the 1st project year are contracted within six months after the inception workshop
2 Loss of government support (at ministerial and municipal level) for the project and activities because of elections and related functions of the project steering committee, which may result in lack of prioritization of AF project activities or different pace of execution of activities in Ghana and Côte d'Ivoire	1 Low	3 Med	2.1 National Project Steering Committees (PSCs) have already been formed during the project preparation phase and these have approved proposed project activities and budgets, etc. This shows a participatory and inclusive project design process took place with ownership of the project as a result. If due to elections, new members of the PSCs will need to be selected, this will be requested by UN-Habitat and AF DA as soon as possible and records of decisions made during earlier PSC will be shared. 2.2 Delays in one country don't have to result in delays in the other country because of functioning national PSCs 2.3 UN-Habitat will establish agreements with the MoE (with appointed AF DA) (through MoUs) to ensure government lead and coordination.	- Confirming steering committee members and roles and responsibilities during inception workshop + report - Government focal point to coordinate SC appointed at inception workshop - MoU signed within 6 months six months after the inception workshop

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3 A lack of coordination between and within national government Ministries and Departments and municipalities	1 Low	3 Med	3.1 Regional and National PSCs are to ensure coordination. Representatives from the target municipalities are members of both regional and national PSC. A technical committee is also established 3.2 Roles and responsibilities related to project implementation of PSC members, also for operation, maintenance and sustainability of activities, have already been identified and focal points within the ministries and municipalities will be appointed through an official letter. 3.3 Should UN-Habitat observe coordination problems, the agency will try to resolve issues directly with government focal point and / or concerned parties	See above	Formatted: Font: 6.5 pt
4 Capacity constraints of executing entities, local institutions, communities and the private sector may limit the effective implementation of interventions	1 Low	3 Med	4.1 The project has a strong capacity building and training component (component 2), designed to operate, maintain, sustain and replicate project activities, esp. at the community level 4.2 UN-Habitat will have dedicated project staff with expertise in spatial / urban planning, climate change, community organization and technical design, M&E and safeguards to ensure quality control from UN-Habitat side.	- Capacity building indicators to be established - Critical staff as mentioned being part of project staff	Formatted: Font: 6.5 pt
5 Communities may not adopt activities during or after the AF project, including infrastructure maintenance	2 Low	4 High	5.1 A strong participatory approach at the community level is used and will be used (component 2) during project implementation to ensure ownership and support of communities to the realised interventions in the targeted project areas. UN-Habitat works with NGOs partners already well established in the target area, to build on relations already established. 5.2 Capacity building and training of communities will be undertaken to improve their awareness and understanding of the benefits of the activities, including operation and maintenance of concrete interventions (component 2).	See above	Formatted: Font: 6.5 pt
6- Planning outcomes of components 1 and 2 may be ineffective	1 Low	3 Med	The planning processes and outcomes are led by the respective Ministries in each country with the mandate for elaboration of territorial and local plans, with a strong political support and an agenda to develop, approve and implement plans. The Ministries have access to detailed information on land ownership through the District Assemblies and technical services. The larger aim of the plan is approval and also to build consensus and stakeholder engagement, and to develop a vision and prioritize an agenda of investments in climate change adaptation and urban development. The planning process itself is also critical, since it allows for the creation of partnerships and governance structures that will ensure plan implementation with mainstreaming of CC adaptation. In this sense, the success of the plans will be achieved not only through the ends, but also through the means. During the participatory process, a vision, strategies, expected outcomes and concrete interventions will be developed that will multiply the impact of the projects and activities part of components 3 and 4. The plans aim at creating realistic consensus and this will be developed using the Participatory Incremental Urban Planning Methodology of UN-Habitat, <a href="#">Our City Plans</a> successfully implemented in over 30 countries. In order to reduce the risks both Governments have asked UN-Habitat to support the capacity development process and support the design, operationalization and implementation of the plans, following a long track record of plans developed in collaboration with national and local governments.	- Written commitment of Ministries - Written commitment of Local governments - Support of UN-Habitat and capacity development function	Formatted: Font: 6.5 pt Formatted: Font: 6.5 pt
<b>Financial management and Requisite Institutional Capacity</b>					
6 Complexity of financial management and procurement. Certain administrative processes could delay the project execution or could lack integrity or needed capacity	2 Low	2 Low	6.1 Financial management arrangements have been defined during project preparation, including identification of most executing entities, which already agreed on the activities and budgets (see also 1.2 above); 6.2 UN-Habitat's control framework, under the financial rules and regulations of the UN secretariat, will ensure documentation of clearly defined roles and responsibilities for management, internal auditors, the governing body, other personnel and demonstrates proof of payment / disbursement; In line with AF and UN-Habitat policies, audits will take place annually and / or for each contract of 500k. 6.3 Activity specific procurement will be managed by the executing entities as agreed through standard Agreements of Cooperation (with relevant conditions, incl. evidence of recognized procurement policies and procedures and specific terms and conditions for timely disbursement of funds for project activities while at the same time ensure provisions on good financial management, hence minimizing the risk of fund mismanagement or corruption). The RPMU has a certifying role (for key procurements / expenditures).	- Timely audit reports (inception and yearly + following UN-H regulations)  - Timely evidence of recognized procurement policies and procedures provided by Execution Entities	Formatted: Font: 6.5 pt
7 Inflation and instability of the national currency leading to budget issues and increased prices for infrastructure delivery	3 Med	1 Low	7.1 All budgets will be in US\$ 7.2 Include clauses in all contracts, incl. with private sector, that they cannot increase the costs during the project duration.	- All budgets in US\$ - Clauses in all contracts, incl. with private sector, that they cannot increase the costs during the project duration.	Formatted: Left
<b>Physical</b>					
8 Covid-19 protocols restrict movement in the target areas	3 Med	4 High	8.1 Although the restrictions have been lifted in both countries, the RPIU will be in charge of advising and developing the SOPs for execution of activities in case of increase in registered cases. In case of Covid peaks and emergencies, in order to prevent delays in the project activities, all initiatives that can occur online, will be transformed into virtual activities (meetings, roundtables, trainings, ...). Moreover, in case of peaks, all work that can be done remotely (analysis, studies, design, ...) will be done remotely, and OMS vaccination policies will be followed for project staff. UN-Habitat will only let live and field work proceed if activities can be developed without risk with the adequate protective measures in line with COVID-19 protocol by host country and OMS recommendations. For all present activities the "Urbani safety protocol" (targeting hygiene standards, the use of basic safety devices -such as masks-, and safety distances) will be adopted. 8.2 Execution entities will require having permanent field staff at project sites, reducing the need to travel 8.3 If target areas are not accessible, UN-Habitat and the proposed execution entities will identify alternative intervention timelines and of priorities in coordination with the SC timelines and/or priorities in coordination with the SC.	Permanent field staff at project locations - Application and documentation of Urbani Safety Protocol - In case exceptional situation declared by host country, the RPIU will share and the NPMU will ensure the compliance with health protocol. - Documented physical activities observe health protocols. - Health protocols are displayed in offices and project sites.	Formatted: Font: 7 pt
<b>Environmental</b>					
9 Poor weather conditions affect implementation of activities and sudden major changes in the environment.	2 Low	1 Low	9.1 UN-Habitat and the proposed executing entities have planned and developed their work plan according to forecasted weather conditions and current climatic variability. Construction activities mainly under component 2 are timed for the dry/low risk season. If unexpected weather patterns occur, the proposed activities and work plan will be reviewed to make practical adaptations.	- Work plans avoiding critical concrete works being planned outside the dry/low risk season.	Formatted: Font: 6.5 pt
10. potential risk of sudden major changes in the environment. Current climate and seasonal variability and/or hazard events result in infrastructure construction delays or undermine confidence in adaptation	2 Low	3 Med	10.1. Current climatic variability has been taken into account in the planning and design of project. Project activities will be planned in the 'dry/low risk season so that sudden major changes in the environment will not impact construction works. All selected investments under Component 2 have been extensively consulted with communities and technical experts. Consequently, through consultation and discussion with technical experts, interventions have been assessed as feasible taking into account seasonal variability and hazard events, adapting the execution calendar of the project to the dry/low risk season. Regarding mangrove reforestation, activities will also happen on the coast, but the seeds will not be directly planted into the ground: they will be grown in nurseries, to prevent floods to impact on the plants when still too young, and planting will be carried out during the low risk season.	- Annual plans clearly defining construction / adaptation works during dry / low risk season. - Operation and maintenance plans showing potential risks and how interventions will be	Formatted: Font: 6.5 pt

measures by local communities.		In unexpected extremes will be forecast, a possible temporary stop of specific activities, a change in the timeline or precise location will be considered in coordination with the NSC. 10.2. The project prioritized EWS, NBS and adaptive capacities, which are adaptable to new environments, and are focused on reducing the severity of sudden major changes risks. Potential risks will be identified, also through risks planning, and the design of activities will anticipate possible changes in the environment.	protected and recovered from storms and floods
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### PART III.C MEASURES FOR ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT

Section II.L presents (in a synthetic format) outcomes of a systematic screening and impact assessment process detailed in Annex 5 and that has been done based on information from consultation with national and local government stakeholders, site visits, local and international experts, a wide range of other concerned stakeholders as well as the target communities (emphasizing equity and the inclusion of marginalized and vulnerable groups). As shown in Part II Section I and in the related Annex 4, consultation with communities focused on: 1) identification of activities/ interventions that address the climate change vulnerabilities of specific groups; 2) identification of exact needs, issues and risks following the 15 Adaptation Fund's environmental and social principles; and 3) identification of risk mitigation measures where required. Annex 4 contains the detailed outcomes of these consultations.

As described in section II.L, based on a screening against the stipulated principles in the AF ESP, the project has been categorized as a B Category risk project. An Environmental and Social Risk Management Plan has been developed (see Annex 6) to ensure that risks are avoided, and that, where this is not the case, they are detected in a timely manner and appropriately mitigated. The ESMP lists all potential risks identified and the measures to avoid or mitigate potential adverse environmental and social impacts. The plan also shows how these potential risks and mitigation measures will be further monitored, including delegating responsibilities.

The essence of the ESMP entails risks management arrangements, such as Roles and Responsibilities, Adaptive management, Arrangements to supervise executing entities for the implementation of ESMP, Budget provision to manage environmental and social risks/ implement of the ESMP, Measures to avoid, minimise, or mitigate potential risks (presentation of the overall ESMP), Risks monitoring system/indicators, and Grievance mechanism.

The ESMP is designed with the understanding that any changes to project activities are subject to the established process with the AF Secretariat and will comply with the requirement of the IE informing the secretariat and the designated authority of changes in project activities or associated indicators or targets, including introductions, modifications and deletions, as soon as possible (decision B.29/32), by:

- obtaining prior approval from the Board;
- communicating such changes to the secretariat; and
- submitting a letter from the designated authority endorsing such changes to the secretariat, in order to obtain such approval.

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#### **General environmental and social risks management reduction measures:**

In addition to the risk management measures identified below, the following elements will be put in place to ensure compliance with the ESP:

all MoUs and Agreements of Cooperation with executing entities will include detailed reference to the ESMP, GP, the 15 ESP Principles and especially compliance to law (Principle 1), human rights (Principle 4), gender approach (Principle 5) and labour and public health standards (Principles 6 and 13).

the UN-Habitat Human Rights Officer and the Project Appraisal Group will check project compliance to the AF ESP during the project (in addition to the Senior Human Settlements Officer) (Principle 4) continuous coordination with focal points within ministries and municipalities, responsible for compliance to national and local standards (especially related to EIAs and GP), will take place.

capacity-building and awareness-raising: the management teams, executing entities and target communities, will receive training / capacity development to better understand and be able to manage the 15 Principles, the ESMP and their responsibilities. This will be completed during the inception phase.

Table 309426. ESP and GP compliance requirements and how the proposal complies to these requirements

ESP and GP compliance requirements	Project compliance to the AF ESP and GP	Reference / evidence
Have all potential environmental and social risks been identified for all project/programme activities prior to funding approval?	All potential environmental and social risks (incl. for gender and considering their significance) have been identified) for all project/programme activities at the project preparation phase. In both Ghana and Côte d'Ivoire, accredited consultants prepared country specific ESIA's, ESMP's and consultations reports in compliance with the AF ESP and GP and national requirements for conducting ESIA's; Outcomes have been consolidated in the proposal.	Part II.I Part II.L Annex 6 (ESP) Annex 5 (GB)

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Has the environmental and social assessment been completed before the project/programme proposal submission to the Adaptation Fund, and its findings included in the proposal document?	In compliance with the AF ESP and GP and national requirements for conducting ESIA's, above reports have been reviewed and approved by the Ghana and Côte d'Ivoire ministries of environment. Outcomes have been consolidated in the proposal.	<a href="#">Ghana ESIA-ESMP report</a> and <a href="#">Côte d'Ivoire ESIA ESMP report</a> .
Has an ESMP been developed and does this include safeguard measures to be implemented during a project/programme?	A project ESMP has been developed, including safeguarding measures. The following has been included in the ESMP: Allocated roles and responsibilities environmental and social risk management / implement of the ESMP Opportunities for adaptive management Arrangements to supervise executing entities for implementation of ESMP Budget provision to manage environmental and social risks/ implement of the ESMP Measures to avoid, minimize, or mitigate potential risks Risks monitoring system / indicators Grievance mechanism	Part III.A (roles and responsibilities for env. and social risk management)  Annex 6 (ESP)
Will a grievance mechanism be put in place and how will it be made widely known to identified and potentially affected parties.	A project grievance mechanism will be put in place, as described in the ESMP. It will be made widely known to identified and potentially affected parties through community mobilisers, posters, and online content	Annex 6 (ESP)

Table 313422. Gender AF GP Principles compliance by the project activities

Component	Gender Objective	Adaptation Fund GP Principle	Related action
1. Strengthened spatial planning for coastal climate adaptation at different geographical scales	To tackle gender imbalance in the planning practice at national and sub-national level	Gender balance, gender equality and gender equity	Participatory process ensuring that women's voices as important actors are heard. Spatial planning instruments for coastal adaptation to be gender responsive and transformative.
2. Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change	To improve women empowerment and tackle gender imbalances from project design to implementation To generate job opportunities, focus on women.	Women empowerment and gender equity	Support women and youth groups including in different subproject activities. Provide competitive small grants targeting small farmers and women association to undertake actions among different subprojects Develop gender responsive and strategies on including women, youth, and vulnerable groups in subproject training
3. Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities	To improve gender balance build capacity at regional, national and local level in the decision making on climate change adaptation.	Gender equality, gender equity and gender mainstreaming	Support national, regional and local meetings, training and cross-fertilization activities for sharing lessons learned and best practices, promoting gender equality at different levels

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## PART III.D ARRANGEMENTS FOR MONITORING, REPORTING AND EVALUATION

### M & E Framework and plan

Monitoring and Evaluation (M & E) arrangements for this project will be in compliance with the AF M&E guidelines and ESP and GP and with UN-Habitat M & E policies and guidelines. This means, as a minimum, the following will be monitored and evaluated: project Milestones, Financial data, Procurement data, Risks assessment, ESP Compliance, GP Compliance, Project indicators, Lessons learned, project Results. The M & E of progress in achieving project results will be based on targets and indicators (also for gender) established in the Project Results Framework (see Part III.E).

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The annual project performance reports (PPRs) will include a section on the implementation status of any environmental and social management plan, including those measures to avoid, minimize, or mitigate environmental and social risks, also focusing on monitoring gender risks. The reports shall also include, if necessary, a description of any corrective action that are deemed necessary. The terminal evaluation report will include an evaluation of the project's performance with respect to environmental and social risks.

UN-Habitat will ensure timely and high-quality M & E by keeping oversight of the process by providing guidance to the Project Execution Entities and national government partners through full briefing of M & E requirements. Where possible, the M & E process will be participatory, involving key stakeholders at national, municipal and communities. Project activities will be monitored by the RPUI and NPMUs with dedicated monitoring staff, which will require having expertise of M & E compliance to the AF ESP and GP. The M & E framework and plan will also need to be endorsed by the Regional-level Project Steering Committee. Audits of the project's financial management will follow AF regulations and rules and applicable audit policies. The M&E plan will be implemented as proposed in the table below.

Table 323228 M & E plan

Type of M&E Activities	Responsible Parties	Time Frame	Reporting
Inception Workshop and Report (included as part of the Regional Workshop, Output 3.1)	UN-Habitat & Regional project coordinator Coordinated with: Abidjan Convention and Regional-level Steering Committee	Workshop: within first six months of signing between AF and UN-Habitat Report: within one month after inception workshop	Inception Report, including 1 <sup>st</sup> year workplan, monitoring framework and plan; project risks management framework and plan; environmental and social risks management framework and plan; knowledge management strategy
Periodic status/ progress reports	UN-Habitat & Regional project coordinator Coordinated with: NPMUs and Project EE	Annually	Annual Report, mid-term, final
Compliance with ESP and GP		Annual, as well as upon receipt of complaints, grievances or queries	Annual Report, mid-term, final
Audits		As per AF (annually)	Audit Reports
Terminal project performance report		No later than one months after project completion	Terminal project performance report

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Final Evaluation	UN-Habitat & Regional project coordinator. Coordinated with: External consultants and NPMUs, Project EE	No later than three months after project completion	Final Evaluation Report
Community consultations/ workshops/ trainings, etc.	Project EE Coordinated with: NPMUs	Within one week after each event	Documentation
Visits to field sites	Abidjan Convention Coordinated with: UN-Habitat & Regional project coordinator and Regional-level Steering Committee	At least every year	Field visit Report
Video with 'before' and 'after' the project	UN-Habitat & Regional project coordinator Coordinated with: Abidjan Convention and Regional-level Steering Committee	Video one: before start of concrete interventions Video two: after completion concrete interventions	Video compilation of project results

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For the M & E budget and a breakdown of how MIE fees will be utilized in the supervision of the M & E function, please see the detailed budget (Part III.G). For related data, targets and indicators, please see the project proposal results framework (Part III.E).

Table 33 M&E

Type of M & E Activity	Activity	Entity	Total	1	2	3	4
Measurements of means of verification (baseline assessment and M & E plans) as part of inception	Inception Workshop (regional workshop)	AbC	3,300	3,300			
	Reports preparation and EE compliance to AF ESP and GP	UN-Habitat	-	See Overall project monitoring and evaluation (from cycle management fee)			
Direct Project Monitoring and Quality Assurance including annual progress and financial reporting, project revisions, technical assistance and ESP and GP compliance (from execution fee M & E and safeguards)	M & E UN-H offices	UN-Habitat National offices	100,000	25,000	30,000	30,000	15,000
Overall project monitoring and evaluation (from cycle management fee)	-	UN-Habitat	32,000	8,000	8,000	8,000	8,000
Audits	In line with AF requirements	OIOS	-	-	-	-	-
Terminal external evaluation	-	Independent	42,000	-	-	-	42,000
<b>Total</b>			<b>177,300</b>	<b>36,300</b>	<b>38,000</b>	<b>38,000</b>	<b>65,000</b>
	From Project Execution fee		142,000	25,000	30,000	30,000	57,000
	From Project Cycle Management fee		32,000	8,000	8,000	8,000	8,000

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## M&E Activities

### 1. Inception workshop and Project Steering Committee meetings

During the Regional workshop, a first Regional-level Project Steering Committee meeting will be organized, and the project Inception Workshop will take place. The Committees will monitor / review project progress and provide technical guidance. During the first Regional-level Project Steering Committee meeting, the following will be reviewed: the project organizational structure, includes roles and responsibilities, the project monitoring framework and workplan, the project risks management framework, the project knowledge management framework and plan, the project Environmental and social Risks Management Plan and annual work plan for year one. The Regional-level Project Steering Committee will meet every year and the National Project Steering Committees will meet every six months, and ad-hoc meetings will be held as needed.

### 2. Periodic project monitoring and terminal project performance reporting

Annual project performance monitoring will be conducted using the AF PPRs template. This will include monitoring of project: Milestones; Financial data; Procurement data; Risks assessment; ESP Compliance; GP Compliance; Project indicators; Lessons learned; Project Results

### 3. ESMP implementation monitoring

The implementation of the project Environment and Social Management Plan as described in Annex 5 will be monitored. The ESMP includes monitoring indicators and responsibilities for identified potential risks, impacts and mitigation measures. A dedicated budget for monitoring the compliance to the AF ESP and GP has been included in Part III.G

### 4. Financial Audits

A professional, certified and independent organization will review the financial management of the project and adherence to required standards and regulations.

### 5. Final Evaluation

No later than three months after the project completion, a final evaluation will be conducted following AF and UN-Habitat policies and guidelines. It will be conducted by an independent team of international and national experts in consultation with executing entities and national stakeholders as a participatory process, including a gender perspective.

### 6. Community Level Participatory Monitoring

Part of the detailed project monitoring framework and plan will be identified through activities to involve Project Execution Entities and beneficiaries at the community level in monitoring activities. This would include community-level monitoring of Gender and Youth responsiveness and impact of the project.

### 7. Periodic Project Site Visits

Members of the Regional-level Project Steering Committee and representatives of UN-Habitat will visit project sites and hold meetings with the local stakeholders to monitor the implementation of project activities.

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8. *Video with 'before' and 'after' the project*

Also, as part of the knowledge management strategy and plan, a video recording project results will be produced using 'birds' eye' views and recording of project activities and beneficiaries

**Reporting**

9. *Inception Workshop and Report*

Within one month after the inception workshop, an Inception Report will be submitted to the AF and project steering committees' members. Reports will include: (i) agreement on organizational structure of the project, including roles and responsibilities; (ii) monitoring framework and workplan; (iii) project risks management framework; (iv) knowledge management framework and plan; (v) Environmental and social Risks Management Plan; (vi) year one work plan.

10. *Annual project performance reports, including final report*

The Annual project performance reports, which will be submitted to the AF, will include:

- Milestones
- Financial data
- Procurement data
- Risks assessment
- ESP Compliance
- GP Compliance
- Project indicators
- Lessons learned
- Project Results

11. *Community Level Meeting /Workshop / Training Reports and site visit*

Reports on all community-level meetings, workshops, and training will be prepared by Project Execution Entities within one week of the event. Photo documented site visit reports, also to monitor women participation, will also be prepared by Project Execution Entities.

12. *Final Evaluation Report*

The Final Evaluation report will be in line with AF and UN-Habitat evaluation policies and guidelines and norms and standards for evaluation in the UN system.

## PART III.E PROJECT PROPOSAL RESULTS FRAMEWORK

Table 343429. Project results framework with indicators, their baseline, targets, risks & assumptions and verification means.

Expected Result	Indicator	AF Core Indicator	Baseline data	Targets	Means of verification (where and how)	Assumptions (external factors or risks)	Frequency of verification	Responsibility	Gender responsive	Knowledge products
<b>Project Goal</b>										
<a href="#">Improved adaptation of small-to-medium coastal settlements in West Africa</a>	<a href="#">Number of beneficiaries of the project (total)</a>	Yes	0	Total: 14368970 Direct: 126019 Indirect: 14242951 W: 50% Y: 20%	Data collection and M&E system of the Project	Assumptions: all activities of the project will be implemented as planned  Risk: change in political priorities; disengagement of communities	Baseline, mid-term and end	UN-H in cooperation with EE and government		
<b>Component 1. Strengthen spatial planning for coastal climate adaptation at different geographical scales</b>										
<b>Outcome 1. National governments, as well as local level staff have created enabling conditions for enhancing coastal adaption</b>	<a href="#">No. of development sector services produced, developed, improved, or strengthened</a> (total number of spatial instruments developed that enhance coastal adaptation)	Yes	0	24	Progress monitoring and final evaluation of the project achievements	Assumptions: national and local governments are interested to develop spatial instruments to improve coastal adaptation.  Risk: change in political priorities; disengagement of communities	Baseline, mid-term and end	UN-H in cooperation with EE and government		
<b>O.1.1 One Transnational Strategic Spatial Development Plan for the joint planning and management of the of coastal area of Ghana and Côte d'Ivoire</b>	No. of transnational strategic spatial development plans developed for the management of the coastal area of Ghana and Côte d'Ivoire		0	1	Frameworks printed / published online	Assumptions: there is interest from the national governments to cooperate together on the development of a transnational spatial plan  Risk: disengagement of the governments of one or both countries; difficult cooperation between countries; divergent interests	Baseline, mid-term and end	UN-H in cooperation with EE and government		
	Percentage of women and youth of the total population consulted through participatory approaches during the planning process for the <del>Transnational</del> Transnational Strategic Spatial Development Plan		0	Youth: 20% Woman: 55%	Pre-selection of participants, Attendance list during the planning workshops.	Assumptions: Women and youth will be contacted by a women and youth focal point designated by the EE.  Risk: Low interest of women to participate or <del>unavailability</del> unavailability to participate.		UN-H in cooperation with EE and government		
	Handbook to explain step-by-step the development and implementation of a Transnational Strategic Spatial Development Plan		0	1	Final document	Assumptions: The EE compile and prepare the information based on the process for the planning instrument implementation.  Risk: Lack of time to prepare the Handbook		UN-H in cooperation with EE		
<b>O.1.2. National level capacity building activities for strengthening the capacity of the to address coastal climate adaptation through spatial development frameworks, and</b>	No. of offices that received on-the-job trainings, at national and district level		0	2 (1 at Ministry and 1 at District level) in Ghana; 2 (1 at Ministry and 1 at District level) in CDI	Meeting and training reports with count of officers trained; Photos of trainings; list / count of targeted institutions on training reports	Assumptions: national offices have the interest to be trained and partner organisations have the capacity.  Risk: political change	Baseline, mid-term and end of output	UN-H in cooperation with EE and government		
	Reports by trainers		0	1/month	Reports shared with project partners					
	No. of beneficiaries (national and district-level government staff) trained to use models, assessment methods and monitoring systems		0	National level: 80 District level: 20 W: 40%	Meeting and training reports with count of people trained;					

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measures to increase coastal resilience	and to replicate effective and efficient building-with-nature adaptation options, at national and district level, disaggregated by gender		CI: 50%; Ghana: 50%	Photos of trainings; list / count of targeted institutions on training reports					
	Training manual for climate adaptation in coastal environments and settlements	0	1	Final document review	Assumptions: The EE compile and prepare the information based on the capacity building process. Risk: Lack of time to prepare the manual.		UN-H in cooperation with EE		
O1.3 Two sub-national spatial development frameworks are developed at district/department level (one in Ghana and one in Côte d'Ivoire)	No. of sub-national spatial developed frameworks developed in Ghana and Côte d'Ivoire in which climate change-related coastal risks and vulnerabilities have been identified + measures to increase resilience proposed (incl. for gender/youth)	0	2 plans (1 Ghana and 1 CDI)	Frameworks printed / published online Analysis / identification of climate change-related coastal risks and vulnerabilities	Assumptions: there is interest from the government and the frameworks are aligned with the national/sub-national strategies. Specific concerns and needs of women and youth should be identified in the SDFs. Risk: political change and lack of technical capacity.	Baseline, mid-term and end of output	UN-H in cooperation with EE and government entities		
	Population covered by the sub-national spatial development frameworks, disaggregated by gender and age	0	Total: 277,963 (Ghana) ; 356,495 (CDI) W: 52% (Ghana) ; 48% (CDI) Y: 43% (Ghana) ; 31%(CDI)	Verify population covered by the frameworks with population data in target areas					
	Percentage of women and youth of the total population consulted through participatory approaches during the planning process for the Sub-national spatial development frameworks	0	Youth: 20% Woman: 55%	Pre-selection of participants, and Attendance list during the planning workshops	Assumptions: Women and youth will be contacted by a women and youth focal point designated by the EE Risk: Low interest or limited availability of women to participate		UN-H in cooperation with EE and government		
	Handbook to explain step-by-step the development and implementation of a Spatial Development Framework in coastal areas, with a focus on Ghana and Côte d'Ivoire.	0	1	Final document review	Assumptions: The EE compile and prepare the information based on the development of the planning instrument Risk: lack of time to prepare the Handbook.		UN-H in cooperation with EE		
O.1.4. Community level adaptation plans (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate-change adaptation strategy within the planning practice of the community	No. of community plans developed in Ghana and Cote d' Ivoire to support successful implementation of concrete adaptation interventions. Plans should include sections on planning, operation, maintenance, monitoring and replication	0	21 (11 in Ghana and 10 in CDI)	Collect and calculate number of community level plans and identify required sections and roles/responsibilities	Assumptions: plans need to include planning, operation, maintenance, monitoring and replication details and roles/responsibilities for proposed physical measures proposed Risk: disengagement of communities, political change	Baseline, mid-term and end	UN-H in cooperation with EE and government		
	No of community-level workshops conducted to develop above plans	0	42 (at least two per community)	Workshop reports shared with project partners					
	No. of beneficiaries, including direct and indirect, disaggregated by gender and age	0	Total: 155,394 Direct: 630 Indirect: 154,764 W: 50% Y: 20%	Workshop reports with count of people and photos of workshops					
	Percentage of women and youth of the total population consulted through participatory approaches during the planning process for the community level adaptation plans	0	Youth: 20% Woman: 55%	Pre-selection of participants, and Attendance list during the planning workshops	Assumptions: Women and youth will be contacted by a women and youth focal point designated by the EE.		UN-H in cooperation with EE and government		

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						Risk: Low interest or limited availability of women to participate								
	Case study report summarizing lessons learned regarding the development of community level adaptation plans in coastal areas		0	1	Document review, Development of the final product, monitoring the deliverables deadline in the workplan.	Assumptions: The activities have been implemented and the experience compiled. There are sufficient funds allocated to the development of knowledge products.  Risk: Lack of time to prepare the knowledge products.		UN-H in cooperation with EE and government						
<b>2. Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change</b>														
<b>Outcome 2. Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realised pilots</b>	Percentage of targeted direct population aware of predicted adverse impacts of climate change on the coast / their community participating in adaptation response activities, disaggregated by gender and age		0	<b>T: 154,764 W: 50% Y: 20%</b>	Calculate % of direct target population aware of impacts and involved in project activities (plans and concrete project activities); Workshop reports with count of people and photos of workshops and activities	Assumptions: there is interest from local stakeholders to learn about climate change and engage in climate adaptation activities	Baseline , mid-term and end	UN-H in cooperation with EE and government						
	No. of settlements that have implemented concrete interventions for coastal adaptation.		0	21	Progress monitoring and final evaluation of the project achievements	Risks: insufficient engagement of women and youth groups in activities								
	<a href="#">No. of physical assets produced, developed, improved, or strengthened (including infiltration cells, bioretention basins, channels, and water infiltration systems for agriculture)</a>	Yes	0	299	<a href="#">Progress monitoring and final evaluation of the project achievements</a>									
<b>O.2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire</b>	<a href="#">No. of EWS adopted in total and by category targeted</a>	Yes	0	<b>Total: 21 (11 in Ghana and 10 in CDI)</b> <b>(1) EWS for Risk knowledge: 21 (11 in Ghana and 10 in CDI)</b> <b>(2) EWS for monitoring and warning Service: 21 (11 in Ghana and 10 in CDI)</b> <b>(3) EWS for dissemination and Communication: 21 (11 in Ghana and 10 in CDI)</b> <b>(4) EWS for response capability: 21 (11 in Ghana and 10 in CDI)</b>	<a href="#">Progress monitoring and final evaluation of the project achievements</a>	Assumption: targeted communities are open to messages about climate-related risks and interested to develop solutions for adapting to climate change  Risks: insufficient engagement of target direct population in EWS trainings and activities of awareness raising.	Baseline , mid-term and end	UN-H in cooperation with EE and government						

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No. of <u>municipalities having adopted EWS</u>	<b>Yes</b>	<b>0</b>	<b>21 (11 in Ghana and 10 in CDI)</b>	Verification of construction and well-functioning facilities.					
<u>Area covered by the adopted EWS</u>	<b>Yes</b>	<b>0</b>	<b>Total: 22953 ha</b>	<u>Verification of the communities covered by the EWS and their surface</u>					
No. <u>-of EWS for hazard monitoring of flood risk</u>	<b>Yes</b>	<b>0</b>	<b>21 (11 in Ghana and 10 in CDI)</b>	Reports developed through the monitoring					
Rate of early warning information timely released by mandated institutions as planned, disaggregated by community and year		<b>0</b>	<b>Mid:50%; End:80%</b>	Comparison of number extreme events against the number of effective and timely communication					
No. of communities with evacuation plans and safe areas defined		<b>0</b>	<b>21 (11 in Ghana and 10 in CDI)</b>	Evacuation plan should be published and shared with the community members and at regional events					
Increased income/avoided decrease in income from reduction of damage and loss related to extreme climate events, including total number of households in the area, number of targeted households, targeted income sources and income increase		<b>0</b>	<b>Total: 18,200 Targeted: 18,200</b> <b>Income sources: agribusinesses, fisheries, transformation and sale</b> <b>Income increase of at least 20% after two years</b>	Comparison of household expenditures and income before and after the implementation.					
No of beneficiaries (users), including direct and indirect, disaggregated by gender and age		<b>0</b>	<b>Total: 157,300 Direct: 18,482 Indirect: 138,818 W: 50% Y: 20%</b>	Verify number of people aware and utilizing the EWS information					
No. of gender-sensitive elements in the design of EWS: division of roles and responsibilities related to EWS; communication and dissemination about activities		<b>0</b>	<b>A specific section in the technical report on gender-sensitive aspects with means of empowerment, roles and responsibilities for women.</b>	Technical report review	Assumptions: EWS design has been prepared considering women's roles, knowledge, needs, educational background and social responsibilities.  Risk: Low interest or limited availability of women to participate				
Percentage of women and youth who have participated in training/capacity building and participatory workshops and have gained planning skills and knowledge about flood risk areas, evacuation centres and safe routes		<b>0</b>	<b>W: 55% Y:20%</b>	List of participants, pre-liminary list of selected participants.	Assumptions: Women and youth will be contacted by a women and youth focal point designated by the EE.  Risk: Low interest or limited availability of women to participate				
Three knowledge products on -EWS to demonstrate the technical elements and the implementation of the subproject.		<b>0</b>	<b>3 (Technical report, video and infographic)</b>	Review of the final products, monitoring of the deliverables deadline in the workplan.	Assumptions: The activities have been implemented and lessons learned have been compiled. There are sufficient funds allocated to the development of the knowledge products.				

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						Risk: Lack of time to prepare the three knowledge products.							
<b>O.2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities</b>	No. of communities with integrated NBS for flood risk reduction, including through mangrove restoration, drainage channels and bioinfiltration facilities		0	<b>21 communities (11 Ghana and 10 in CDI)</b>	Progress over time must be shown and NBS protection measures must be monitored								
	<u>Total number of natural assets or ecosystems rehabilitated</u>	Yes	0	<b>2 (mangroves and agricultural land)</b>	<u>Verification of the implementation of the activity</u>								
	Ha of mangroves rehabilitated	Yes	0	<b>582 ha</b>	Comparison of ha of mangrove growth in reforested area before and after								
	Meter2 of infiltration cells constructed		0	<b>3,550 m2 infiltration cells</b>	Verification of constructions of infiltration cells in the settlements.	Assumption: targeted communities are open to messages about climate-related risks and adaptation to climate change; targeted communities already try (informally and with lack of capacity) to mitigate flooding; there are successful experiences of mangrove restoration; communities will maintain NBS and engage in the protection of the restored mangrove if it provides income (carbon credit) to the communities and reduces flooding risk.  Risk: during dry season community members can occupy and build in areas destined for NBS (e.g. seasonal storm water basin); in case of lack of income/livelihoods opportunities, communities may tend to exploit mangroves by both harvesting and selling wood for energy generation.	Baseline , mid-term and end	UN-H in cooperation with EE and government					
	Meter of drainage channels constructed		0	<b>252m of channels (2.1m width)</b>	Verification of constructions of drainage channels in the settlements.								
	No. of people benefiting from NBS for flood risk and run-off reduction (mangroves, drainage channels, bioinfiltration facilities), including direct and indirect, disaggregated by gender and age		0	<b>Total: 144,644 Direct: 88,643 Indirect: 56,002 W: 50% Y: 20%</b>	Comparison of flooded area before and after the construction of the facilities (table, maps, photos, etc.)								
	No. of women who are engaged on the construction of bioretention, detention facilities and drainage channel activities;		0	<b>W: 55% Y:20%</b>	List of people working directly in the physical interventions and reviewing contracts.								
	Increased income generated by avoided losses, including total number of households in the area, number of targeted households, targeted income sources and income increase		0	<b>Total: 38,107 Targeted: 23,003  Income sources: agriculture, transformation and sale  Income increase of at least 20% after two years</b>	Comparison of annual losses due to climate-related hazards before and after the implementation.								
	Percentage of women and youth trained in mangrove plantation and management		0	<b>W:55% Youth: 20%</b>	List of participants								
	Percentage of women working on mangrove management activities (blue carbon testudies, mangrove nursery)		0	<b>W:55%</b>	Contracts and monitoring reports.								
	Tons of carbon captured in first 4 years		0	<b>9,770 tCO2e - 12,700 tCO2e4</b>	Annual calculations of carbon removal will be measured through in-situ methodologies approved by the carbon offset certification body in which the project be registered and validated.								
	Three knowledge products on -NBS to demonstrate the technical elements and the implementation of the subproject.		0	<b>3 (Technical report, video and infographic)</b>	Review of the final products, monitoring of the deliverables deadline in the workplan.				Assumptions: The activities have been implemented and lessons learned have been compiled. There are sufficient funds allocated to the development of knowledge products.  Risk: Lack of time to prepare the three knowledge products.				

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O.2.3. Adaptive capacity through alternative livelihoods is put in place in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions	No. of communities with resilient agriculture pilots	0	9 communities (6 Ghana and 3 in CDI)	Analysis and localization of resilient agriculture pilots in each community (table, maps, photos, etc.)					
	No. of lead farmers trained, disaggregated by gender and age	0	540 W: 55% Y: 20%	Training reports and list of participants					
	Ha of agricultural land rehabilitated through soil and water conservation methods	Yes 0	225	Verification of <a href="#">ha with soil and water conservation methods</a>					
	No. of water infiltration systems installed	0	4	Indicators for successful water infiltration systems need to be identified during project					
	Increase in food productivity rate and income through the sale of agricultural goods produced, including total number of households in the area, number of targeted households, targeted income sources and income increase	0	Total: 15,288 Targeted: 540  Income sources: agriculture  Income increase of at least 15% after two years	Comparison of yield of food production before and after the implementation.	Assumption: farming is already and activity in the target communities and farmers struggle to find solutions for the salinity; lead farmers trained tend to share the knowledge with family members and at least 2 neighbours; local populations deforest mangroves to use and sell the wood as firewood	Baseline , mid-term and end	UN-H in cooperation with EE and government		
	No of beneficiaries benefiting from the adoption of climate-resilient agriculture methods, including direct and indirect, disaggregated by gender and age	0	Total: 3,240 Direct: 2,160 Indirect: 1,080 W: 49% Y: 23%	List of participants and information on the family situation of each participant (family size)	Risk: unwillingness of farmers to commute to the training centre in Tegbi and adopt new practices				
	Increase in income diversification through improved mangrove ecosystems and the blue carbon project, including total number of households in the area, number of targeted households	0	Total: 34,951 Targeted: 21,740  Income diversification of at least 50%	Comparison of mean number of income sources before and after the implementation.					
	No of beneficiaries benefiting from new knowledge on resilient housing, including direct and indirect, disaggregated by gender and age	0	Total: 92,412 Direct: 5,040 Indirect: 87,372 W: 50% Y: 20%	Training reports and list of participants					
	No of beneficiaries benefiting from new knowledge on blue carbon projects and carbon credits, including direct and indirect, disaggregated by gender and age	0	Total: 87,445 Direct: 4,560 Indirect: 82,885 W: 50% Y: 20%	Training reports and list of participants					
	No of energy-efficient and alternative cooking solutions identified to avoid cutting of mangrove trees	0	5	Training reports					
No of beneficiaries, benefiting from the knowledge on energy efficiency and alternative cooking solutions, including direct and indirect, disaggregated by gender and age	0	Total: 92,412 Direct: 5,040 Indirect: 87,372 W: 50% Y: 20%	Training reports and list of participants						
Three knowledge products on alternative livelihoods to demonstrate the technical elements and the implementation of the subproject.	0	3 (Technical report, video and infographic)	Review of the final products, monitoring of the deliverables deadline in the workplan.	Assumptions: The activities have been implemented and lessons learned have been compiled. There are sufficient funds allocated to the development of					

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					knowledge products.									
					Risk: Lack of time to prepare the three knowledge products.									
<b>Component 3. Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities</b>														
<b>Outcome 3. Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards</b>														
	Workplan for the joint transnational initiatives		0	1	Workplan should be shared with the two countries and project partners on a yearly basis	Assumption: Decision-makers at all levels and key sectors are willing to collaborate to promote climate change adaptation through capacity building, trainings, physical interventions and awareness raising.  Risk: new unexpected challenges due to the sanitation measures (pandemic); disengagement of project partners	1/year	National and Regional government and District assemblies						
	No of round-table discussions		0	16	Verification of meetings held and attendance list									
<b>O3.1 Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa with Abidjan Convention as regional knowledge platform</b>	Workplan with: Description of regional and national initiatives (forums, events, etc). Time plan Focal points and roles		0	1	Workplan should be shared with the Abidjan Convention on a yearly basis	Assumption: there is a political will to mainstream climate change considerations into planning and programming; regional platforms exist that allow to disseminate information  Risk: lack of capacity and coordination between local, national and regional partners for effective dissemination	1/year	UN-H in cooperation with EE and government						
	No. of lessons learned and best practices compiled and shared at a regional scale related to coastal climate adaptation.		0	30	Documents shared									
	No. of lessons learned and best practices compiled and shared at a regional scale focusing on gender transformative approaches		0	10	Document shared compiling the information on coastal adaptation									
	Online knowledge platform repository linked to the Abidjan website		0	1	Verification that information has been uploaded and is accessible (information uploaded following workplan)									
	Percentage of women and youth who take part in the workshops for experience sharing about coastal climate adaptation		0	<b>W:40% Youth: 20%</b>	Pre-selection of participants, and Attendance list during the planning workshops									
<b>O.3.2. Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for exchanging experiences from project's implementation, and fostering cooperation on coastal adaptation</b>	No. of meetings developed to gather lessons learned from the cross-fertilization activities		0	<b>13 meetings (5 regional level and 8 national level: 4 Ghana and 4 in CDI)</b>	Documents/publications finalized and published	Assumptions: there is a political will to foster transnational cooperation on coastal adaptation  Risk: impossibility of organizing missions and workshops planned	1/year	UN-H in cooperation with EE and government						
	Percentage of women and youth who take part of the meetings to exchange possible solutions and address common challenges for climate adaptation.			<b>W:40% minimum qouta Youth: 20%</b>	Pre-selection of participants, and Attendance list during the activities.									
	No. of exploratory missions carried out to exchange experiences during project implementation		0	4	Mission reports									
	No. of good practices/lessons learned per country that are shared with the other country		0	<b>15 per country</b>	Review of the document compiling the information shared on coastal adaptation									

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Physical infrastructure - Produced	<ul style="list-style-type: none"> <li>1 transnational coastal management framework developed for Ghana and Côte d'Ivoire</li> <li>2 SDFs developed in Ghana (1) and Côte d'Ivoire (1) in which climate change-related coastal risks and vulnerabilities have been identified</li> <li>21 community plans developed in Ghana (11) and Cote d'Ivoire (10) to support successful implementation of concrete adaptation interventions</li> </ul>	
	<ul style="list-style-type: none"> <li>299 interventions of physical infrastructure, including: <ul style="list-style-type: none"> <li>87 drainage channels (252 m of drainage channels constructed)</li> <li>203 infiltration cells (3,550 m2 of infiltration cells constructed)</li> <li>5 bioretention basins</li> <li>4 water infiltration systems installed</li> </ul> </li> </ul>	
Increased income, or avoided decrease in income	<ul style="list-style-type: none"> <li>20% avoided decrease in income from reduction of damage and loss related to extreme climate events through EWS and NBS</li> <li>15% increase in food productivity rate and income through the sale of agricultural goods produced</li> <li>50% income diversification through improved mangrove ecosystems, alternative livelihoods for climate adaptation, and the blue carbon project</li> </ul>	Targeted income sources include agricultural production, agri-businesses, fisheries, transformation and sale
Natural Assets Protected or Rehabilitated	<ul style="list-style-type: none"> <li>2 types of natural assets or ecosystems rehabilitated, including: <ul style="list-style-type: none"> <li>582 ha of mangroves rehabilitated in target areas</li> <li>225 ha of agricultural land rehabilitated through soil and water conservation methods</li> </ul> </li> </ul>	

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### PART III.F PROJECT ALIGNMENTS WITH THE AF RESULTS FRAMEWORK

Table 363634. Project alignment with the Adaptation Fund results framework

Expected Result/ Project Outcome	Project Outcome Indicator	AF Outcome/Output	AF Outcome/Output indicator
Outcome 1. National governments, as well as local level staff have created enabling conditions for enhancing coastal adaption	Total numbers of spatial instruments (plans and frameworks) developed that enhance coastal adaptation.	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy
Outcome 2. Municipal staff, communities and local stakeholders have successfully planned and implemented concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realised pilots	Percentage of targeted direct population aware of predicted adverse impacts of climate change on the coast / their community participating in adaptation response activities, disaggregated by gender and age  Number of settlements that have implemented concrete interventions for coastal adaptation.	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses.
		Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets	3.2. Percentage of targeted population applying appropriate adaptation responses
		Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	4.2. Physical infrastructure improved to withstand climate change and variability-induced stress
		Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress
Outcome 3. Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards	Workplan for the initiatives and events in the Region  No of round-table discussions	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	6.1 Percentage of households and communities having more secure access to livelihood assets
		Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods
		Outcome 1: Reduced exposure to climate-related hazards and threats	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased
Output 1.1 One Transnational Strategic Spatial Development Plan for the joint planning and management of the coastal area of Ghana and Cote d'Ivoire	No. of transnational strategic spatial development plans developed for the management of the coastal area of Ghana and Côte d'Ivoire Percentage of women and youth of the total population consulted through participatory approaches during the planning process for the Transnational Strategic Spatial Development Plan Handbook to explain step-by-step the development and implementation of a Transnational Strategic Spatial Development Plan	Output 7: Improved integration of climate-resilience strategies into country development plans	8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level.  1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis
			7.2. No. of targeted development strategies with incorporated climate change priorities enforced

<b>Output 1.2. National level capacity building activities for strengthening the capacity of the to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience</b>	<p>No. of offices that received on-the-job trainings, at national and district level Reports by trainers No. of beneficiaires (national and district-level government staff) trained to use models, assessment methods and monitoring systems and to replicate effective and efficient building-with-nature adaptation options, at national and district level, disaggregated by gender Training manual for climate adaptation in coastal environments and settlements Number of offices that received on-the-job trainings, at national and district level Reports by trainers No. of beneficiaires (national and district-level government staff) trained to use models, assessment methods and monitoring systems and to replicate effective and efficient building-with-nature adaptation options, at national and district level, disaggregated by gender</p>	<p>Output 2.1: Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events</p>	<p>2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender) 2.1.2. No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale).</p>
<b>Output 1.3 Two sub-national spatial development frameworks are developed at district/department level (one in Ghana and one in Côte d'Ivoire)</b>	<p>climate change-related coastal risks and vulnerabilities have been identified + measures to increase resilience proposed (incl. for gender/youth) Population covered by the sub-national spatial development frameworks, disaggregated by gender and age Percentage of women and youth of the total population consulted through participatory approaches during the planning process for the Sub-national spatial development frameworks Handbook to explain step-by-step the development and implementation of a Spatial Development Framework in coastal areas, with a focus on Ghana and Côte d'Ivoire.</p>	<p>Output 7: Improved integration of climate-resilience strategies into country development plans Output 1.2: Targeted population groups covered by adequate risk reduction systems</p>	<p>7.2. No. of targeted development strategies with incorporated climate change priorities enforced 1.2.1. Percentage of target population covered by adequate risk-reduction systems</p>
<b>Output 1.4. Community level adaptation plans (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate-change adaptation strategy within the planning practice of the community</b>	<p>No. of community plans developed in Ghana and Côte d'Ivoire to support successful implementation of concrete adaptation interventions. Plans should include sections on planning, operation, maintenance, monitoring and replication. No. of community-level workshops conducted to develop above plans. No. of beneficiaries, including direct and indirect, disaggregated by gender and age. Percentage of women and youth of the total population consulted through participatory approaches during the planning process for the community level adaptation plans. Case study report summarizing lessons learned regarding the development of community level adaptation plans in coastal areas</p>	<p>Output 7: Improved integration of climate-resilience strategies into country development plans Output 1.2: Targeted population groups covered by adequate risk reduction systems</p>	<p>7.2. No. of targeted development strategies with incorporated climate change priorities enforced 1.2.1. Percentage of target population covered by adequate risk-reduction systems</p>
<b>Output 2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire</b>	<p>No. of communities covered by operating hydro-meteorological equipment (e.g. radar, rainfall stations, meteorological stations, gage stations, water level monitoring) No. of Hazards monitored Rate of early warning information timely released by mandated institutions as planned, disaggregated by community and year No. of communities with evacuation plans and safe areas defined Increased income/avoided decrease in income from reduction of damage and loss related to extreme climate events, including total number of households in the area, number of targeted households, targeted income sources and income increase No. of beneficiaries (users), including direct and indirect, disaggregated by gender and age No. of gender-sensitive elements in the design of EWS: division of roles and responsibilities related to EWS; communication and dissemination about activities Percentage of women and youth who have participated in training/capacity building and participatory workshops and have gained planning skills and knowledge about flood risk areas, evacuation centres and safe routes Three knowledge products on EWS to demonstrate the technical elements and the implementation of the subproject.</p>	<p>Output 1.2: Targeted population groups covered by adequate risk reduction systems Output 2.1: Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events Output 1.1: Risk and vulnerability assessments conducted and updated</p>	<p>1.2.1. Percentage of target population covered by adequate risk-reduction systems 2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender) 1.2. No. of early warning systems (by scale) and no. of beneficiaries covered</p>
<b>Output 2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities</b>	<p>No. of communities with integrated NBS for flood risk reduction, including through mangrove restoration, drainage channels and bioinfiltration facilities Ha of mangroves planted/rehabilitated in target areas Meter<sup>2</sup> of infiltration cells constructed Meter of drainage channels constructed No. of people benefiting from NBS for flood risk and run-off reduction (mangroves, drainage channels, bioinfiltration facilities), including direct and indirect, disaggregated by gender and age No. of women who are engaged on the construction of bioretention, detention facilities and drainage channel activities; Increased income generated by avoided losses, including total number of households in the area, number of targeted households, targeted income sources and income increase Percentage of women and youth trained in mangrove plantation and management Percentage of women working on mangrove management activities (blue carbon testudies, mangrove nursery) Tons of carbon captured in first 4 years Three knowledge products on NBS to demonstrate the technical elements and the implementation of the subproject.</p>	<p>Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability. Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability</p>	<p>4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale) 4.1.1. No. and type of development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale) 5.1. No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)</p>
<b>Output 2.3. Adaptive capacity through alternative livelihoods is put in place in 21 coastal</b>	<p>No. of communities with resilient agriculture pilots No. of lead farmers trained, disaggregated by gender and age Acres of agricultural land improved through soil and water conservation methods</p>	<p>Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability</p>	<p>6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies</p>

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2.3.3. Joint trainings including both countries officials to improve transboundary governance systems and planning for coastal climate adaptation	240,500	81,770	79,365	79,365	0
Subtotal component 3	957,500	469,070	729,155	131,953	61,900
Total of components	11,674,077	2,518,769	6,028,028	2,319,904	807,377
Project Execution cost	1,221,000	332,000	377,000	338,000	174,000
Total project cost requested	12,895,077	2,850,769	6,405,028	2,657,904	981,377
Total management fee	1,096,082	271,555	521,018	227,680	75,829
TOTAL amount of financing requested	13,991,159	3,122,324	6,926,045	2,885,584	1,057,206

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**PART III.H: BUDGET NOTES**

Table 3736 Budget

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Inputs (as per ToC)	Activities (as per ToC)	Sub-activities	TOTAL	Year 1	Year 2	Year 3	Year 4
<b>Project components</b>							
C1.1 One Transnational Strategic Spatial Development Plan for the joint planning and management of the coastal area of Ghana and Cote d'Ivoire	Develop a spatial development framework for coordinated adaptation to common-transboundary climate-related hazard in the whole coastal area of Ghana and Cote d'Ivoire	Support to data collection (including GIS materials)	38,000	26,600	11,400	-	-
		Support to background building and spatial explicit maps	38,000	26,600	11,400	-	-
		Support to the development of the matrix of function	44,000	30,800	13,200	-	-
		Support to the design of the Transnational Coastal Development Strategy	112,000	78,400	33,600	-	-
		Material to set up a joint office for one year	20,000	14,000	6,000	-	-
		Office	-	-	-	-	-
		Car	70,000	49,000	21,000	-	-
		Driver	24,000	16,800	7,200	-	-
		International missions of international experts	18,000	12,600	5,400	-	-
		National Travel in Cdi for field mission	60,000	42,000	18,000	-	-
		Travel from Cdi to Ghana for field missions	76,800	53,760	23,040	-	-
		Participatory workshop (4)	16,000	11,200	4,800	-	-
		Validation workshop (1)	4,000	-	4,000	-	-
		Layout and print of the report	11,000	-	11,000	-	-
<b>Sub-total</b>			<b>531,800</b>	<b>361,760</b>	<b>170,040</b>	-	-
C1.2 National level capacity building activities for strengthening the capacity of the coastal area to address climate adaptation through spatial development frameworks, and measures to increase coastal resilience	Organize four national workshops: two in Ghana involving Land Use Spatial Planning Authority (LUSPA) and the Municipal District Assemblies (MMDAs) and two in Cote d'Ivoire involving Ministry of the Environment and Sustainable Development	Lead organizer/developer trainings and material preparation	48,000	24,000	24,000	-	-
		Technical expert to provide inputs to trainings	10,000	5,000	5,000	-	-
		International missions of international experts	36,000	18,000	18,000	-	-
		1 day workshops (4)	16,000	8,000	8,000	-	-
		On the job training provided by an international spatial planner (one per country) through frequent missions	30,545	15,273	15,273	-	-
		Support the subnational staff through on the job trainings in the planning offices in charge of the spatial development plans	30,545	15,273	15,273	-	-
		International missions of international experts	39,000	19,500	19,500	-	-
Local travelling	-	-	-	-	-		
<b>Sub-total</b>			<b>246,091</b>	<b>123,046</b>	<b>123,046</b>	-	-
C1.3 Two sub-national spatial development frameworks are developed at district/department level (one in Ghana and one in Cote d'Ivoire)	Develop two subnational spatial development frameworks: 1 targeting the district of Ada East in Ghana, and one targeting the department of Lagueville in Cote d'Ivoire, with climate change-related coastal risks identified and measures to increase coastal resilience proposed	Two junior spatial planners (international) following both Ghana and Cdi	456,000	-	228,000	228,000	-
		Technical support to the preparation phase (communication strategy, establishing working groups, meetings, scope, coordination with LUSPA and MMDA); analysis and plan proposal (literature review, field work data collection, draft report, final report, development strategies, key strategic projects, action plan), and maintenance of the activity (stakeholders consultation for the adoption of the plan, dissemination of the plan, monitoring and evaluation)	36,000	-	18,000	18,000	-
		One climatologist (international) following both Ghana and Cote d'Ivoire + a supervisor; One sociologist (international) following both Ghana and Cote d'Ivoire	18,000	-	9,000	9,000	-
		One national spatial planner in Cdi	30,000	-	15,000	15,000	-
		One national spatial planner in Ghana	30,000	-	15,000	15,000	-
		One national economist in Cdi	30,000	-	15,000	15,000	-
		One national economist in Ghana	30,000	-	15,000	15,000	-
		2 Launching events (1 in Ghana and Cote d'Ivoire)	8,000	-	8,000	-	-
		8 stakeholders consultation (4 in Ghana and 4 in Cote d'Ivoire)	8,600	-	4,800	4,800	-
		2 inception workshops (1 in Ghana and Cote d'Ivoire), 4 consultative workshops (2 in Ghana and 2 in Cdi), 4 validation workshops (2 in Ghana and 2 in Cote d'Ivoire)	12,000	-	12,000	-	-
		Communication strategy for the process in Ghana and Cote d'Ivoire	10,000	-	5,000	5,000	-
		Layout and print of reports (1 final report for Ghana and 1 final report for Cote d'Ivoire)	21,000	-	-	21,000	-
		Office set up for one year (one office in Ghana and one in Cote d'Ivoire)	20,000	-	16,000	4,000	-
		Office	-	-	-	-	-
Car (one for Ghana and one for Cdi)	140,000	-	140,000	-	-		
Driver One for Ghana and one for Cdi for one year	48,000	-	24,000	24,000	-		
International missions of international experts	24,000	-	12,000	12,000	-		
<b>Sub-total</b>			<b>922,600</b>	<b>-</b>	<b>536,800</b>	<b>386,800</b>	<b>-</b>
C1.4 Community level adaptation plans (11 in Ghana and 10 in Cdi are developed with the purpose of spatializing the pilots and ensuring an integrated climate-change adaptation strategy within the planning practice of the community	Develop 10-year horizon adaptation plans (in collaboration with the local staff) of 11 communities in Ghana and 10 communities in Cote d'Ivoire	Two spatial planners (international) one for Ghana and one for Cdi	64,000	-	-	44,800	19,200
		Technical support to the preparation phase (communication strategy, establishing working groups, meetings, scope, coordination with LUSPA and MMDA); analysis and plan proposal (literature review, field work data collection, draft report, final report, development strategies, key strategic projects, action plan), and maintenance of the activity (stakeholders consultation for the adoption of the plan, dissemination of the plan, monitoring and evaluation)	12,000	-	-	8,400	3,600
		One climatologist (international) following both Ghana and Cote d'Ivoire	12,000	-	-	8,400	3,600
		One national spatial planner in Cdi	20,000	-	-	14,000	6,000
		One national spatial planner in Ghana	20,000	-	-	14,000	6,000
		21 Launching events (11 in Ghana and 10 Cote d'Ivoire)	25,200	-	-	17,640	7,560
		Workshops (Per district: 3 in Ghana and 2 in Cote d'Ivoire)	18,000	-	-	12,600	5,400
		Community mobilizers/CREMA approach implementation	105,000	-	-	73,500	31,500
		Communication strategy/community involvement	21,000	-	-	14,700	6,300
		Citocommunity workshops	20,000	-	-	10,000	-
		Technical studies and assessments	30,000	-	-	16,800	7,200
		Cost of materials and equipment of the centre of surveillance	658,600	-	658,600	-	-
		Installation of the ranging stations and sirens	50,000	-	50,000	-	-
		Evacuation plan, EWS data management, field monitoring	200,000	-	120,000	80,000	-
<b>Sub-total</b>			<b>2,046,331</b>	<b>384,805</b>	<b>373,835</b>	<b>577,365</b>	<b>103,720</b>
<b>IT Component A</b>							
C2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Cote d'Ivoire	Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire	Lead developer of detailed sub-project documents	40,000	40,000	-	-	-
		Experts (engineers, architects, etc.) to provide technical inputs and carry out engineering studies to complete sub-project documents	80,000	80,000	-	-	-
		Lead organizer community consultations	15,000	7,500	7,500	-	-
		City/community consultation and analysis assistance	40,000	20,000	10,000	10,000	-
		Citocommunity workshops	20,000	10,000	10,000	-	-
		Technical studies and assessments	30,000	30,000	-	-	-
		Cost of materials and equipment of the centre of surveillance	658,600	-	658,600	-	-
Installation of the ranging stations and sirens	50,000	-	50,000	-	-		
Evacuation plan, EWS data management, field monitoring	200,000	-	120,000	80,000	-		
<b>Sub-total</b>			<b>78,497</b>	<b>19,624</b>	<b>39,249</b>	<b>19,624</b>	<b>-</b>
Project execution	Car for Cdi	-	-	-	-	-	
	Chief of Party	63,535	17,028	17,879	18,773	9,856	
	Technical lead, Climate adaptation	47,098	13,684	14,368	15,086	3,960	
	Operations lead	51,058	13,684	14,368	15,086	3,960	
	Infrastructure manager (Engineer)	17,789	3,421	14,368	-	-	

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		Environmental safeguarding manager	47,098	13,684	14,368	15,086	3,960		
		MEAL Manager	51,058	13,684	14,368	15,086	7,920		
		Community development & Safeguarding coordinator	33,183	8,893	9,338	9,805	5,147		
		Finance & Admin manager	51,058	13,684	14,368	15,086	7,920		
		Procurement & Logistics officer	21,094	6,129	6,435	6,757	1,774		
		Finance Officer	19,332	5,181	5,440	5,712	2,999		
		Driver	5,971	1,600	1,680	1,764	926		
		Driver	5,971	1,600	1,680	1,764	926		
		Local missions: Ghana/CDI	68,796	19,656	19,656	19,656	9,828		
		Vehicle maintenance and Gasoline	15,672	4,200	4,410	4,631	2,431		
		CDI Office running costs: Rent contribution/utilities/communication	22,388	6,000	6,300	6,615	3,473		
		Field offices set up & operation	4,200	4,200	---	---	---		
		Field offices running costs	10,527	2,269	3,175	3,334	1,750		
		International missions of international experts	23,520	6,720	6,720	6,720	3,980		
		Project indirect support costs	115,889	23,711	69,625	17,702	4,851		
	<b>Sub-total</b>		<b>1,897,355</b>	<b>386,149</b>	<b>1,133,894</b>	<b>286,266</b>	<b>76,002</b>		
C 2.2. Integrated NBS for reducing run-off and adapt to increasing riverine floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Cote d'Ivoire, in collaboration with local staff and communities	Build drainage channels in 9 communities in Ghana and 6 Communities of Cote d'Ivoire	Lead developer of detailed sub-project documents	40,000	40,000	---	---	---		
		Experts (engineers, architects, etc.) to provide technical inputs and carry out engineering studies to complete sub-project documents	80,000	80,000	---	---	---		
		Lead organizer community consultations	15,000	7,500	7,500	---	---		
		Civ/community consultation and analysis assistance	40,000	12,000	28,000	---	---		
		Civ/community workshops	30,000	9,000	21,000	---	---		
		Technical studies and assessments	80,000	---	---	---	---		
		Cost of materials and construction	178,000	---	178,000	---	---		
		Maintenance	50,000	---	15,000	15,000	20,000		
		Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana	Lead developer of detailed sub-project documents	---	---	---	---	---	
			Experts (engineers, architects, etc.) to provide technical inputs and carry out engineering studies to complete sub-project documents	---	---	---	---	---	
			Lead organizer community consultations	---	---	---	---	---	
			Civ/community consultation and analysis assistance	---	---	---	---	---	
	Civ/community workshops		30,000	7,500	7,500	7,500	7,500		
	Technical studies and assessments		80,000	---	---	---	---		
	Cost of material and construction		427,200	---	427,200	---	---		
	Maintenance		50,000	---	15,000	15,000	20,000		
	Reforest mangrove systems to minimize the impact of floods in 8 communities in Cote d'Ivoire and 11 communities in Ghana		Lead developer of detailed sub-project documents	---	---	---	---	---	
			Experts (engineers, architects, etc.) to provide technical inputs and carry out engineering studies to complete sub-project documents	---	---	---	---	---	
			Lead organizer community consultations	---	---	---	---	---	
			Civ/community consultation and analysis assistance	---	---	---	---	---	
		Civ/community workshops	30,000	7,500	7,500	7,500	7,500		
		Technical studies and assessments	60,000	60,000	---	---	---		
		Cost of materials and preparation	120,150	---	120,150	---	---		
		Mangrove planting	356,000	---	356,000	---	---		
		Carbon credits	210,000	---	63,000	63,000	84,000		
		Maintenance and nursery person during the project duration	180,000	---	135,000	45,000	---		
		Monitoring and sustainable development plan	200,000	---	80,000	60,000	60,000		
		Car (for Ghana)	70,000	70,000	---	---	---		
	Project execution	Vehicle maintenance and Gasoline	15,672	4,200	4,410	4,631	2,431		
		Car for CDI	124,045	33,244	34,507	36,659	19,242		
		Chief of Party	91,953	26,716	28,051	29,454	7,732		
		Technical lead, Climate adaptation	99,684	26,716	28,051	29,454	15,463		
		Operations lead	34,730	6,679	28,051	---	---		
		Infrastructure manager (Engineer)	91,953	26,716	28,051	29,454	7,732		
		Environmental safeguarding manager	99,684	26,716	28,051	29,454	15,463		
		MEAL Manager	64,786	17,363	19,231	19,142	10,059		
		Community development & Safeguarding coordinator	99,684	26,716	28,051	29,454	15,463		
		Finance & Admin manager	41,184	11,965	12,564	13,192	3,463		
		Procurement & Logistics officer	37,744	10,116	10,621	11,152	5,855		
		Finance Officer	11,657	3,124	3,280	3,444	1,808		
		Driver	11,657	3,124	3,280	3,444	1,808		
		Local missions: Ghana/CDI	134,316	39,376	39,376	39,376	19,188		
		CDI Office running costs: Rent contribution/utilities/communication	22,388	6,000	6,300	6,615	3,473		
		Field offices set up & operation	8,200	8,200	---	---	---		
		Field offices running costs	19,926	4,428	6,199	6,199	3,100		
		International missions of international experts	45,920	13,120	13,120	13,120	6,560		
		Project indirect support costs	241,224	43,637	121,711	33,773	22,101		
		<b>Sub-total</b>		<b>3,002,755</b>	<b>710,654</b>	<b>1,982,158</b>	<b>850,010</b>	<b>359,932</b>	
C 2.3. Adaptive capacity through alternative livelihoods is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions		Set up resilient agriculture activities through dedicated plots and one training centre in 6 communities in Ghana and 3 communities in Cote d'Ivoire	Lead developer of detailed sub-project documents	40,000	40,000	---	---	---	
			Experts (engineers, architects, etc.) to provide technical inputs and carry out engineering studies to complete sub-project documents	80,000	80,000	---	---	---	
			Lead organizer community consultations	15,000	7,500	7,500	---	---	
			Civ/community consultation and analysis assistance	40,000	10,000	10,000	10,000	10,000	
			Technical studies and assessments	60,000	30,000	30,000	---	---	
			Cost of material, irrigation, land preparation and construction of the farm (training centre)	1,068,000	---	1,068,000	---	---	
			Education activities in the training centre	100,000	---	40,000	40,000	20,000	
			Supervision, monitoring and reporting	50,000	---	20,000	20,000	10,000	
			Monitoring, evaluation of results and refinement, ensure seed availability of new crops	100,000	---	40,000	40,000	20,000	
			Train local staff and communities regarding project management, maintenance, and climate adaptation activities	Lead developer of detailed sub-project documents	---	---	---	---	---
				Lead organizer of the trainings	120,000	---	80,000	80,000	---
				Trainers	100,000	---	50,000	50,000	---
		Material preparation		45,000	---	45,000	---	---	
		Trainings delivered		48,000	---	24,000	24,000	---	
		Car (one for Ghana and one for Cdi)		---	---	---	---	---	
		Resilience housing training		100,000	---	50,000	50,000	---	
	Vehicle maintenance and Gasoline	15,672		4,200	4,410	4,631	2,431		
	Car for CDI	114,969		30,812	32,353	33,970	17,634		
	Chief of Party	85,224		24,761	25,999	27,299	7,166		
	Technical lead, Climate adaptation	92,390		24,761	25,999	27,299	14,332		
	Operations lead	32,189		6,190	25,999	---	---		
	Infrastructure manager (Engineer)	85,224	24,761	25,999	27,299	7,166			
	Environmental safeguarding manager	92,390	24,761	25,999	27,299	14,332			
	MEAL Manager	60,045	16,092	16,897	17,742	9,314			
	Community development & Safeguarding coordinator	92,390	24,761	25,999	27,299	14,332			
	Finance & Admin manager	38,170	11,090	11,844	12,227	3,309			
	Procurement & Logistics officer	34,982	9,375	9,844	10,336	5,427			
	Finance Officer	10,804	2,896	3,040	3,192	1,676			
	Driver	10,804	2,896	3,040	3,192	1,676			
	Local missions: Ghana/CDI	124,488	35,568	35,568	35,568	17,784			
	CDI Office running costs: Rent contribution/utilities/communication	22,388	6,000	6,300	6,615	3,473			
	Field offices set up & operation	7,600	7,600	---	---	---			
	Field offices running costs	19,050	4,104	5,746	6,033	3,167			
	International missions of international experts	42,560	12,160	12,160	12,160	6,080			
	Project indirect support costs	192,817	28,804	113,930	37,693	12,391			
	<b>Sub-total</b>		<b>3,340,158</b>	<b>469,091</b>	<b>1,855,426</b>	<b>619,863</b>	<b>201,790</b>		
		<b>Component 2</b>		<b>9,937,298</b>	<b>1,997,994</b>	<b>1,071,707</b>	<b>1,067,161</b>	<b>660,726</b>	

C3.1 Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa with Abidjan Convention as regional knowledge platform	Organise one regional workshop for experience sharing of national coastal climate adaptation	Regional workshops preparation expert/lead	15,000	15,000	-	-	-	
		Regional workshop preparation assistance	15,000	15,000	-	-	-	
		Regional workshops (including travel costs of participants)	75,000	75,000	-	-	-	
		Transport for staff (travel / der diem)	20,000	20,000	-	-	-	
		travel / per diem)	20,000	20,000	-	-	-	
		Lead coordinator (50% staff time)	50,000	35,000	5,000	5,000	5,000	
		Knowledge management expert	50,000	35,000	5,000	5,000	5,000	
		Communication expert / web-designer	50,000	17,500	12,500	12,500	7,500	
		Technical experts compiling best practices and preparing the reports	36,000	18,000	-	9,000	9,000	
		International missions of international experts	12,000	6,000	-	3,000	3,000	
Layout and print of the report	10,000	5,000	-	-	5,000			
<b>Sub-total</b>			<b>353,000</b>	<b>261,500</b>	<b>22,500</b>	<b>24,500</b>	<b>34,500</b>	
C3.2. Cross-fertilization activities among Ghana and Cote d'Ivoire at different scales for exchanging experiences from project's implementation, and fostering cooperation on coastal adaptation	Organise meetings (twice a year) involving national level staff from the two countries to address common challenges and exchange possible solutions (facilitated by the local universities)	Expert lead	60,000	18,000	18,000	18,000	6,000	
		Support of technical expert	84,000	25,200	25,200	25,200	8,400	
		Organization of meetings (including venues and food when live)	60,000	19,800	19,800	20,400	-	
		Expert lead	-	-	-	-	-	
		Support of technical expert	60,000	18,000	18,000	18,000	6,000	
Prepare meetings (twice a year) involving community staff from the two countries to discuss common challenges and and possible solution in terms of project implementation, governance, and capacity building	Facilitate government officials carry out exploratory missions the another country to learn through one-month on-the-job training	Expert lead	-	-	-	-	-	
		Support of technical expert	60,000	18,000	18,000	18,000	6,000	
		Organization of meetings (including venues and food when live)	60,000	19,800	19,800	20,400	-	
		Expert lead	-	-	-	-	-	
		Support of technical expert	60,000	18,000	18,000	18,000	6,000	
C3.3. Joint trainings including both countries officials to improve transboundary governance systems and planning for coastal climate adaptation	Organise one training per year for national level staff involving Ghana and Cote d'Ivoire about tools, monitoring systems and strategies for coastal climate adaptation	Joint trainings preparation expert/lead	20,000	6,800	6,800	6,800	-	
		Joint trainings preparation assistance/knowledge management	48,000	16,320	15,840	15,840	-	
		Trainings	7,500	2,550	2,475	2,475	-	
		International missions of international experts	18,000	6,120	5,940	5,940	-	
		Joint trainings preparation expert/lead	-	-	-	-	-	
Organise one training per year involving staff from the sub-national level spatial frameworks	Facilitate government officials carry out exploratory missions the another country to learn through one-month on-the-job training	Joint trainings preparation expert/lead	-	-	-	-	-	
		Joint trainings preparation assistance/knowledge management	48,000	16,320	15,840	15,840	-	
		Trainings	7,500	2,550	2,475	2,475	-	
		International missions of international experts	18,000	6,120	5,940	5,940	-	
		Joint trainings preparation expert/lead	-	-	-	-	-	
TOTAL	TOTAL	Joint trainings preparation expert/lead	20,000	6,800	6,800	6,800	-	
		Joint trainings preparation assistance/knowledge management	48,000	16,320	15,840	15,840	-	
		Trainings	7,500	2,550	2,475	2,475	-	
		International missions of international experts	18,000	6,120	5,940	5,940	-	
		Joint trainings preparation expert/lead	-	-	-	-	-	
<b>Sub-total</b>			<b>240,500</b>	<b>81,770</b>	<b>79,365</b>	<b>79,365</b>	<b>34,200</b>	
<b>Project cycle management fee costs</b>			<b>11,875,077</b>	<b>2,878,769</b>	<b>6,405,028</b>	<b>2,657,904</b>	<b>981,377</b>	
Project execution	Cote d'Ivoire	Regional Project Coordinator	480,000	120,000	144,000	144,000	72,000	
		Admin / financial procurement (national)	100,000	25,000	30,000	30,000	15,000	
		Safeguarding system (AF) compliance (national)	30,000	7,500	7,500	7,500	7,500	
		M & E Gender and communication	70,000	17,500	22,500	22,500	7,500	
		National Project manager	248,000	80,000	96,000	72,000	-	
		Admin / financial procurement (national)	70,000	25,000	30,000	15,000	-	
		Travel	32,000	12,000	8,000	8,000	4,000	
		Ghana	Vehicle Operations & Maintenance	31,000	9,000	9,000	9,000	4,000
			Office Rent	86,000	24,000	24,000	24,000	14,000
			Communication / publication / printing	18,000	4,000	4,000	4,000	6,000
			Office Supplies, Stationery, Computers	14,000	8,000	2,000	2,000	2,000
		Operations	Independent evaluation (lump sum)	42,000	-	-	-	42,000
Final evaluation	1,221,000		332,000	377,000	338,000	174,000		
<b>TOTAL Execution costs</b>			<b>9.47%</b>	<b>12,895,077</b>	<b>2,850,769</b>	<b>6,405,028</b>	<b>2,657,904</b>	
<b>TOTAL Project costs</b>			<b>12,895,077</b>	<b>2,850,769</b>	<b>6,405,028</b>	<b>2,657,904</b>	<b>981,377</b>	
Project cycle management	1.39%	UN-Habitat overall project supervision and M&E, incl. AF and UN-H policies (less ESP and CPI and regulations compliance (Senior Human Settlements officer 5% + PMO 5% + PMA 25% + M & E))	179,100	68,834	65,550	38,674	6,042	
		PS 5 %	32,640	8,160	14,280	8,160	2,040	
		PMA 25 %	45,000	7,500	22,500	12,500	2,500	
		PMA Common services	10,730	1,587	5,385	3,007	751	
		Coordination PS PFES	48,000	18,000	18,000	12,000	-	
		PS PFES Common services	10,730	1,587	5,385	3,007	751	
		Inception support M&E	32,000	32,000	-	-	-	
		UN-Habitat Travel	14,326	3,167	7,116	2,953	1,090	
		UN-Habitat HQ Overall project supervision, incl. compliance to UN-H policies (gender, human rights, climate change, etc.)	802,655	199,554	448,352	186,053	68,696	
		<b>TOTAL management fee</b>			<b>8.50%</b>	<b>1,098,082</b>	<b>271,555</b>	<b>521,018</b>
<b>TOTAL amount of financing requested</b>			<b>13,991,159</b>	<b>3,122,324</b>	<b>6,926,045</b>	<b>2,885,354</b>	<b>1,057,206</b>	
			<b>26</b>	<b>% comp 1+ 3 sul "tot component"</b>	<b>179,100</b>	<b>68,834</b>	<b>65,550</b>	<b>38,674</b>
			<b>74</b>	<b>comp 2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
			<b>14,280</b>	<b>4,080</b>	<b>4,080</b>	<b>4,080</b>	<b>2,040</b>	
			<b>21,000</b>	<b>6,000</b>	<b>6,000</b>	<b>6,000</b>	<b>3,000</b>	

### PART III. DISBURSEMENT SCHEDULE

Table 383433. Disbursement

Schedule Date	Upon signing	One year after project's inception	Two years after project's inception	Three years after project's inception	Grand total
<b>A. Project's fund (USD)</b>	2,518,769	6,028,028	2,319,904	807,377	11,674,077
<b>B. Execution costs (USD)</b>	332,000	377,000	338,000	174,000	1,221,000
<b>C. Project cycle management (USD)</b>	271,555	521,018	227,680	75,829	1,096,082
<b>Total project cost requested (USD)</b>	<b>3,122,324</b>	<b>6,926,045</b>	<b>2,885,584</b>	<b>1,057,206</b>	<b>13,991,159</b>

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MINISTRY OF ENVIRONMENT AND  
SUSTAINABLE DEVELOPMENT  
-----  
GENERAL COORDINATION OF PROGRAMS  
AND PROJECTS  
-----  
NATIONAL CLIMATE CHANGE PROGRAM  
-----  
N° 000003 /MINEDD/CAB/CGPP/PNCC/ld

REPUBLIQUE DE CÔTE D'IVOIRE  
*Union - Discipline - Travail*



Abidjan, le 10 FEV. 2023



ADAPTATION FUND

### Letter of Endorsement by Government

To: **Adaptation Fund Board**  
c/o Adaptation Fund Board Secretariat  
Email : Secretariat@Adaptation-Fund.org  
Fax : 202 522 3240/5

Subject: Request for UN-Habitat to execute the output 1.2 under component 1 of the proposed Adaptation Fund project "Improved Resilience of Coastal Communities in Cote d'Ivoire and Ghana".

In my capacity as the designated authority for the Adaptation Fund in the Republic of Côte d'Ivoire, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Côte d'Ivoire.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund, if approved, the project will be implemented by the United Nations Human Settlements Programme (UN-Habitat) in support with the Ministry of Environment and Sustainable Development and the Ministry of Planning and Development.

Sincerely,



LIADÉ-Dissahonon Marie Sylvie

Adaptation Fund National Designated Authority

Environmental Engineer, Technical Assistant in charge  
of Climate Resource Mobilization

Tel: +225 07 57 39 35 15

Email : dissahononliade@gmail.com

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**PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY**



MINISTRY  
OF  
ENVIRONMENT, SCIENCE,  
TECHNOLOGY AND  
INNOVATION

P. O. Box M232, Ministries - Accra  
Digital Address : GA-107-3073

Kindly quote this number and date on all correspondence

My Ref. No. MESTI/IA/006/02

Your Ref. No. \_\_\_\_\_

Date: Nov 23, 2022

To: **The Adaptation Fund Board**  
c/o Adaptation Fund Board Secretariat  
Email: Secretariat@Adaptation-Fund.org  
Fax: 202 522 3240/5

**SUBJECT: ENDORSEMENT FOR PROJECT "IMPROVED RESILIENCE OF COASTAL COMMUNITIES IN GHANA AND COTE D'IVOIRE"**

In my capacity as the designated authority for the Adaptation Fund in the Republic of Ghana, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Ghana.

2. Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the United Nations Human Settlements Program (UN-Habitat) in collaboration with the Ministry of Environment, Science, Technology & Innovation (MESTI) and an executing entity of Ghana at the national level.
3. The rationale for the request is that UN-Habitat is mandated and best placed among potential execution entities to conduct the proposed project activities under output 1.2. These include strengthening the capacity of Ministry of Environment, Science, Technology & Innovation and the Land Use and Spatial Planning Authority to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience and to develop a Transnational Strategic Spatial Development Plan and a Spatial Development Framework in which climate change risks are mainstreamed (see outputs 1.1 and 1.3 under component 1 of the project).
4. UN-Habitat will execute Output 1.2 to support the capacity building of the Ministry of Environment, Science, Technology & Innovation (MESTI) and the Land Use and Spatial Planning Authority (LUSPA).
5. Counting on your usual cooperation.

**PETER DERY  
ADAPTATION FUND NATIONAL  
DESIGNATED AUTHORITY  
DIRECTOR, ENVIRONMENT**

Tel: +233 (0) 302 662 626  
Email: info@mesti.gov.gh  
Website: www.mesti.gov.gh

MINISTRY OF ENVIRONMENT AND  
SUSTAINABLE DEVELOPMENT  
-----  
GENERAL COORDINATION OF PROGRAMS  
AND PROJECTS  
-----  
NATIONAL CLIMATE CHANGE PROGRAM  
-----  
N°000003 /MINEDD/CAB/CGPP/PNCC/ld

REPUBLIQUE DE COTE D'IVOIRE  
*Union - Discipline - Travail*



Abidjan, le 10 FEV. 2023



ADAPTATION FUND

**Letter of Endorsement by Government**

To: **Adaptation Fund Board**  
c/o Adaptation Fund Board Secretariat  
Email : Secretariat@Adaptation-Fund.org  
Fax : 202 522 3240/5

Subject: Request for UN-Habitat to execute the output 1.2 under component 1 of the proposed Adaptation Fund project "**Improved Resilience of Coastal Communities in Côte d'Ivoire and Ghana**".

In my capacity as the designated authority for the Adaptation Fund in the Republic of Côte d'Ivoire, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Côte d'Ivoire.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the United Nations Human Settlements Programme (UN-Habitat) in support with the Ministry of Environment and Sustainable Development and the Ministry of Planning and Development.

Sincerely,



LIADÉ-Dissahonon Marie Sylvie

Adaptation Fund National Designated Authority

Environmental Engineer, Technical Assistant in charge  
of Climate Resource Mobilization

Tel : +225 07 57 39 35 15

Email : dissahononliade@gmail.com



MINICTDV

P. O. Box M232, Ministries - Accra  
Digital Address : GA-107-3073

MINISTRY OF ENVIRONMENT AND  
SUSTAINABLE DEVELOPMENT  
GENERAL COORDINATION OF PROGRAMS  
AND PROJECTS  
NATIONAL CLIMATE CHANGE PROGRAM  
N000001/MINEDD/CAB/CGPP/PNCC/ld

REPUBLIQUE DE COTE D'IVOIRE  
*Union - Discipline - Travail*



Abidjan, le 13 DEC. 2022



**Letter of Endorsement by Government**

To: **Adaptation Fund Board**  
c/o Adaptation Fund Board Secretariat  
Email: Secretariat@Adaptation-Fund.org  
Fax: 202 522 3240/5

Subject: Request for UN-Habitat to execute the output 1.2 under component 1 of the proposed Adaptation Fund project "**Improved Resilience of Coastal Communities in Côte d'Ivoire and Ghana**".

In my capacity as the designated authority for the Adaptation Fund in the Republic of Côte d'Ivoire, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Côte d'Ivoire.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the United Nations Human Settlements Programme (UN-Habitat) in collaboration with the Ministry of Environment and Sustainable Development, the Ministry of Planning and Development and an executing entity of Côte d'Ivoire at the national level.

The rationale for the request is that UN-Habitat is mandated and best placed among potential execution entities to conduct the proposed project activities under output 1.2. These include strengthening the capacity of the Ministry of Environment and Sustainable Development and the Ministry of Planning and Development to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience and to develop a Transnational Strategic Spatial Development Plan and a Spatial Development Framework in which climate change risks are mainstreamed (see outputs 1.1 and 1.3 under component 1 of the project).

Moreover, the Ministry of Environment and Sustainable Development and the Ministry of Planning and Development will achieve sustainability of proposed project activities by ensuring that the Transnational Strategic Spatial Development Plan and the Sub-National/ District Frameworks are periodically updated as requested by national law.

Sincerely,

  
  
**Marie Sylvie**  
National Designated Authority  
Technical Assistant in charge of resource mobilization

MINISTÈRE DE L'ENVIRONNEMENT ET DU DÉVELOPPEMENT DURABLE  
Côte Administrative, Tour D, 10<sup>ème</sup> étage  
20 BP 850 Abidjan 20 - Tél : (225) 27 20 23 99 01/14

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**PART V: M&E**

Table 4035 M&E

Type of M & E Activity	Activity	Entity	Total	1	2	3	4
Measurements of means of verification (baseline assessment and M & E plans) as part of inception	Inception Workshop (regional workshop)	AbC	3,300	3,300	-	-	-
	Reports preparation and EE compliance to AF ESP and GP	UN-Habitat	-	See Overall project monitoring and evaluation (from cycle management fee)			
Direct Project Monitoring and Quality Assurance including annual progress and financial reporting, project revisions, technical assistance and ESP and GP compliance (from execution fee M & E and safeguards)	M & E UN-H offices	UN-Habitat National offices	400,000	25,000	30,000	30,000	15,000
	Overall project monitoring and evaluation (from cycle management fee)	UN-Habitat	32,000	8,000	8,000	8,000	8,000
Audits	In-line with AF requirements	QIOS	-	*	*	*	*
Terminal external evaluation	-	Independent	42,000	-	-	-	42,000
<b>Total</b>	-	-	<b>477,300</b>	<b>36,300</b>	<b>38,000</b>	<b>38,000</b>	<b>65,000</b>
From Project Execution fee			442,000	25,000	30,000	30,000	57,000
From Project Cycle Management fee			32,000	8,000	8,000	8,000	8,000

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I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans, especially the NDCs of Ghana and Cote d'Ivoire and their national climate change strategies / policies, and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Mr. Rafeel Tuts, Director, Global Solutions Division, UN-Habitat and Officer-in-Charge, Office of the Deputy Executive Director



Implementing Entity Coordinator

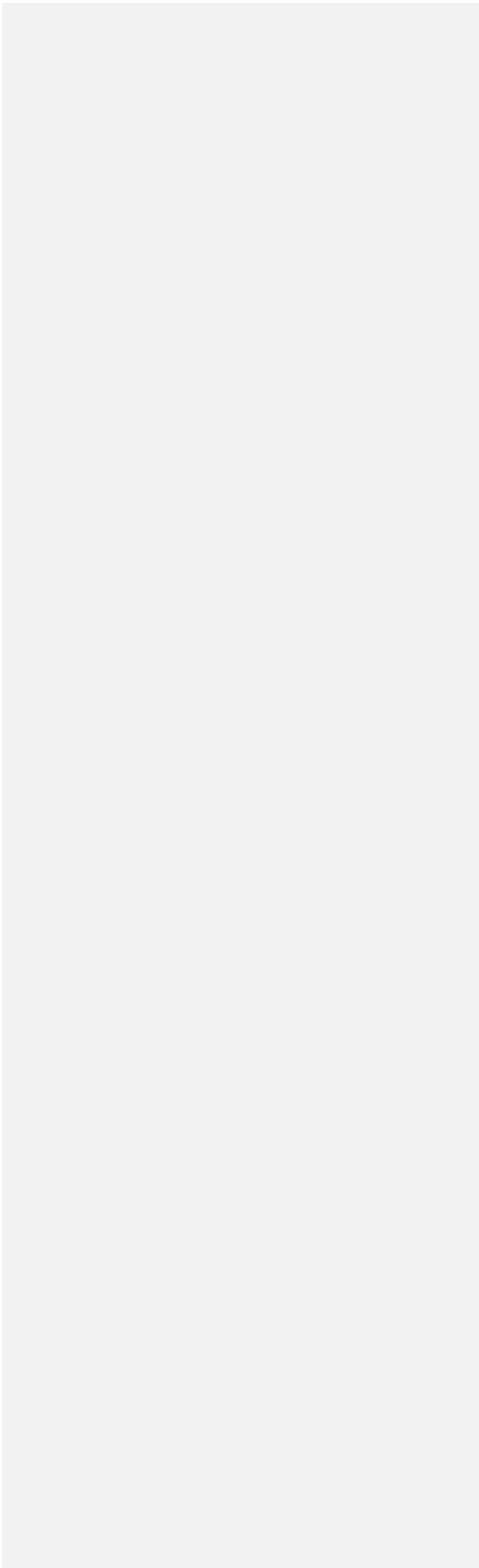
Date: 6 January 2023 Tel: +254 20 76 23 726; Email: raf.tuts@un.org  
 Project Contact Person 1: Project Contact Person: Javier Torner; Mathias Spalliviero  
 Email: mathias.spalliviero@un.org  
 Project Contact Person 2: Javier Torner  
 Email: Javier.torner@un.org

October 2017

**PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY**

**PART VI: BUDGET NOTES**

Table [4136](#) Budget notes



## ANNEX 1: VULNERABILITY ANALYSIS AND MCA SELECTION OF PROJECT AREAS FOR THE SUBPROJECTS OF COMPONENT 2

As mentioned under section II.A, the selection of areas of interventions for the subprojects, was based on a Multi-criteria analysis (MCA). Criteria of the analysis are: i) CC environmental-social-financial (economic) impacts; ii) Beneficiaries impact; iii) Vulnerable groups ratio; iv) Geographical impact; v) Alignment with government priorities.

### 1.1 Coastal areas analysis in Côte d'Ivoire for area selection

As previously mentioned in the Background section, the Ivorian coastline is extremely vulnerable to both coastal flooding and erosion.

The coastline is 566 km long and consists of a variety of coastal habitats including coastal lagoons, estuaries, mangroves, swamps and humid zones. The coastal area can be divided into three zones based on geomorphology. The first zone is from Cape of Palmas to Sassandra and is characterized by a rocky coast and an elevation above 10 meters. The second zone goes from Sassandra to Abidjan and is covered by coastal cliffs. Finally, the third zone from Abidjan to Cape of Three is composed of sandy beaches and lies slightly above sea level (0-10m). Due to their different characteristics, the levels of vulnerability vary from one region to another, and it is therefore important to identify the areas at highest risk to prioritize as main targets for this project. The third zone (also called the Greater Abidjan area) is composed of the districts of Abidjan, Agboville, Tiassale, and Grand-Lahou and is the most densely populated due to its rapidly growing population and migration of rural communities to urban areas in search of better opportunities. The area concentrates more than 30% of the national population. Due to this, unplanned development and urban sprawl occurred leading the city to extend in areas where natural hazards were higher.

Based on the fact that the coastal communities and assets within the Great Abidjan region (or third zone) are most at risk, the project decided to concentrate efforts in this area. To select which departments and communities within the region will be included in this project, a prioritization process using a multi-criteria methodology was conducted to ensure evidence-based selection. The parameters included in this multi-criteria methodology are environmental and socio-economic impacts, vulnerable groups, beneficiaries, geographical impact, and alignment with national priorities.

The prioritization process was conducted using a matrix where the different parameters were given a score for each of the areas to be prioritized. Ultimately, the prioritization was done by ranking the areas from the highest to the lowest values. As per the table below, the prioritized departments are Port-Bouet, Grand-Bassam, and Jacqueville. However, due to ongoing investments in Port Bouet the department was excluded to avoid duplication. Therefore, the final selected departments are **Grand-Bassam and Jacqueville**.

Annex Table 1 Prioritization of target areas. Côte d'Ivoire.

Department/ commune	Prioritization criteria						PRIORITY
	CC environmental-social-financial (economic) impacts	Beneficiaries impact	Vulnerable groups ratio	Geographical impact			
				m/year	%	Final	
Jacqueville	High	High	High	High	High	High	3
Bingerville	Low	Low	Low	Low	Low	Low	1
Grand-Bassam	High	High	High	High	High	High	2
Cocody	Low	Low	Low	Low	Low	Low	4
Port Bouet	High	High	High	High	High	High	1

The selection and prioritization highlighted in this table has been achieved through consultations with stakeholders and communities, as well as by data collection from relevant studies and statistics on the Ivorian coastal dynamics.

### 1.2 Coastal areas analysis in Ghana for area selection

In order to identify the target areas for the project, results from a vulnerability study have been used. This study, Mapping Vulnerability and Risk of Ghana's Coastline to Sea Level Rise, is a collaboration between the University of Ghana and the University of Portsmouth in 2016.<sup>81</sup> It entails a detailed assessment at district level through the Coastal Vulnerability Index-based methodology, which provides a vulnerability ranking. This results from the analysis and correlation of key variables influencing coastal change. These variables include geomorphology characteristics such as coastal slope or wave heights, and socio-economic dynamics such as population at risk.

<sup>81</sup> Boateng, Isaac.Jayson-Quashigah, Philip. 2016.Mapping Vulnerability and Risk of Ghana's Coastline to Sea Level Rise.



Annex Figure 1 Coastal Vulnerability Index to sea level rise and coastal flooding and erosion. Ghana

The study shows how 36% of the coastline has very high levels of vulnerability. The Eastern part of the coast presents the highest erosion rates, 3.9 m/year, compared to the Central and Western areas that have values of

2.7 m/year and 1.6 m/year, respectively.<sup>82</sup> Another study estimates that under a scenario of 2 m sea level rise, around 5,000 km<sup>2</sup> of the eastern districts will be impacted by floods.<sup>83</sup> There are four coastal regions in the country, Western, Central, **Greater Accra, and Volta**. This proposal will focus on the latter two that are located on the eastern part of the coast, based on their higher vulnerability values, and the evaluation of socio-economic and environmental assets presented below.

In terms of socio-economic resources, Greater Accra and Volta regions while having 24% of the land, host 44% of the national population<sup>84</sup> and over 60% of major industries (manufacturing, refinery, mining, port and harbour, textile and smelting). Here, population growth is also among the highest in the country, rating at 3.1% in Greater Accra and 2.5% in Volta, according to latest census in 2010. In Volta region, rural growth is the most relevant having a rate of 2.8%.

Annex Figure 2 Population density in Greater Accra and Volta regions. Ghana



Based on highest levels of vulnerability, key environmental assets at risk, and higher need for support in rural areas (where less investment and initiatives take place), the project will concentrate on the eastern part of these two regions.

This means out of the 8 coastal districts, Ga South, Accra Metropolitan, and Tema Metropolitan, were excluded from the final selection process. The remaining districts are included in the project and are Ningo-Prampram, Ada East, Ada West, Anloga/ Keta, and Ketu.

The selection of these districts was done according to a prioritization process using a multi-criteria methodology to ensure evidence-based selection. The parameters included in a multi-criteria methodology are environmental and socio-economic impacts, vulnerable groups, beneficiaries, geographical impact, and alignment with national priorities.

Each of these was weighted according to its relevance and was provided with measurable indicators that ensured an objective evaluation. The prioritization process was conducted using a matrix where the different parameters were given a score for each of the areas to be prioritized. Ultimately, the prioritization was done by ranking the areas from the highest to the lowest values. As per the table below the selected districts are **Anloga/ Keta, Ada East, and Ada West**.

Annex Table 2 Prioritization of target areas. Ghana

Districts	Prioritization criteria						PRIORITY
	Environmental-social-financial (economic) impacts	Beneficiaries impact	Vulnerable groups ratio	Geographical impact			
				m/year	%	Final	
Ningo-Prampram	High	High	High	High	High	High	5
Ada West	High	High	High	High	High	High	3
Ada East	High	High	High	High	High	High	2
Anloga/ Keta	High	High	High	High	High	High	1
Ketu	High	High	High	High	High	High	4

<sup>82</sup> Giardino.A., et al. 2017. A quantitative assessment on human interventions and climate change on the West African sediment budget.

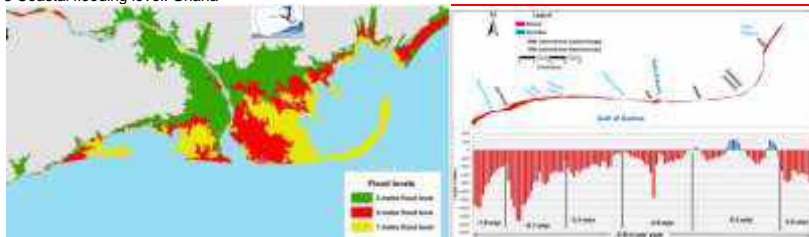
<sup>83</sup> Adortse. P., 2019. Coastal flood hazard assessment for Ghana.

<sup>84</sup> Ministry of Environment, Science, Technology and Innovation, Town and Country Planning Department, National Development Planning Commission. 2015. Ghana National Spatial Development Framework (2015-2035)



Evidence for this matrix has been collected from consultations with stakeholders and the communities, as well as from detailed studies that targeted coastal flooding and erosion. As per the maps below, the area of study is in serious threat of flooding, both landward (lagoon water) and seaward (sea water), and coastal recession due to the soft geology, low-lying topography, and the reduction of sediment supply. For example, it highlights how erosion rates are very severe, reaching 2-3m/year in the Volta estuary and 8m/year in Anloga/ Keta. Episodes of shore erosion over the last several decades caused about 70% loss of infrastructure along the coast of Anloga/ Keta.

Annex Figure 3 Coastal flooding level. Ghana



### 1.3 Summary and characteristics of communities in target areas.

The information provided by the coastal area analysis and the prioritization of the target areas for increasing local adaptive capacity facilitated the identification of the communities that will be directly benefited from the project's physical interventions that fall under component 3. The following section compiles specific information regarding the main characteristics of each community related to their physical, social, and environmental infrastructure. These specific elements create a unique profile for each community in which most cases, increases their vulnerability to climate change hazards, emphasizing the presence of people and ecosystems that are being adversely affected by coastal-related hazards and other environmental and social threats.

Despite their singularities, all communities share high levels of exposure, sensitivity, and low adaptive capacity to cope with climate change hazards. In all the communities, main income-generating activities and livelihoods are critically compromised. In several communities' other infrastructure challenges surge which make it more difficult to increase coastal resilience, such as lack of basic sanitization infrastructure or weak agriculture practices. The information was provided directly by communities through the consultative process, and it was rectified by international experts on climate change adaptation in the region.

#### Communities Cote d'Ivoire

##### 1. Mondokou - Grand Bassam district

- **Summary:** The community is vulnerable to impact of the sea level and the Volta River channel. Even though many houses are already elevated, strong floods put in risk the life of the people in the community, also affecting their livelihood, which is currently based on agriculture.
- **Community characteristics:** Mondokou is a very diverse community, with different ethnics and languages. Due to the soil saturation, the agriculture is weak. There are many hotels located in the seaside, which are also being affected by flooding during raining season. While men are responsible for fishing and agriculture, women have the role of smoking (cooking) the fish and producing flour with cassava. Coconut is used to generate energy.

##### 2. Quartier France- Grand Bassam district

- **Summary:** The community is very fragile and susceptible to impact of the sea level rise and sediment accumulation of the lagoon. Even though there are some surface drainage lines and structured roads, floods put in risk the life of the people in the community.
- **Community characteristics:** The Kingdom of Quartier France is an organized community, with a clear hierarchy structure. The community is an old village with history from the colonial period expressed in some buildings. Those old area have better infrastructure, such as paved roads, surface drainage system and satellite antenna. There is agriculture in the garden of some houses, creating a low-density pattern.

##### 3. Azzuretti- Grand Bassam district

- **Summary:** The settlement is in a narrow land between the ocean and the lagoon and is very vulnerable to flooding as a result of lagoon and sea level rise and accelerated sedimentation of the lagoon. Flood put in risk the lives of the people in the community.
- **Community characteristics:** Large part of the inhabitants have come from other communities that have been invaded by the ocean. Many houses seem recent (similar to temporary shelters), the spatial distribution is organic, and there are no defined streets. Sea-fishing is the main source of food and the main source of income,

since and agriculture is weak. Men are also responsible for fishing and women for smoking (cooking) and selling the fish. Wood is used for cooking and general energy. Due to the lack of job opportunities and studies, the youth are moving to Grand Bassam and Abidjan.

#### 4. Vitre 2- Grand Bassam district

- **Summary:** climate change has mainly impacted livelihood: agriculture and fishing. Agriculture has been impacted by the risen temperature and floods; change of water properties in the lagoon has resulted in the reduction of fish. Only houses near the lagoon face floods.
- **Community characteristics:** The settlement follows the lagoon line and is surrounded by water. The access to the community is very weak, making the community very isolated. Although there is a floodable area of the lagoon (lagoon level has risen over the years), most part of the houses are located in a safe distance from the lagoon, making the flood impact to the houses low. The land agriculture is located around 4km from the community and is vulnerable to flooding. Rain pattern change has impacted the agriculture practice and fishing has become more important. Fishing is also challenged by the climate change - as result of sediment accumulation, run-off and property changes, number of fish in the lagoons have reduced.

#### 5. Gran-Jack- Jacquelineville district

- **Summary:** the houses along the coastline are vulnerable to floods due to sea level rise and strong rainfall. Climate change has also impacted livelihood – fishing has reduced, and agriculture is challenged by floods and drought.
- **Community characteristics:** The sea property has been affected by the climate change, as result of sediment accumulation, pollution, run-off and property changes, the number of fish in the sea have reduced and has impacted the fishing and agriculture has become more important. A large project of oil and gas is under construction, with pipes in the main road of the community, reducing the land available to agriculture. In the past, the community used to plant coffee and cacao. Around the community, there is a large coconut plantation, with around 600HA, planted by the government.

#### 6. Attoutou B- Jacquelineville district

- **Summary:** similar to Vitre 2, climate change has mainly impacted livelihood: agriculture and fishing. Agriculture has been impacted by flood but also drought; change of water properties in the lagoon has resulted in the reduction of fish.
- **Community characteristics:** The community is very isolated to the other communities, with difficult access and poor road quality. Similar to Vitre 2, rain pattern change has impacted the agriculture practice and fishing has become more important. The lagoon property has been affected by the climate change - as result of sediment accumulation, pollution, run-off and property changes, the number of fish in the lagoons have reduced and has impacted the fishing production. Men are responsible for fishing and agriculture and women for smoking (cooking) the fish and produce flour with cassava. Coconut is used to generate energy.

#### 7. Koko - Jacquelineville district

- **Summary:** Similar to Vitre 2 and Attoutou B, in Koko climate change has mainly impacted livelihood: agriculture and fishing. Floods occur in the agriculture land, roads and in-between buildings closed to the lagoon.
- **Community characteristics:** The settlement follows the coast and is surrounded by water. The population is characterized by kids and elders. Due to the lack of opportunities, the youth are leaving to surrounds communities, with better access to education and jobs. Although there is a floodable area closed to the lagoon, the most part of the houses are located in a safe distance from the lagoon, making the flood impact low. There is some vegetation in public spaces and roads in the community, acting as surface drainage. Main activities are agriculture and fishing. Men are responsible for fishing and agriculture and women for smoking (cooking) the fish and produce flour with cassava. Coconut is used to generate energy.

#### 8. Tiemen - Jacquelineville district

- **Summary:** The community does not flood, but the drought, risen temperature and erosion are impacting livelihood. Agriculture has become the main activity overfishing.
- **Community characteristics:** The settlement is possibly the most developed of the targeted communities. The community is very diverse with some migrants from Mali, Nigeria, Burkina Faso. The site has seen tensions on land tenure. Since 2018, a private company has been working in a project for subdivision of plots and is negotiating a resettlement to this new place, where the company will build houses and infrastructures and two hotels. The community is in contact with this company and already signed agreements. Previously, the main activity in the community was fishing but due to the climate change effects, resulting on sediment accumulation, pollution, number of fish in the lagoon have reduced. The agriculture become the main activity, with focus on the cassava. The cassava production is also for commercial purpose. There are vegetation and mangrove between the community and the lagoon, the houses are built with a safe distance from the waterpoint and are elevated from the floor, protected from floods.

#### 9. Tefredji - Jacquelineville district

- **Summary:** the community is very fragile and susceptible to impact of the sea/lagoon level rise and sediment accumulation. Floods put in risk the life of the people in the community, rather than their source of livelihood.

- **Community characteristics:** It is a very isolated community, to arrive there is necessary a boat and some roads are not accessible to cars. The settlement is structured, with some good buildings. The community is aware of the impacts of the climate change and have already attempted to grow mangrove and built rudimentary drainage channels, however they lack technical knowledge. Adults leave the community seeking for livelihoods opportunities and there are many kids and elders.

#### 10. Taboth – Jacquville district

- **Summary:** The community does not flood, but the drought, risen temperature and erosion are impacting livelihood.
- **Community characteristics:** Previously the main activity in the community was fishing but due to the climate change effects, resulting on sediment accumulation, pollution, number of fish in the lagoon have reduced. The agriculture become the main activity, with focus on the cassava. The houses are built with elevated floors, avoiding flash floods. There are few green areas in public spaces, contributing to protect the soil.

#### *Communities in Ghana*

#### 1. Wokumagbe – Ada West District

- **Summary:** The community is very fragile and susceptible to impact of the sea level rise and sediment accumulation of Keta lagoon. Floods put in risk the life of the people in the community, rather than their source of income since the community lives out of sea-fishing.
- **Community characteristics:** Wokumagbe is one of the poorest of the targeted communities. Sanitation system is limited to one public toilet. With weak agriculture practice (vegetables are bought from other communities or from Accra), fishing is the main source of food. Men are responsible for fishing and women for smoking (cooking) the fish. Wood is used for cooking and general energy.

#### 2. Akplabanya- Ada West District

- **Summary:** The community is very fragile and susceptible to impact of the sea level rise and sediment accumulation of Keta lagoon. As Wokumagbe, floods put in risk the life of the people in the community, rather than their source of income since the community lives out of sea-fishing.
- **Community characteristics:** Akplabanya is one of the poorest of the targeted communities, with a growing population of approximately 5.000 people. Large part of the people has come from other neighbouring communities that have been invaded by the ocean. Many houses seem recent (similar to temporary shelters), the spatial distribution is organic, and there are no defined streets. The community lacks basic services, notably sanitation, and the lagoon is deeply polluted. As in Wokumagbe sea-fishing is the main source of food and agriculture is weak. Men are responsible for fishing and women for smoking (cooking) the fish. Wood is used for cooking and general energy.

#### 3. Goi- Ada West District

- **Summary:** The community is susceptible to impact of the sea level rise and sediment accumulation of coastal lagoons. Floods impact only houses near the lagoon but provokes diseases in the community.
- **Community characteristics:** Agriculture is practiced by man and women and is stronger than fishing. Production is sold to Accra and neighbouring communities. A large lagoon area (floodable area) exists between the ocean and the main part of Goi.

#### 4. Kewunor-Azizanya – Ada East District

- **Summary:** Narrow along the remaining land in the estuary, the settlement is very vulnerable to flooding as a result of lagoon and sea level rise, and accelerated sedimentation. A large lagoon area (floodable area) exists between the ocean and the community.
- **Community characteristics:** The settlement is located in the estuary, where the Volta River and the ocean meet. The community is an old fishing village with history from the colonial period expressed in some buildings. Together with fishing, hotels and resorts are important source of income. The site has seen tensions on land tenure and the pressure from the hospitality sector. Dredging has already been done in the past, and although the community faces flooding issues again, the memory of the sort-term benefits dredging is very present.

#### 5. Agorkedzi/Atiteti – Anloga/ Keta District

- **Summary:** The community is susceptible to impact of the sea level rise and sediment accumulation of coastal lagoons. Floods put in risk the life of the people in the community, rather than their source of income since the community lives out of sea-fishing.
- **Community characteristics:** The settlement follows the coast (thing and long) and is surrounded by water. In 'front' of Agorkedzi, between the ocean and the houses, there are a number of coastal lagoons. In the 'back' of Agorkedzi (northern part), there is a floodable area of the Volta River. The population is continuously moving due to the flooding and constructions are easily spotted. For instance, due to the sea level rise, people living in the very west of Agorkedzi (community called Fuveme), have moved to the north part of Agorkedzi. Fishing is stronger than agriculture. Men are responsible for fishing and women for smoking (cooking) and sell the fish in the traditional market.

#### 6. Agbledomi - Anloga/ Keta District

- **Summary:** The community is vulnerable to sea/lagoon level rise, which impacts mainly the sources of livelihood. Mangrove between the lagoon and the agriculture land has been destroyed throughout the years. Few waterpoints generated small lagoons (floodable area) between the ocean, the community and the agriculture land.
- **Community characteristics:** Rain pattern change has impacted the agriculture practice and fishing has become more important - although fishing is currently the main activity (60%\*), agriculture (40%\*) is still very strong. Fishing is also challenged by the climate change, as result of sediment accumulation, run-off and property changes, number of fish in the lagoons have reduced. \*based on community perception

#### 7. Dzita- Anloga/ Keta District

- **Summary:** Floods impact houses near the coastal lagoon. Rain patterns change and lagoon property have impacted fishing. Agriculture is challenged by salinity. Some water spots generated lagoon area (floodable area) between the ocean and the community.
- **Community characteristics:** The settlement follows the coast (thing and long). In 'front' of Dzita, between the ocean and the houses, there are a number of coastal lagoons with a coastal landscape and challenges similar to Goi. In the 'back' of Dzita (northern part) is located the agricultural land. Agriculture and fishing are equality important, both activities have been impacted by climate change. Salt intrusion and high temperatures have reduced the agriculture production. As for fishing, sedimentation of the lagoon and change of ecosystem properties due to sea level rise have caused reduction of fishes. In Dzita, women are responsible for agriculture and smoking (cooking) fish, and men for sea-fishing. Agriculture products are sold to Anloga-Keta District and to Azyzania community, in Ada East.

#### 8. Whuti- Anloga/ Keta District

- **Summary:** climate change majorly impacts the sources of livelihood: agriculture and fishing. Some houses near the coastal lagoon and riverine lagoon also flood, but not all the community.
- **Community characteristics:** Whuti is one of the most developed of the targeted communities. Some roads are paved, with structure defined and buildings well finished. Similar to Agorkedzi, the settlement is in between coastal lagoons (front) and riverine lagoon (back), however the flooding impacts Whuti differently: risks the sources of income and livelihood rather than houses. Agriculture and fishing are equality important. Agriculture is responsibility of women, and is challenged by floods, drought, salinity, and temperature. Ministry of Food and Agriculture of Ghana (MOFA) have already provided agriculture trainings in the past, but the challenges persist. As for fishing, sedimentation of the lagoon and change of ecosystem properties due to sea level rise have caused reduction of fishes and fishing is now limited to sea-fishing.

#### 9. Lagbati/Lashibi- Anloga/ Keta District

- **Summary:** climate change majorly impacts the sources of livelihood: agriculture, fishing and water conveyance. Agriculture lands make a barrier for flooding to reach the houses, however some houses near the coastal lagoon and riverine lagoon also flood, but not all the community.
- **Community characteristics:** Lagbati and Lashibi are referred by local community as one single settlement due to the spatial integration and dynamics. The settlement is quite developed compering with the other targeted communities, and it is where the Anloga-Keta District Assembly is based. Some roads are paved, with structure defined, buildings well finished, and it is possible to find urban drainage channels (properly built). Agriculture has become more important that fishing - risen temperature, accelerated sedimentation and sea level rise, has changed the properties of the lagoon, and caused the reduction of fishes. However, agriculture has been challenged by soil salinity and compactness, risen temperature, rainfall pattern changes and reduced water conveyance. Farmers started using chemicals (proven not to be efficient), which have also impacted the soil and the underground water properties.

#### 10. Woe- Anloga/ Keta District

- **Summary:** In Woe, similar to Lagbati/Lashibi, climate change majorly impacts the sources of livelihood: agriculture, fishing, and water conveyance. Some houses near the Keta Lagoon also flood, but not all the community.
- **Community characteristics:** Most of the houses in the settlement are closer to the Keta lagoon than the ocean. Agriculture (cassava, carrots, maize, onion, tomatoes, etc.) has become the main activity due to the reduction of fish in Keta Lagoon. Population of the community leave Woe at young age and go back to spend retirement. There is an interest to process food to enlarge the source of income and avoid spoiling perishable products, especially tomato (e.g. tomato paste). Agriculture is impacted by rain pattern change, causing drought, flood, high temperature, soil compactness and salinity. Lagoon level rise also impact agriculture and houses near the lagoon.

#### 11. Tegbi- Anloga/ Keta District

- **Summary:** In Tegbi, similar to Woe and Lagbati/Lashibi, climate change majorly impacts the sources of livelihood: agriculture, fishing, and water conveyance. Poverty impacts women, children and disabled.
- **Community characteristics:** Although the community has seen a reduction in the fishes of the lagoon, fishing is stronger than agriculture as there are two sources (sea and lagoon). Agriculture has been impacted by rainfall pattern change, floods, drought, soil salinity and compactness.

#### 1.4 Climate exposure analysis per community

The previous information provided sufficient evidence to develop a dichotomous assessment of climate hazards exposure (Table 3 and 4) that have been continually repeating among the communities. The assessment identifies seven main hazards that are a mayor threat for the targeted communities and responds to the question: Is this a main climate hazard that hinders communities' resilience? If so, they are marked with a YES. The outputs from this assessment allowed to tailor the physical interventions to the communities' specific needs for increasing climate adaptation capacities, which are described on Annex 3 Subproject Sheets. For complementing the vulnerability assessment, information regarding the specific vulnerability groups and other cross-cutting issues can be reviewed on Annex 5.

Annex Table 3 Climate hazards and impacts per community in Cote d'Ivoire.

District	Community	Floods	Salinization	Droughts	Sea/lagoon level rise	Coastal erosion	Accelerated sedimentation	Heatwaves
Jacquerville	Tefredji	yes			yes	yes	yes	
	Tiémien			yes			yes	yes
	Attoutou B	yes		yes		yes	yes	
	Grand-Jacques	yes		yes	yes		yes	
	Koko	yes			yes		yes	
	Taboth (Ahizi)	yes	yes		yes	yes	yes	
Gran-Bassam	Vitré 2 (Ehotilé)	yes			yes		yes	yes
	Azuretti (n'zima)	yes			yes	yes	yes	
	Quartier France	yes			yes		yes	
	Mondoukou	yes			yes			yes

In Ghana, all the targeted communities are exposed to floods in urban and agricultural lands due to sea and lagoon level rise. Accelerated sedimentation is also presented in all the target areas which is linked to floods and sea level rise. Salinization and droughts are presented in more than half of the communities while heat waves are a threat to almost all communities. Coastal erosion is not a main challenge to be addressed in Ghana.

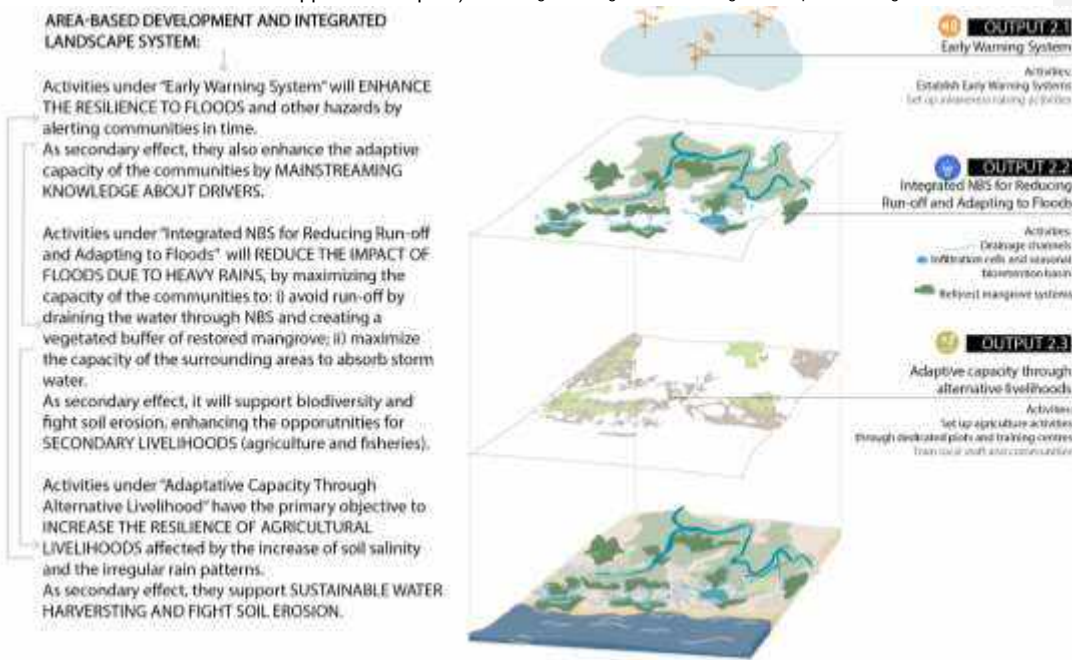
Annex Table 4 Climate hazards and impacts per community in Ghana.

District	Community	Floods	Salinization	Droughts	Sea/lagoon level rise	Coastal erosion	Accelerated sedimentation	Heatwaves
Ada West	Akplabanya	yes			yes		yes	
	Wokumagbe	yes			yes		yes	
	Goi	yes			yes		yes	
Ada East	Kewunor/Azizanya	yes			yes		yes	
	Agorkedzi/Atititi	yes			yes		yes	yes
Anloga-Keta	Agbledomi	yes	yes	yes	yes		yes	yes
	Dzita	yes	yes	yes	yes		yes	yes
	Whuti	yes	yes	yes	yes		yes	yes
	Lagbati/Kashibi	yes	yes	yes	yes		yes	yes
	Woe	yes	yes	yes	yes		yes	yes
	Tegbi	yes	yes	yes	yes		yes	yes

## ANNEX 2: SUBPROJECT SHEETS FOR OUTPUTS UNDER COMPONENT 2

To support coastal communities in Côte d'Ivoire and Ghana to adapt to climate change and to **improve their resilience**, the project includes through component 2 a set of three outputs. All the three outputs under component 2 concern physical interventions (here called "subprojects"). More specifically, subprojects under output 2.1. focus on adaptation to major hazards such as coastal floods through the Establishment of Early Warning Systems; subprojects under output 2.2. focus on adaptation through Integrated NBS for reducing run-off and adapt to increasing riverine floods and altered rain patterns urban flood adaptation; and subprojects under output 2.3 focus on enhancing the Adaptive capacity through alternative livelihood.

The subprojects under the three outputs are designed following an area-based approach, and an integrated approach. Despite they adopt an integrated approach, meaning that they work in synergy to foster climate adaptation of coastal settlements, each of the three present its own logic and structure, which is presented in this annex. Figure 4 here below present the ensemble of subprojects under the three outputs and their integrated way of adapting to climate change. ~~inter-relation~~ (please, ref. to section 2A of the main document for further details about the approach adopted). Annex Figure 4 Diagram of the 4 integrated adaptation strategies



~~Even though the subprojects under T~~ the three outputs were conceived as a integrated response to main challenges of climate change that could be addressed at community level –and conceptually work as a unique synergetic block -, and they will be are not always implemented in all 21 communities. However, each of the three outputs comprises a set of activities and not all activities per output will be implemented in all communities. Thus,; the local dynamics, needs and challenges identified through the analysis and community consultations (see Annex 3), and consultation with technical experts resulted in the identification of which subprojects-activities are needed in each community and Annex Figure 5 and 6 present an overview of which subprojects-activities are being implemented in which community, in Côte d'Ivoire and Ghana respectively. In particular, all activities were selected and designed in a participatory manner, and consulted with local communities and technical experts. Figure 5 and figure 6 below, together with table 4239, presents in a snapshot which activities under the three outputs were selected and designed for each of the 21 communities.

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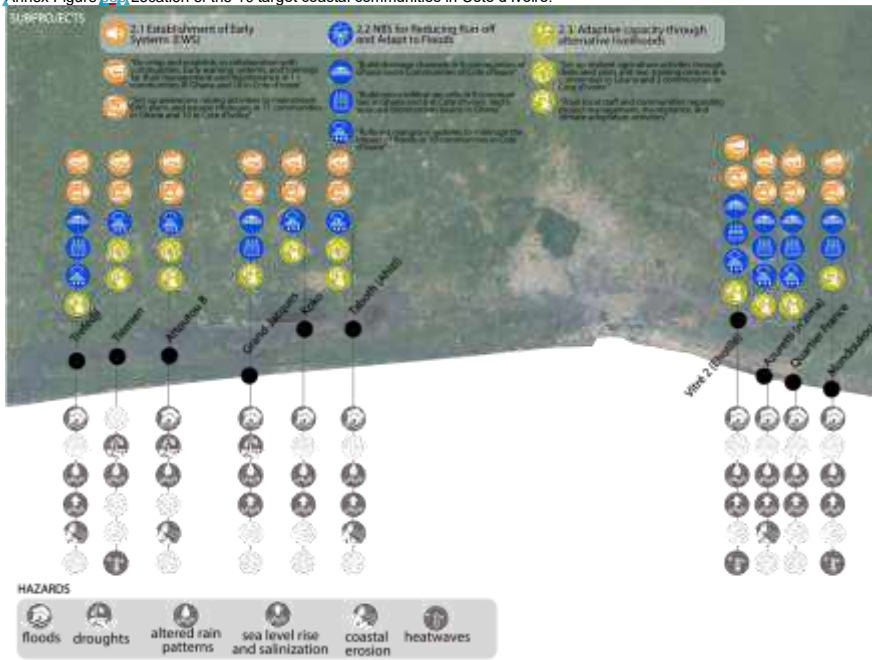
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Annex Figure 555 Location of the 10 target coastal communities in Côte d'Ivoire.



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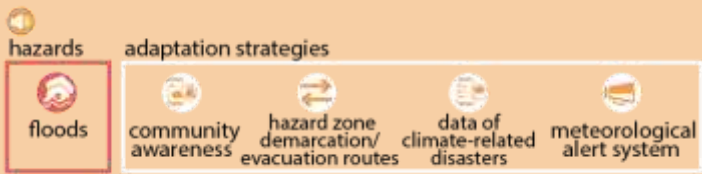
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Annex Figure 6 Location of the 11 target coastal communities in Ghana.







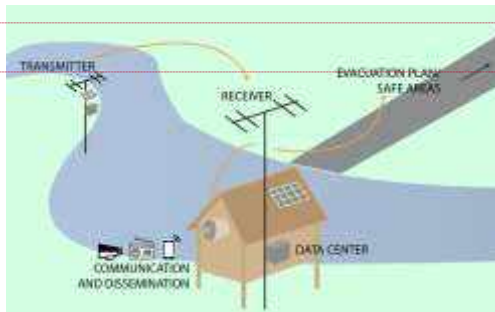


**Output 2.1: ESTABLISHMENT OF EARLY WARNING SYSTEMS (EWS)**

Cost: 1,887,333 USD Beneficiaries: 18,482 (direct) + 138,818 (indirect)

Adaptation strategy in brief: thanks to EWS and the provisioning of effective information about floods, people will be enabled to evacuate safely and timely in case of major hazards. More specifically, the Establishment of EWS

**consists of two activities: a) installing devices to alert the people in case of need and identifying evacuation routes and safe areas (non-flood-prone areas in the community where people can escape during floods) in the 21 communities; b) training people about how to use the EWS and about evacuation plans.**



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consists of two activities: a) installing devices to alert the people in case of need and identifying evacuation routes and safe areas (non-flood-prone areas in the community where people can escape during floods) in the 21 communities; b) training people about how to use the EWS and about evacuation plans. Additionally, information on hazards, risks, impacts, and early action options (climate risk preparedness) will facilitate future decision making on the choice of the best adaptation and mitigation alternative practices.

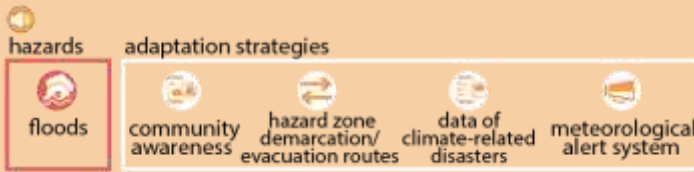
Annex Figure 7 Elements for EWS (devices to alert the people and store data (transmitter, receiver, data centre) and identification of safe areas and design of evacuation plans

**SUBPROJECT RATIONAL AND DESCRIPTION**

Climate change brings to altered rain, meaning a shift of the rain period and an increased intensity of rain events, causing rivers and lagoons to overtop their banks, leading to flooding, and has already led to major damage to houses, assets and infrastructures and devastated critical ecosystems such as mangroves, beaches, and farmlands. The climate change, which triggers sea-level rise and extreme rain events, increases the frequency and severity of coastal and riverine floods. EWS is a critical component of disaster risk reduction (DRR) efforts. Reliable disaster early warning is vital to disaster response. The system aims at monitoring disasters, forecasting of probable events, and notify and warn with clear messages, with a dissemination system that reaches those at risk. It also serves as the trigger point of evacuation order and timely response initiation decisions by individuals and local governments, resulting in saving lives and property. The mutual collaboration and learning process build on the public preparedness and reaction capacity of target communities and decrease vulnerability.

Early Warning is "the provision of timely and effective information, through identified institutions, that allows individuals exposed to hazard to take action to avoid or reduce their risk and prepare for effective response". Such systems are usually made up of a network of sensing devices, such as satellites or radar, for detecting extreme hydrometeorological events in time to take preventive actions in order to mow their impact and put together an effective and efficient dissemination of timely hazardous events and risk information to the public, comprising an early action and earlier response, minimizing damage and losses.

The importance and need to promote, invest in, develop, maintain, and strengthen EWS as one of the key elements of disaster risk reduction is mentioned in upstream documents such as the Sendai Framework and the Hyogo. Setting up an early warning system (EWS) will allow municipalities and local communities to have timely climate information which will enable them to rapidly take proper action and better plan prevention and adaptation measures in relation to climate risks. Such improved adaptive responses against climate shocks will support the provision of impact-based forecasting. "End-to-end warning system" is a term used to emphasize that a warning system needs to span all steps from hazard detection to community response. Inadequate climate information services and early warning systems impact the capacity of local communities in taking adaptive responses to climate change. Accurate, reliable, and timely climate information coupled with robust early warning systems are



crucial for planning adaptive measures to reduce losses and damages resulting from climate-related extreme weather events and from other risks and also facilitate early recovery effectively.

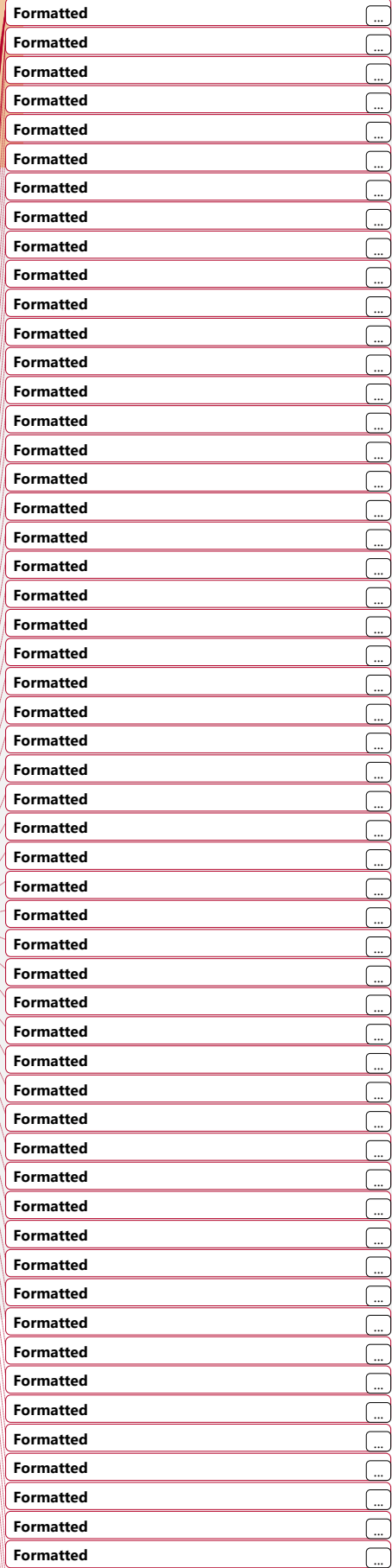
In particular, Output 2.1 is structured into two activities: a) "Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire", and b) "Set up awareness raising activities to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Cote d'Ivoire". Activity "a" will install 21 receivers (1 per community) and 21 alarms (1 per community); set up two data centres (one per country), design 21 evacuation plans (1 per community) and identify 46 safe areas/places. One two focal points per community will receive two technical trainings (one for using the receivers, and one for the data management). Exact localities of monitoring stations and, evacuation routes and safe areas were designed in collaboration with local communities and technical experts, and are shown in the maps from page 127 to 137. Activity "b" will present and ensure that the community is aware about the evacuation plans, and community EWS operators in charge of the equipment and their communities will be trained on adopting disaster response when a disaster occurs. Activity b will also be implemented in all 21 communities. The two activities together constitute the subproject presented in this sheet. Community maps at the end of this annex show in detail the location of the subproject in each of the 21 communities.

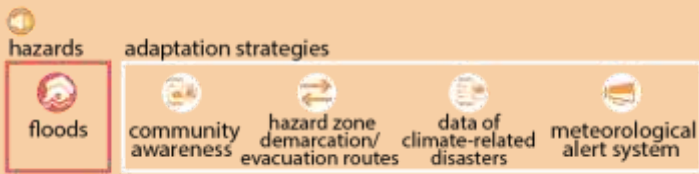
Activity a will install 21 receivers (1 per community) and 21 alarms (1 per community); set up two data centres (one per country), design 21 evacuation plans (1 per community) and identify 46 safe areas/places. One two focal points per community will receive two technical trainings (one for using the receivers, and one for the data management). Activity b will present and ensure that the community is aware about the evacuation plans, and community EWS operators in charge of the equipment and their communities will be trained on adopting disaster response when a disaster occurs. The two activities together constitute the subproject presented in this sheet. Community maps at the end of this annex show in detail the location of the subproject in each of the 21 communities. Table 43. EWS in Ghana

District	Community	"Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire".			"Set up awareness raising activities to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Cote d'Ivoire".
		Safe Areas	Evacuation routes	Climate monitoring	
Ada West	1 Wokumagbe	1	yes	1	yes
	2 Akplabanya	4	yes	1	yes
	3 Goi	2	yes	1	yes
Ada East	4 Kewunor/Azizanya	2	yes	1	yes
	5 Agorkedzi/Atiteti	1	yes	1	yes
Anloga-Keta	6 Aqbledomi	6	yes	1	yes
	7 Dzita	3	yes	1	yes
	8 Whuti	4	yes	1	yes
	9 Laqobati/Kashibi (Anloga)	3	yes	1	yes
	10 Woe	3	yes	1	yes
	11 Tegbi	3	yes	1	yes
	<b>Total Ghana</b>	<b>33</b>	-	<b>11</b>	-

Table 44. EWS in Cote d'Ivoire

District	Community	Safe Areas	Evacuation routes	Climate monitoring	Awareness raising activities
Jacqueville	1 Tefredji	2	yes	1	yes
	2 Tiémien	2	yes	1	yes
	3 Attoutou B	1	yes	1	yes
	4 Grand-Jacques	2	yes	1	yes
	5 Koko	1	yes	1	yes
Grand-Bassam	6 Taboth (Ahizi)	1	yes	1	yes
	7 Vitré 2 (Ehotilé)	2	yes	1	yes
	8 Azuretti (n'zima)	1	yes	1	yes
	9 Quartier France	3	yes	1	yes
	10 Mondoukou	2	yes	1	yes
		<b>Total CDI</b>	<b>17</b>	-	<b>10</b>





#### IMPLEMENTATION STRATEGY AND PLANNED ACTIVITIES

Activity a) "Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire"

##### Preparation

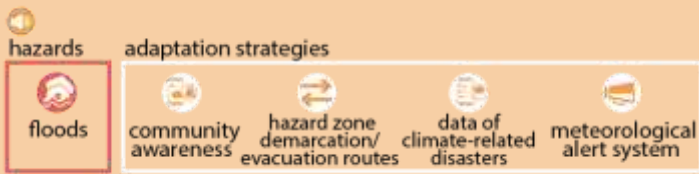
- **Project and coordination set-up**, including setting the project office (one per country: communities from the same country can have the same office, according to their regionality), hiring staff and structuring the roles.
- **Networking: set up of the network with local stakeholders, including focal points of the National government, city technicians and officials, and community leaders**
  - (ii) Necessary meteorological (radar, rainfall stations, meteorological stations...) and hydro (gauge stations, water level monitoring...) equipment to be installed
  - (iv) Validation of the technical equipment (a transmitter and a receiver), including IT, capacity building and institutional strengthening.
- **Validation of technical detailed and analysis with local stakeholders, including focal points of the National government, city technicians and officials, and community leaders**
  - (i) Analysis of the technical flood risk screening based on available data in order to confirm the sites to be monitored (gauge stations, water level in ponds, retention areas...);
  - (ii) Necessary meteorological (radar, rainfall stations, meteorological stations...) and hydro (gauge stations, water level monitoring...) equipment to be installed
  - (iii) Participatory mapping and detail identification of the evacuation centre and validation of routes already identified in concerned communities during the consultation process;
  - (iv) Validation of the technical equipment (a transmitter and a receiver), including IT, capacity building and institutional strengthening.
- Preparation of tender documents for purchase and installation of hydrometeorological equipment, including warning messages dissemination kits (beacons, flags, sirens, signalling, speakers, etc.), and capacity building,
- Assistance in the reception, the follow-up of the installation and the test of the equipment.
- An improved local communication mechanism for EWS will be established, ensuring that early warning messages are effectively communicated and understood by the local population, enabling people and communities receive warnings in advance to proper flooding events preparedness, facilitating coordination among districts and information exchange. It is necessary to ensure information is shared in a manner that is timely and "actionable" and also to integrate people, processes, and technologies to drive optimal benefits in weather forecast and use. A chain of multi-layered communications will be set up to maximize the reach. Part and parcel of the overall implementation strategy will hence be to make maximum use of youths and women in disseminating weather-related forecasts. The proposed project will involve youth groups and local disaster volunteers in the communication strategy, trainings and drills for the EWS. Additionally, local radio stations at community level already identified during the consultation process will be involved sending alert. Radio messages can be reinforced by a system of automated sirens, as well as through the use of megaphones by responsible/trained members of the local community. Importantly, marginalized and vulnerable groups need to be targeted so that early warning messages can reach them soon and they can be safely evacuated before the occurrence of an imminent flood.

In Ghana, the institutions to be engaged in the process are the Hydrological Services Department (HSD), Ghana Metrological Agency (GMet), Water Resources Commission (WRC) and National Disaster Management Organisation (NADMO), specifically the Emergency Operations Centre (EOC). In Côte d'Ivoire, the institutions to be engaged in the process are authorities in charge of DRR.

##### Operation

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a) **“Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d’Ivoire”**

- **Early Warning System construction:** The NGO will provide training and support the development of institutional arrangements inside the communities for the installation and operation systems. Additionally, technical expertise has been secured from development partners.
- A community emergency response team will be created to train civilians to be the first responders to their own local disasters, this will make the disaster management more effective and safer for local communities. These “local disasters volunteers” will be involved and activated during a disaster to assist the communities and guide neighbours to reach safe places. The aim of this team is to provide a rapid, effective, and efficient emergency response in times of disasters.
- After the EWS in place, based on available information and priorities, the next step will determine the preparedness and response measures to be implemented when a disaster occurs. Early warning system will be an efficient measure, knowing the timing between the moment of the rainfall upstream and the critical rising water levels downstream. The NGO will train and equip EWS operators in charge of the equipment and train the community emergency response team in order to identify the suitable disaster response when a disaster occurs.
- Reliable and redundant communication system is essential for the effective dissemination of early warning information. A EWS Central Data Management will be created to collect all the data generated and to disseminate effectively and rapidly. The system connects to agencies and local governments via internet and provides detailed weather information and warnings to local communities and municipalities. Information for citizens will be transmitted via local radios, mobile messages and specific communication mechanisms based on the local context of each community. L-Alert is a disaster information sharing system where prefectures use a shared platform for sending out local disaster information via multiple media, such as mobile SMS, email, radio, tv, digital boards, loudspeakers and community-managed bulletins.
- An evacuation plan will be prepared through participatory approach with the concerned communities, identifying evacuation centres and mark escape routes and improve evacuation routes from disaster prone areas to evacuation centres, as well the adoption of low cost/ no-cost measures such as hazards zone demarcation and identifying safe zones and evacuations routes in EWS communities and possibly in additional communities. The evacuation plan needs to be properly marked and well signalled so they can be easily identified and used during a flood emergency. This activity will be led by the communities themselves in coordination with the responsible authorities, to increase the level of awareness and understanding.
- Two focal points per community will receive two trainings: one about the receivers, and one on data management.
- Provide recommendations of relevant national, regional and local rules, regulations, standards and procedures/lessons learned.

b) **“Set up awareness raising activities to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Cote d’Ivoire”**

- In parallel, the communication and dissemination strategy will ensure communities validate and get familiar with the evacuation plans.
- Trainings and awareness-raising activities such as regular drills, training sessions will be delivered at the community level regarding disaster risk prevention, preparedness and response through.

**Monitoring and maintenance**

- The subproject will ably collect weather related information generating data, which will support risk management decisions relying on accurate information and necessary data for drought adaptation. It will enable to provide useful data not only for preparedness and crisis management but also for scientific studies aiming at understanding better the hydrometeorological phenomenon (calibration of hydrological model, provision of input data to regional climate models...).
- Enhanced communication mechanisms need to be established between the local communities and the responsible institutions at the different levels: municipal, district and regional. At different levels, the subproject will review and provide recommendation of relevant national, regional and local rules, regulations, standards and procedures.
- Field monitoring: technical visit on regular basis to inspect the flooding areas and assess if the evacuation centre and routes are well developed and the results to the community.

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**TIMEPLAN**

Table 454537. Timeplan EWS

Year 1		Year 2		Year 3		Year 4	
1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester
	<b>Preparation</b>	<b>Operation</b>		<b>Monitoring and maintenance</b>			
		<i>a. "Develop and establish, in collaboration with communities, Early warning systems, and trainings for their management and maintenance in 11 communities in Ghana and 10 in Cote d'Ivoire"</i> <i>b. "Set up awareness raising activities to mainstream EWS plans and escape strategies in 11 communities in Ghana and 10 in Cote d'Ivoire"</i>					

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**INNOVATION**

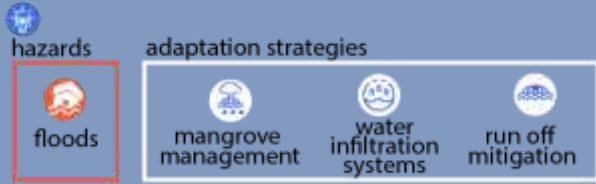
Early Warning System for floods, on top of community level alarming to minimize the level of floods (which is necessary for adaptation), will enable the collection of data from each community into the two data centres. Even though EWS are not diffused in the target areas, the real element of innovation represent by this subproject is the transnational data management. Thus, by capitalizing on the experience derived by the VOLTALARM initiative<sup>85</sup> the project will use the data collected in the two data centres to provide transnational inputs to higher level decision-makers and policy-designers. In this way, the activity is seeking to improve existing flood and drought management strategies and plans at the regional, national and local level. This, combined with the planning activities under component 1 and the cross-fertilization activities and joint-trainings under component 3 aims to better understand future climate events and thus more coordinated responses to associated hazards. For future details on innovation solutions, please refer to section 2.b. of this document.

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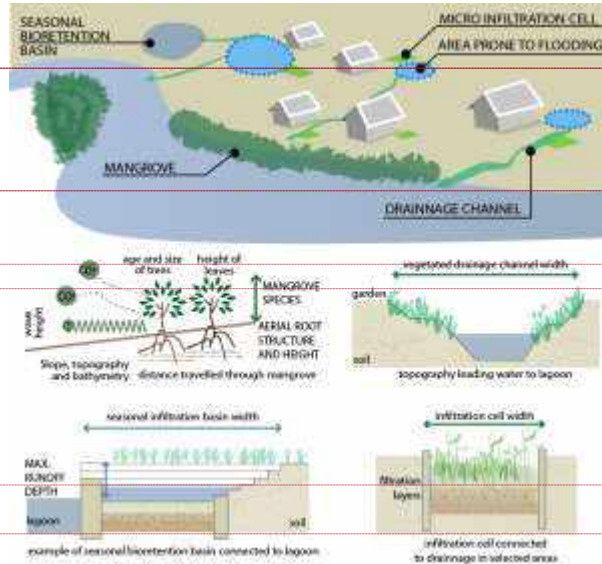
<sup>85</sup> Another AF-funded project for Flood and drought management in West Africa  
126



**Output 2.2. NBS FOR REDUCING RUN-OFF AND ADAPT TO FLOODS**

Cost: 3,602,755 USD Beneficiaries: 88,643(direct) + 56,002 (indirect)

Adaptation strategy in brief: To reduce impacts of climate change, this project will integrate nature-based solutions (NBS) that mitigate surface run off and the flooding of settlements caused by to altered rain patterns and consequent heavy rainfalls. NBS are resource-efficient solutions for climate adaptation and procure multiple co-benefits, thus reducing the costs in the short and long-term (including cost for construction and maintenance) and increasing the resilience of coastal communities. This output focuses on implementing NBS by three activities: i) creating **87 drainage channels** from lower and cumulation areas to discharge water pressure towards the lagoons or ocean (in 15 communities); ii) **building 203 infiltration cells (in 15 communities)** see table 428; for the detailed list of communities; ii) **building 203 infiltration cells (in 15 communities) and 5 bioretention basins (in 5 communities)** to increase water absorption in specific cumulation areas (see table 42 for the detailed list of communities); iii) restoring the **582.5 ha of mangroves** to create a primary natural barrier (in 19 communities, see table 42 for the detailed list of communities). The three types of activities comprised in this subproject work in synergy to mitigate the impact of minor and recurrent floods. However, even though they all contribute to flood mitigation in the settlements, they are not always implemented all-together in each settlement: different combination of the three activities were planned, designed and localized- based on the contexts, exposure, environmental constrains, consultation with technical experts and community consultation.



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and 5 bioretention basins (in 5 communities) to increase water absorption in specific cumulation areas; iii) restoring the 582.5 ha of mangroves to create a primary natural barrier (in 19 communities). The three types of activities comprised in this subproject work in synergy to mitigate the impact of minor and recurrent floods. However, even though they all contribute to flood mitigation in the settlements, they are not always implemented all-together in each settlement: different combination of the three activities were planned (and will be implemented), based on the contexts, exposure, environmental constrains and community consultation.

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Annex Figure 8 Elements for NBS. From the left to the right, drainage channels with vegetation, infiltration cells and bioretention basins, and mangrove reforestation (with nurseries)

**SUBPROJECT RATIONAL AND DESCRIPTION**

In the coastal regions of Ghana and Côte d'Ivoire, altered rain patterns are threatening coastal settlements through minor recurrent floods. The 21 target communities are particularly vulnerable to the risk, as on top of the exposure to the hazard, they present low adaptive capacity (due to lacking drainage systems, urbanization patterns, poor capacity of lagoons to store the run-off, and degraded mangrove systems), and high sensitivity. As a consequence, the population in coastal communities are suffering from sudden floods and stagnating water which render inaccessible certain areas and penetrate the houses affecting livelihoods and health, specially the most vulnerable such as women, children, people with disabilities and older adults. NBS include efficient and effective solutions that can contribute to increasing the resilience of coastal communities to flooding, thereby helping them adapt to the impacts of climate change. NBS can be implemented to reduce the risk of flooding by mitigating the run-off through drainage channels, increasing water absorption on site and attenuating waves and stabilizing shorelines.



NBS strategies for flood risk reduction include **mangrove restoration**, the construction of **bioretention basins and infiltration cells, and drainage channels** (e.g. bioswale) connected to one another and to a lagoon, facilitating the absorption and purification of water by the soil. In particular, O 2.2 is structured into three activities: a) "Build drainage channels in 9 communities of Ghana and 6 Communities of Cote d'Ivoire"; b) "Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana"; c) "Reforest mangrove systems to minimize the impact of floods in 11 in Ghana and 8 communities in Cote d'Ivoire". Table 48 2 presents the full list of activities per community under this output. Community maps at the end of this annex (from page 127 to 137) show in detail the location and combination of the activities under this subproject in each community.

in 19 communities in Cote d'Ivoire". Community maps at the end of this annex show in detail the location and combination of the activities under this subproject in each community.

**a) "Build drainage channels in 9 communities of Ghana and 6 Communities of Cote d'Ivoire"**

Drainage channels are an important component of flood risk reduction strategies in local communities, as they help evacuating water. Channels also help to purify water, especially if channels are combined with vegetated areas on the bords and/or on nearby floodplains. At present, some of the participating communities dispose of drainage channels, but the coverage is poor, and channels are generally too narrow and unstable. In case of heavy rain, the channels often get obstructed by their own mud, thus reducing their effectiveness. Under the proposed activity, a total of **5880 m<sup>2</sup> of vegetated drainage channels will be built in the communities**. Drainage channels are of 2.10 meters wide, ranging in length according to the site-context (types range from 10, 25, 50, 60 meters long). Communities targeted for this activity are: Wokumagwe, Akplabanya, Kewunor/Azizanya, Agorkedzi/Atiteti, Agbledomi, Dzita, Whuti and Tegbi for Ghana; Tefredji, Grand-Jaques, Vitre 2, Azuretti, Quartier France and Mondoukou for Cdl. Table 48 2 presents legths and width of the channels designed for each specific communities. Where possible, the work on the channel itself will be combined with the creation of a vegetated floodplain on the sides of the channel. The vegetation will improve the stability of the channels by reducing erosion in case of rainfall and strong current and will contribute to improving the water quality by removing pollutants.

**b) "Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana"**

Infiltration cells are shallow depressions covered by vegetation, that improve the infiltrate of rainwater, thus reducing runoff. Well-designed and well-maintained bioretention basins can largely contribute to reducing flood risk in urban and semi-urban environment. Under this activity, a total of **715m<sup>2</sup> of infiltration cells will be built, distributed in 9 communities in Ghana and 6 in Cote d'Ivoire**. Communities targeted are: Wokumagwe, Akplabanya, Kewunor/Azizanya, Agorkedzi/Atiteti, Agbledomi, Dzita, Whuti and Tegbi for Ghana; Tefredji, Grand-Jaques, Vitre 2, Azuretti, Quartier France and Mondoukou for Cdl. The infiltration cells range in three sizes (small, medium and large), varying in length and width according to the site (see table 48 2). 5 seasonal bioretention basins will be built in 5 communities in Ghana (Anloga, Dzita, Agbledomi, Agorkedzi and Kewunor -see table 48 2). 715m<sup>2</sup> of infiltration cells will be built, distributed in 9 communities in Ghana and 6 in Cote d'Ivoire. The infiltration cells range in three sizes (small, medium and large), varying in length and width according to the site.

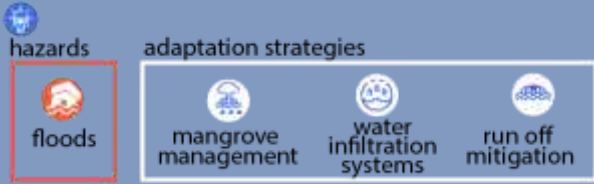
5 seasonal bioretention basins will be built in 5 communities in Ghana (Anloga, Dzita, Agbledomi, Agorkedzi and Kewunor). The basins will help communities facing inundations around lagoons located near the houses,. As part of the settlement landscape and **connected to the lagoons, the seasonal bioretention basins will support water percolation and support the water cycle, providing indirect benefits in term of adaptation to drought as well.**

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**c) "Reforest mangrove systems to minimize the impact of floods in 8 communities in Cote d'Ivoire and 11 communities in Ghana"**

Mangroves can act as barriers that mitigate floods and storms, by **stabilizing shorelines** and creating **buffer zones**. On top of direct advantages in terms of flood risk reduction, restored mangroves also contribute to improving the conditions of the surrounding natural system, improving food security, and mitigating soil erosion and saltwater intrusion in the long term.

The current proposal focuses on restoration of mangroves in buffer zones, in between possible source of riverine and/or coastal floods and the communities. Mangrove restoration under this activity will cover **approximately 582.5 hectares**, of which **410 hectares in Ghana and 172 hectares in Côte d'Ivoire**. The activities will be implemented in ~~numerous, small-scale and localised intervention~~ areas, that have been proposed ~~and are managed~~ by the communities themselves, and feasibility was validated with technical experts (with the support of an NGO on site). During the design of the project, consultation with landowners, private and public, took place. To guarantee the development of the planned activities, landowners have agreed on making their land available for the implementation of mangrove restoration activities, where agreements with the Chiefs and Elders for use of their lands of selected plots have been signed.

The restoration activities will use native species (black, white, red and button mangroves). One nursery per country will be build (in Lagbati/Lashibi for Ghana and Quartier France for CDI); Table 4.7 presents the species that were selected to be planted taking into account the characteristics of the local habitat. Details in terms of hectares of mangroves planted per community, are provided in table 48.

**Table 46. Mangrove species to be planted in reforested areas by region.**

Mangrove Species	Common Name	Region and Country
<i>Rhizophora mangle</i>	Red mangrove	Ghana
<i>Rhizophora racemosa</i>		
<i>Laguncularia racemosa</i>	White mangrove	Ghana and Cote d'Ivoire
<i>Avecinia germinans</i>	Black mangrove	
<i>Conocarpus erectus</i>	Button mangrove	

In order to achieve successful recolonisation, abiotic conditions that will allow for effective active restoration as well as improved natural regeneration will take place. Furthermore, in order to guarantee that reforestation activities contribute to the long-lasting effect and sustainability of this activity, under Output 2.3. "Adaptive capacity through alternative livelihoods", trainings will address causes of mangrove degradation, such as fuel for stoves and other anthropogenic factors. To conclude, Carbon Credit mechanisms will be put in place, to ensure the economic sustainability of the activity. The set of the mechanism is under this output, while the management of carbon credits by the communities is foreseen under the trainings comprised by output 2.3.

**Table 47. NBS Interventions overview**

		NBS for Reducing Run-off and Adapt to Floods										a) "Reforest mangrove systems to minimize the impact of floods in 8 communities in Cote d'Ivoire and 11 communities in Ghana" (in hectares)	
District	Community	a) "Build drainage channels in 9 communities of Ghana and 6 Communities of Cote d'Ivoire"					b) Build micro infiltration cells in 9 communities in Ghana and 6 in Cote d'Ivoire, and 5 seasonal bioretention basins in Ghana"					Bioretention Basin (total #)	TOTAL
		D1 (10m) = 10.00 x 2.10	D2 (25m) = 25.00 x 2.10	D3 (50m) = 50.00 x 2.10	D4 (60m) = 60.00 x 2.10	TOTAL	IC1 (small) = 2.25 x 2.25	IC2 (medium) = 2.25 x 4.00	IC3 (large) = 3.00 x 5.00	TOTAL			
Ada West	1 Wokumagbe	2	3	-	-	5	10	2	0	12	-	42	
	2 Akplabanya	7	1	-	-	8	6	2	6	14	-	21.5	
	3 Goi	-	3	-	1	4	6	4	4	14	-	49	
Ada East	4 Kewunor/Azizanya	2	2	-	-	4	8	0	2	10	1	28	
	5 Agorkedzi/Atititi	-	2	3	1	6	8	0	2	10	1	38	
Anloga-Keta	6 Agbledomi	-	1	5	2	8	15	2	2	19	1	32	
	7 Dzita	-	4	2	-	6	8	4	2	14	1	22	
	8 Whuti	-	-	-	5	5	8	4	1	13	-	40	
	9 Lagbati/Kashibi (Anloga)	-	-	-	-	-	-	-	-	-	1	40	
	10 Woe	-	-	-	-	-	-	-	-	-	-	48	

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adaptation strategies



	11	Tegbi	-	6	-	2	8	15	3	2	20	-	50
		<b>Total Ghana</b>	<b>11</b>	<b>22</b>	<b>10</b>	<b>11</b>	<b>54</b>	<b>84</b>	<b>21</b>	<b>21</b>	<b>126</b>	<b>5</b>	<b>411</b>
Jacqueville	1	Tefredji	2	2	3	-	7	12	-	4	16	-	6
	2	Tiémien	-	-	-	-	-	-	-	-	-	-	15
	3	Attoutou B	-	-	-	-	-	-	-	-	-	-	17
	4	Grand-Jacques	2	2	2	-	6	8	-	4	12	-	10
	5	Koko	-	-	-	-	-	-	-	-	-	-	10
	6	Taboth (Ahizi)	-	-	-	-	-	-	-	-	-	-	10
Grand-Bassam	7	Vitré 2 (Ehotilé)	-	3	1	-	4	4	2	2	8	-	25
	8	Azuretti (n'zima)	-	3	1	-	4	6	0	5	11	-	30
	9	Quartier France	2	4	-	1	7	12	0	6	18	-	59
	10	Mondoukou	-	4	-	1	5	6	2	4	12	-	17
		<b>Total CDI</b>	<b>6</b>	<b>18</b>	<b>7</b>	<b>2</b>	<b>33</b>	<b>48</b>	<b>4</b>	<b>25</b>	<b>77</b>	<b>172</b>	

landowners have agreed on making their land available for the implementation of mangrove restoration activities, where agreements with the Chiefs and Elders for use of their lands have been signed.

Table 38. Mangrove restoration in Ghana

Districts in Ghana	Community	Mangrove restoration (ha)
Ada West	Wokumagbe	42
	Akplabanya	21.5
	Goè	49
Ada East	Kewunor/Azizanya	28
	Agorkedzi/Atitoti	38
Anloga-Keta	Agbledomi	32
	Dzita	22
	Whuti	40
	Anloga (Lagbati/Lashibi)	40
	Woe	48
	Tegbi	50
	<b>Total</b>	<b>410.5</b>

Table 39. Mangrove restoration in Côte d'Ivoire

Districts in Côte d'Ivoire	Community	Mangrove restoration (ha)
Jacqueville	Tefredji	6
	Tiémien	15
	Attoutou B	17
	Koko	10
Grand-Bassam	Taboth (Ahizi)	10
	Vitré 2 (Ehotilé)	25
	Azuretti (n'zima)	30
<b>Total</b>	<b>Quartier France</b>	<b>99</b>
		<b>172</b>

The restoration activities will use native species (black, white, red and button mangroves). One nursery per country will be build. Table 7 presents the species that will be planted according to the community, taking into account the characteristics of the local habitat.

Table 39. Mangrove species to be planted in reforested areas by region.

Mangrove Species	Common name	Region and Country
Rhizophora mangle	Red mangrove	Ghana
Rhizophora racemosa	White mangrove	Ghana and Cote d'Ivoire
Laguncularia racemosa	Black mangrove	
Avicinnia germinans	Button mangrove	
Conocarpus erectus	Button mangrove	

In order to achieve successful recolonisation, a focus will be put on creating the abiotic conditions that will allow for effective active restoration as well as improved natural regeneration to take place. Thus, as a first step, the hydrodynamics and general conditions of the ecosystem will be analysed on-site. Once this has been resolved, involved stakeholders can proceed to plant local seedlings in the targeted areas. Furthermore, in order to guarantee that reforestation activities contribute to the long-lasting effect and sustainability of this activity, under Output 2.3. "Adaptive capacity through alternative livelihoods", trainings will address causes of mangrove degradation, such as fuel for stoves and other anthropogenic factors. To conclude, Carbon Credit mechanisms will be put in place, to ensure the economic sustainability of the activity. The set of the mechanism is under this output, while the management of carbon credits by the communities is foreseen under the trainings comprised by output 2.3.

IMPLEMENTATION STRATEGY AND PLANNED ACTIVITIES

Preparation

- Project and coordination set-up, including setting the project office (different communities can have the same office, according to their regionality), hiring staff and structuring the roles.
- Develop workplan and definition of roles to supervise and coordinate the activity.
- Constructive drawings for channels and bioretention facilities will be developed
- Acquisition of material, including tools (Mattock, Wellington boots, Cutlasses); mangrove seedlings, fertilizers (organic), sand, gravel, wood, vegetation for the channels, as well as specific materials for the mangrove nursery (wooden planks, hatch, racks).
- Establishing the nursery in Lagbati/Lashibi (Ghana) and Quartier France (CDI): Proceed to the site leasing, fencing of the site and construction of small built infrastructure for storing and operationalization.

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~~(The precise location of the nurseries was selected and agreed during the consultation process, and it shown into the community maps at the end of this annex).~~

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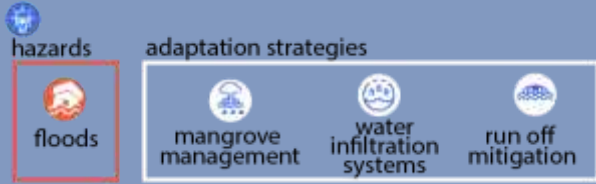
- ~~• **Project and coordination set up**, including setting the project office (different communities can have the same office, according to their regionality), hiring staff and structuring the roles.~~
- ~~• **Develop workplan** (steps of each activity, including trainings) and definition of roles to supervise and coordinate the activity.~~
- ~~• **System design** for mangrove restoration and detailed **constructive drawings for channels and bioretention facilities** will be developed, including technical dimensions.~~
- ~~• Organize **participatory workshops** with community and local stakeholders to **validate results** of the diagnosis, including the challenges and opportunities, and design.~~
- ~~• **Acquisition of material**, including tools (Mattock, Wellington boots, Cutlasses); mangrove seedlings, fertilizers (organic), sand, gravel, wood, vegetation for the channels, as well as specific materials for the mangrove nursery (wooden planks, thatch, racks).~~
- ~~• **Establishing the nursery** in Lagbati/Lashibi (Ghana) and Quartier France (CDI): Proceed to the site leasing, fencing of the site and construction of small built infrastructure for storing and operationalization. The location of the nurseries was selected during the consultation process.—~~

### Operation

- Partner NGO will deliver **trainings** on the project activities and technical details of each step of the implementation.
- **Drainage channels:**
  - **Construction of drainage channels** connected with waterbody to support the infiltration along the catchment area, also filtering water and guaranteeing quality and conveyance. Gardens around the channels can be cultivated for small farming activities.
- **Bio-infiltration facilities:**
  - **Construction of micro infiltration cells** in specific areas ~~of the community where often water cumulates and~~ integrated to drainage channels to strengthen its effectiveness
  - **Construction of bioretention basins** in the lower-level topography connected to the lagoon to catch the water that overpasses the lagoon capacity. During the dry period the site can be used for recreational purposes.
- **Mangroves**
  - **Management of the nursery**, including collection of soil to site and transport to the nursery, as well as bed and bag preparation. Daily activities include watering, shading, weeding, hardening, grading, sorting, packaging seedlings, etc.
  - **Planting of the mangroves** with seedlings that are ready on the nursery site and clearing the planting sites. Planting process will be approached as a community-based mangrove restoration. This will be led by the project manager, coordinated on site by a supervisor, and executed by local community hired for this intervention. Community participation as volunteer for planning the mangrove will be fostered.
  - **Transportation** of the seedlings from the nursery to the site will be sub-contracted and managed by the project lead.
  - **Replanting** by a team of well-trained and dedicated experts and a NGO with previous and relevant experience in the development of mangrove restoration programmes (organizations have been pre-identified for competitive procurement and will lead the project execution), and community members after they have received training.
  - **Blue Carbon Credits** mechanisms will be put in place by a team of experts, to provide the communities a financial source of mangrove management (capacity building activities to train the community members about the use of Carbon Credits are under output 2.3, activity b).

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### Monitoring and maintenance



- **Training and awareness** raising activities to promote maintenance of systems (and prevent mowing), explaining when and how to use the retention basin during dry season and how to profit from the vegetation planted. This activity includes the preparation of materials to be distributed in the communities (ensure inclusion) and training workshops.
- **Field monitoring** during the project duration will be done by the NGO in collaboration with the local community. For the mangrove, monitoring activities include technical visit to the plantation (daily, weekly, monthly, quarterly) to inspect the entire plantation and specific patches, look out and/or check for encrusting organism, etc. Drone flying to support evaluate seedlings performance. Drainage channels and bioretention facilities' monitoring will be done in a daily basis by community (training needed) and through quarterly technical visit to inspect water quality, identification of number and intensity of water erosion and if channels are adequately vegetated. A report will be developed to monitor the status of the facilities (well-functioning, efficiency) and the results to the community.
- **Maintenance** will be done through repairing structure of the facilities and replanting of more resilient vegetation (for mangrove this will be mangrove seedling) after every major rain event. Maintenance and sustainability will be ensured through the Community Resource Management Areas (CREMA) mechanism. This is a governance arrangement for natural resource management.
- **A monitoring plan** to be developed which includes replanting areas that have not succeed on the first round for mangroves, and effectiveness of drainage channels and bioretention facilities during and after floods.

### TIMEPLAN

Table 48. Table 40. Timeplan NBS

Year 1		Year 2		Year 3		Year 4	
1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester
	Preparation	Operation		Monitoring and maintenance			
		a. Drainage channels b. Infiltration cells and bioretention basins					

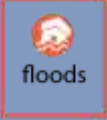
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### INNOVATION

General innovation will be achieved in the NBS for flood risk reduction projects by implementing an **integrated ecosystem-based** approach, which goes into the direction of working with nature, instead of working against nature. The mangrove buffer zone act as a primary barrier for flood protection and contribute to stabilizing the coastline, thereby reducing the risk of coastal flooding; the channels, in turn, will enable water evacuation, infiltration and reduction of the water flow rate until the water reaches the lagoons or bioretention facilities; finally, the bioretention facilities will improve on-site water infiltration, thus reducing runoff and relieving pressure off the channels. The integrated approach of the three activities, increases the resilience of the communities to floods, and the amount-number of multi-benefits derived from the implementation of the three activities. Then, single activity themselves presents level of innovation. For example, the adoption of vegetated drainage channels instead of traditional concrete channels support water purification and protect the surrounding ecosystems (such as lagoons) from dramatic increase of pollutants. It is key to remember that community's resilience also relies on the health of surrounding ecosystems. Regarding mangroves, even though adaptation to climate change through mangroves does not represent an innovation per se, the set-up of carbon credits to ensure economic sustainability, as well and the combination of this activity with trainings to abate the route causes of deforestation (under outputs 2.3) provide an innovative way of managing adaptation through mangroves (compared to business-as-usual and traditional ecosystem restoration). Of course, the design of mangrove activities (and their location), was undertaken with the clear purpose of flood mitigation and integration with the other activities under this outputs, to ensure that they work in synergy to minimize floods. For further detail on innovative solutions, please refer to section 2b of this document.



hazards



floods

adaptation strategies



mangrove  
management

water  
infiltration  
systems

run off  
mitigation

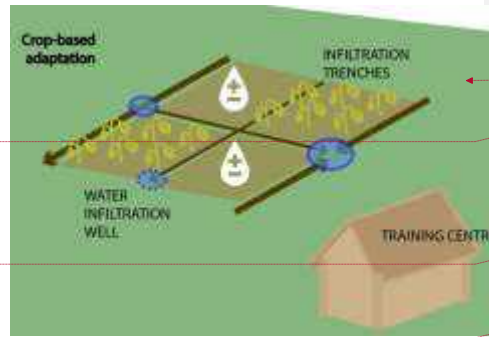


**Output 2.3. ADAPTIVE CAPACITY THROUGH ALTERNATIVE LIVELIHOODS**

Cost: 3,140,158 USD Total beneficiaries<sup>86</sup>: 16,800 (direct) + 258,709 (indirect)

Adaptation strategy in brief: livelihoods are affected by climate change but, at the same time, also have an impact on the capacity of a system to adapt to climate change. On the one hand, the salinization and rain pattern variability are threatening traditional peri-urban agriculture. On the other hand, current practices (such as the cutting of mangrove trees to use the wood as source of income) reduce the adaptive capacity of coastal communities to floods and storms. Working on livelihoods will allow to address the socio-economic conditions that are inherently linked with climate adaptation, and which need to be addressed in order to make adaptation option viable and long-lasting.

This output focuses on increasing adaptive capacity of coastal communities through alternative livelihoods focusing on two activities: a) Set up resilient agriculture activities through dedicated plots and one training centre in 3 communities in Cote d'Ivoire and 6 communities in Ghana, and b) "Train local staff and communities regarding project management, maintenance, and climate adaptation activities". As for other outputs under this component, different combination of the two activities were planned, designed and localized based on the contexts, exposure, environmental constrains, consultation with technical experts and community consultation. Table 5042 shows the distribution of activities by community,



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<sup>86</sup> two activities: a) Set up resilient agriculture activities through dedicated plots and one training centre in 3 communities in Cote d'Ivoire and 6 communities in Ghana", and b) "Train local staff and communities regarding project management, maintenance, and climate adaptation activities". As for other outputs under this component, the activities of the subproject will be implemented in a subset of the 21 communities, based on the contexts, exposure, environmental constraints and community consultation.

Annex Figure 9 Elements for Climate resilient agriculture (activity "a" under this output): infiltration trenches, ponds, water infiltrating well and adoption of salt-resilient crops in the selected pilot plots)

**SUBPROJECT RATIONAL AND DESCRIPTION**

The Keta and Volta regions are located in a low-lying coastal plain with the highest point of 53 meters above sea level and the lowest between 1 to 3.5 meters below sea level. Some areas are experiencing annual increase in flooding and present extremely high salinity levels, limiting communities' agricultural productivity and local agri-food resilience. Ecosystem services play a key role in livelihood creation, and communities in these districts highly rely on their natural environment. Parts of their development are linked to coastal ecosystem services that may be compromised as they deteriorate. Wood harvesting has led to a decrease in the total surface of mangrove forests in the coastal regions, thus reducing the capacity of the natural ecosystem to limit the impact of floods and storms. With increasing manifestations of climate change, salt intrusion is likely to increase due to sea level rise and alterations in precipitation patterns, reducing underground freshwater availability and allowing saline water to move to agricultural grounds. This output introduces a focus on the link between local livelihoods and adaptation to climate change impacts. This includes the development of alternative incomes that promote climate resilience of communities, and the scaling up of climate-resilient agriculture strategies. In particular, ensuring agricultural production (despite soil salinization and altered rain-patterns), and to promote resilience and

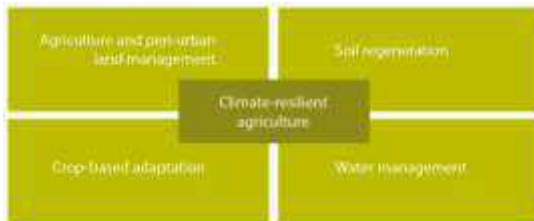
<sup>86</sup> Beneficiaries calculation: direct + indirect. Direct (targeted with high intensity) : Lead farmers (estimation of 20 per community) x Rural Average Household Size (estimation of 4). Indirect (i. targeted with medium intensity + ii. not targeted with medium intensity): i. zero; ii. Lead farmers x Neighbours (estimation of 2).



sustainability of activities under this component, such as mangrove systems management (through Carbon Credits) and alternative energy use through trainings that lead to increased capacity and, indirectly, to job creation.

**a) "Set up resilient agriculture activities through dedicated plots and two training centres in 6 communities in Ghana and 3 communities in Cote d'Ivoire"**

To increase the resilience of agricultural practices and ensure key livelihoods in the communities, this activity focuses on transferring knowledge and hard activities such as tools to: i) improving soil's fertility, using agroecological techniques and other soil management solutions, ii) introducing salt-resilient crops, iii) promoting agriculture water management improvement, and iv) improving agricultural land management.



In each community hosting this activity, all these four "tools" are implemented through trainings, and, as said, physical interventions (such as wells, pumps, ...) listed in table 5042.

Annex Figure 10 Climate-resilient approaches for reducing communities' vulnerability and improving livelihoods in Ghana and Cote d'Ivoire.

This activity will be implemented in 3 communities in Cote d'Ivoire (Tiemmen, Attoutou and Taboth) and 6 communities in Ghana (Tegbi, Whuti, Anloga, Woe, Dzita, Aglebdomi), where agriculture activities are already present and are being threatened by soil salinization. The activity, in concrete, has identified pilot plots in each of the 9 communities involved, and the plots will be equipped with infiltration trenches, ponds, and a water infiltration well to improve water management for agricultural activities in response to altered rain patterns (for detailed about design, please see table 42). Salt-resilient crops will be introduced to be planted in the nine pilot plots. In addition, a training centre will be established in each country (one in Tiemen and one in Tegbi) to train the beneficiaries of the activities about agricultural land management practices. Thus, the Agriculture Community Centre (ACC) will enable beneficiaries of the trainings to learn, and to then expand the practices to the plots identified in the target communities. In total, the activity will cover 150 hectares of farmland in Ghana and 75 hectares of farmland in Côte d'Ivoire, with 540 lead farmers benefiting from the adoption of strategies that increase the resilience of their production.

i) improving soil's fertility, using agroecological techniques and other soil management solutions. Soil regeneration introduces conservation agriculture practices, such as the principle of minimum soil disturbance, the implementation of permanent soil covers and efficient use of organics inputs for reducing soil salinity and improving the fertility for a more productive yield. The techniques developed through this approach are permeable rock dam, stone bunds, and assisted natural regeneration and mulching. All these techniques will be taught in the training centres, to promote their utilization.

These activities will be introduced in an initial experimental plot (v), which will also hold the Agriculture Community Centre (ACC) supporting the adoption of all new strategies and technologies.

This activity will be implemented in 3 communities in Cote d'Ivoire and 6 communities in Ghana, where agriculture activities are already present and are being threatened by soil salinization. The activity, in concrete, will identify pilot plots in each of the 9 communities, and the plots will be equipped with infiltration trenches, ponds, and a water infiltration well to improve water management for agricultural activities (in response to altered rain patterns). Salt-resilient crops will be introduced to be planted in the six pilot plots. In addition, a training centre will be established in each country to train the beneficiaries of the activities about agricultural land management practices. In total, the activity will cover 150 hectares of farmland in Ghana and 75 hectares of farmland in Côte d'Ivoire, with 540 lead farmers benefiting from the adoption of strategies that increase the resilience of their production.

i) improving soil's fertility, using agroecological techniques and other soil management solutions. The activities regarding soil regeneration introduce conservation agriculture practices, such as the principle of minimum soil

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~~disturbance, the implementation of permanent soil covers and efficient use of organics inputs for reducing soil salinity and improving the fertility for a more productive yield. The techniques developed through this activity is permeable rock dam, stone bunds, and assisted natural regeneration and mulching~~

- Permeable rock dams are anti-erosion structures built along contour lines with a height of 30 to 50 cm and extended over to two or three times the height. The rock dam have the simultaneous effect of controlling gulley erosion while causing deposition of silt, and spreading and retaining runoff for improved plant growth. It will be located to first break the force of the water flowing from the plateaus and slopes. Additionally, this structure dissipates the energy of the water and contributes to the sedimentation, it increases the infiltration of surface water into the soil.
- Stone bunds are anti-erosion arrangements of blocks of stones constructed in line in a height of 20-30 cm from the ground, producing better results when combined with biological measures (grass strips, agroforestry, etc).
- Assisted natural regeneration (ANR) is an agro-forestry technique that protect and maintain woody species that grow naturally in a plot. It is a blend of active planting and passive restoration, where local community will intervene to help trees and native vegetation naturally recover by eliminating barriers and threats to their growth and survival. To prevent the spread of wildfires, it is possible to build firebreaks and clear the florets floor. To promote native trees enough room to grow, they can remove invasive grasses and scrubs.
- Mulching is a technique of spread stalks of millet and sorghum on the field after harvesting. It is recommended a quantity about 2t per year, corresponding 2 to 3 stems per m2.

ii) introducing salt-resilient crops. Currently, communities' crop production is based on shallots, bell pepper, tomatoes, onions, carrots, and cabbages in small proportion. In addition, in the last years, sugar beet and harish potato have been introduced. Taking advantage of the communities' capacity of adapting different crops, climate-resilient agriculture includes a crop-based management approach by implementing technical trainings for local farmers. Within these trainings, salt-resilient crops such as varieties of sugar, spinach, carrots, potatoes, cauliflower, eggplant and oca will be introduced, combining them with other crop management practices such as crop rotation and association of local crops. The crops ~~will behave been~~ selected depending on the characteristics of the soil and community's needs, Within the community training centre, the project will provide cultivation beds, seeds, fertilizers, and toolkit for soil sampling and salinity measurements. In each country, the institution in charge of agriculture research will provide knowledge and seed banks in the training of the groups on seed multiplication techniques. These activities can jointly improve communities' resilience by increasing the number of types of crops that can be produced. ~~In addition, to guarantee a full adoption of the new salt resilient crops, agribusiness models will be developed which will be supported by initial cost-efficient and cost-effective analysis.~~

iii) promoting agriculture **water management improvement**. In the Keta and Volta region, agriculture-based communities use small-scale intensive irrigation systems. Using hydrologic resources from the area, wells are used to manually obtain fresh water from the aquifers. Then, water is pumped and sprinkled to hydrate the crops. In other cases, water can be found using traditional agriculture digging 1 meter to 2 meters where water can be found easily. To reduce saline intrusion on underground levels and reduce flood risks in agricultural land, an aquifer recharge strategy will be developed by installing water infiltration systems where agriculture is practised and is vulnerable to salt intrusion and floods. These water infiltration systems will be implemented where soil moisture levels, fresh-brackish groundwater availability, infiltration capacity and other geophysical and water levels are clearly defined. Based on the characteristics of the sites, there will be a need to:

- 7000 m<sup>2</sup> of infiltration trenches (4668m<sup>2</sup> in Ghana and 2334m<sup>2</sup> in CDI – 778m<sup>2</sup> in each community)
- 9 wells with large diameters (6 in Ghana and 3 in CDI)
- 18 sets of drip irrigation equipment and toolkit for soil sampling (12 in Ghana and 6 in CDI)
- 216 hectares pre-sowing land clearing and preparation, construct cultivation beds, seeds, fertilizers, and land lease (144 in Ghana and 72 in CDI)
- 10 pumps (5 per country)

~~Please, refer to table 5042, to see details about water management improvement-related devices per community.~~ The water infiltration systems will be integrated by water infiltration trenches and wells, so as small ponds that are

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capable of varying degrees of permeability into the different underground layers. This technology will significantly reduce the probability of flood risks in the area and will reduce levels of soil erosion. Additionally, for a comprehensive water management strategy, rainwater systems and dipping irrigation systems for crop irrigation will be implemented as farmers are introduced into different training irrigation techniques.

iv) **improving agricultural land management.** Proper use of land is a priority for sustainable climate-resilient agricultural production and for ensuring productive agri-food systems. Urban growth and urban expansion can become stress drivers for agricultural land loss. Through the participatory planning process that will take place under the component 1 and additionally to the data collected during the consultation, agriculture land will be validated, and suitable areas will be demarcated to reduce agriculture land expansion. In order to attend this challenge in the communities, **trainings for agriculture land management** and controlling urban expansion will be implemented. These training courses will include an approach where agricultural land has importance within the regional ecological landscape and as an economic driver in the region.

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v) experimental plots, Agriculture Community Centre (ACC) and plot expansion. **In Ghana, The Agriculture Community Centre will be situated in Tegbi, having a total area of 5 acres. In this centre, A first batch formed by 6 groups of 10 lead farmers from each community will be trained during one season, giving a total of 60 team leaders per season. Each year has two crop seasons, therefore the total amount of farm leaders trained per year will be 120. By the second year a second batch of lead farmers are expected to be trained (120) including both seasons, while the lead farmers trained during the previous year will start to replicate the best practices in one of their owned plots, these will add a total of 42 HA (7 acres per community) in the second year. By the third year a third batch of lead farmers are expected to be trained (120), while the lead farmers trained the previous year will start to replicate the best practices in one of their plots, these will add a total of 48 HA (8 HA per community) in the third year. During the last half a year of the project implementation, no new lead farmers will be trained. However, the previous lead farmers will start to replicate the best practices in one of their plots, these will add a total of 48HA (8 HA for each community) in the third year. The total amount of plots with adopted climate-resilient practices will be 150 HA and the total lead farmers adopting the strategy will be 360.**

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Table 49. Annex Table 4. Number of farmers and HA practicing climate-resilient practices in Ghana.

Year	Farmers in Ghana per community							HA in Ghana per community						
	Tegbi	Whuti	Anloga	Woe	Dzila	Agbledomi	Total	Tegbi	Whuti	Anloga	Woe	Dzila	Agbledomi	Total
1	20	20	20	20	20	20	120	12	0	0	0	0	0	12
2	20	20	20	20	20	20	120	7	7	7	7	7	7	42
3	20	20	20	20	20	20	120	8	8	8	8	8	8	48
4	0	0	0	0	0	0	0	8	8	8	8	8	8	48
<b>TOTAL Per community</b>	60	60	60	60	60	60	360	35	23	23	23	23	23	150

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In Cote d'Ivoire, the Agriculture Community Centre will be situated in Tiémien, having a total area of 5 acres. In this centre, A first batch formed by 3 groups of 10 lead farmers from each community will be trained during one season, giving a total of 60 team leaders per season. Each year has two crop seasons, therefore the total amount of farm leaders trained per year will be 60. By the second year a second batch of lead farmers are expected to be trained (60) including both seasons, while the lead farmers trained during the previous year will start to replicate the best practices in one of their owned plots, these will add a total of 24 HA (8HA per community) in the second year. By the third year a third batch of lead farmers are expected to be trained (60), while the lead farmers trained the previous year will start to replicate the best practices in one of their plots, these will add a total of 24 HA (8HA per community) in the third year. During the last half a year of the project implementation, no new lead farmers will be trained. However, the previous lead farmers will start to replicate the best practices in one of their plots, these will add a total of 24 HA (8 HA for each community) in the third year. The total area of plots with adopted climate-resilient practices will be **75 HA** and the total lead farmers adopting the strategy will be **180**.



Table 50. Annex Table 5. Number of farmers and acres practicing climate-resilient practices in Cote d'Ivoire.

Year	Farmers in Ghana per community				HA in CDI per community			
	Tièmen	Attoutou B	Taboth	Total	Tièmen	Attoutou B	Taboth	Total
1	20	20	20	60	3	0	0	3
2	20	20	20	60	8	8	8	24
3	20	20	20	60	8	8	8	24
4	0	0	0	0	8	8	8	24
<b>TOTAL</b> Per community	60	60	60	180	27	24	24	75

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**b) "Train local staff and communities regarding project management, maintenance, and climate adaptation activities"**

The resilience of coastal communities in Ghana and Côte d'Ivoire depends largely on the health and intactness of the local ecosystems, in particular of the mangroves, which can act as barriers that mitigate floods and storms, by stabilizing shorelines and creating buffer zones. Deforestation of mangroves is primarily caused by the use of firewood to provide fuel for cooking, which may be harvested for self-use or to be sold on local markets. It is also known that livelihoods and economic benefits are the main factors that favour community participation for mangrove conservation. In order to ensure that reforestation activities implemented under Output 2.2 will have sustainable and long-lasting effects on improving the coverage of mangroves in the coastal regions, they will be implemented in combination with activities focusing on alternative incomes and practices. Last but not least, training on resilient housing will also be provided, to support local communities in adopting construction techniques that will help their houses to be more resilient to recurrent floods.

Two main strategies will be developed to prevent cutting of mangrove trees: a Blue Carbon Project and the scaling up energy options and energy-efficient alternatives. A third capacity building activities to support alternative income generation and to boost adaptation will be the one focusing on resilient housing. In particular, the **Blue Carbon Project (BCP)** has the objective is to take advantage of the 582.5 ha reforested mangrove (Output 2.2) capacity to sequester CO<sup>2</sup>, which can be accounted and transformed into carbon offsets in order to compensate greenhouse gases emissions through the Carbon Offset Market. Once carbon offsets are purchased, communities are economically benefited receiving revenues from the mangrove ecosystem service delivered. This response to the necessity of improving communities' livelihoods, empowering them while guaranteeing the sustainability, regeneration, and conservation of the mangrove forest. In order to register the reforested areas as a certified blue carbon project, different steps will have to be followed (under output 2.2.), such as the development of a concept note, the execution of technical studies (carbon inventory), the development of a project design report by a NGO and the verification of the project by a third party for further registration as a certified BCP, as reflected in the project budget. Under these training, community's representative will be enabled to manage the project and the income deriving from it, to ensure the long-term sustainability of the mangrove's related activities. Regarding **energy alternatives and improved energy-efficiency trainings**, community level events will be organized to promote the use of fuel-efficient cookstoves. In order to limit the use of firewood for cooking, the project will be looking at increasing the use of new processing/cooking techniques and the identification of alternative energy sources (high-energy briquettes, gas, etc.). The feasibility and economic viability of each of the different energy options will be evaluated through a feasibility study, based on which the selected options will be implemented in each community. This will allow to ensure regeneration and long-term conservation of local mangrove forests. To conclude, trainings will involve the communities to mainstream **resilient housing techniques**, to increase the capacity of the built capital to adapt to recurrent floods.

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All communities will benefit from this activities. However, communities will receive the training based on their needs. Table 50 presents specifically which trainings under this activity will be delivered in which community.

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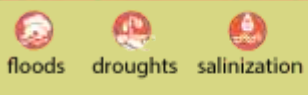
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Table 51. Alternative livelihoods interventions overview

Adaptive capacity through alternative livelihoods
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Ghana		"Set up resilient agriculture activities through dedicated plots and training centres in 6 communities in Ghana and 3 communities in Cote d'Ivoire"					"Train local staff and communities regarding project management, maintenance, and climate adaptation activities"		
District	Community	Infiltration trenches (m2)	Wells (#)	Drip irrigation (#)	Pumps (#)	Farm plot (HA)	Resilient housing	Blue-Carbon	New practices
Ada West	1 Wokumagbe	-	-	-	-	-	yes	yes	yes
	2 Akplabanya	-	-	-	-	-	yes	yes	yes
	3 Goli	-	-	-	-	-	yes	yes	yes
Ada East	4 Kewunor/Azizanya	-	-	-	-	-	yes	yes	yes
Anloga-Keta	5 Agorkedzi/Atitetti	-	-	-	-	-	yes	yes	yes
	6 Agbledomi	778	1	2	1	24	yes	yes	yes
	7 Dzita	778	1	2	2	24	yes	yes	yes
	8 Whuti	778	1	2	2	24	yes	yes	yes
	9 Jagbati/Kashibi (Anloga)	778	1	2	2	24	yes	yes	yes
	10 Woe	778	1	2	2	24	yes	yes	yes
	11 Tegbi	778	1	2	2	24	yes	yes	yes
<b>Total Ghana</b>		<b>4,668</b>	<b>6</b>	<b>12</b>	<b>11</b>	<b>144</b>	-	-	-
<b>CDI</b>									
Jacqueville	1 Tefredji	-	-	-	-	-	yes	yes	yes
	2 Tiémien	778	1	2	1	24	yes	yes	yes
	3 Attoutou B	778	1	2	1	24	yes	yes	yes
	4 Grand-Jacques	-	-	-	-	-	yes	-	yes
	5 Koko	-	-	-	-	-	yes	yes	yes
	6 Taboth (Ahizi)	778	1	2	1	24	yes	yes	yes
Grand-Bassam	7 Vitré 2 (Ehotilé)	-	-	-	-	-	yes	yes	yes
	8 Azuretti (n'zima)	-	-	-	-	-	yes	yes	yes
	9 Quartier France	-	-	-	-	-	yes	yes	yes
	10 Mondoukou	-	-	-	-	-	yes	-	yes
<b>Total CDI</b>		<b>2,334</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>72</b>	-	-	-

IMPLEMENTATION STRATEGY AND PLANNED ACTIVITIES

Preparation

- **Project and coordination set-up**, including hiring staff, detailed workplan, definition of roles to supervise and coordinate the activity.
- **Fine tuning of technical hydrogeological and soil tests** will be developed.
- **Preparation of the ACC** (stakeholders meeting and field work) where **salt-resilient crops and water management practices** will be introduced.
- Development of a **rainwater harvesting approach** joint to the **irrigation and water infiltration systems**.

Operation

a) Set up resilient agriculture activities through dedicated plots and one training centre in 6 communities in Ghana and 3 in Cote d'Ivoire"

- Finalization of the Agriculture Community Centre in Tiémien and Tegbi, including the cultivation beds and toolkit for soil sampling and salinity measurements.
- **Water infiltration system construction**. The NGO will provide training and support the development of institutional arrangements inside the communities for the installation and operation systems. Additionally, technical expertise has been secured from development partners.
- Construction of large diameter wells and infiltration trenches.

Preparation

- **Project and coordination set-up**, including hiring staff, detailed workplan, definition of roles to supervise and coordinate the activity.



- ~~Detailed technical hydrogeological and soil analysis~~ will be developed, including a soil salinity assessment. In addition, analysis of socio-economic aspects for integrating new crops will be implemented, including the analysis and development of sustainable economic models in the value chain.
- ~~Preparation of the ACC and validation of pre-selected farmers' plots~~ (stakeholders meeting and field work) where salt resilient crops and water management practices will be introduced.
- ~~Validation of crops selection~~ based on the soil's characteristics and community's needs (stakeholders meeting and field work).
- ~~Development of a rainwater harvesting approach~~ joint to the irrigation and water infiltration systems.

**Operation**

**a) Set up resilient agriculture activities through dedicated plots and one training centre in 6 communities in Ghana and 3 in Cote d'Ivoire"**

- ~~Construction of the Agriculture Community Centre in Tiémien and Togbi, including the cultivation beds and toolkit for soil sampling and salinity measurements.~~
- ~~Water infiltration system construction.~~ The NGO will provide training and support the development of institutional arrangements inside the communities for the installation and operation systems. Additionally, technical expertise has been secured from development partners.
- ~~Construction of large diameter wells and infiltration trenches.~~
- ~~Soil regeneration.~~ Validation of sites to build permeable rock dam, stone bunds, and assisted natural regeneration and mulching.
- ~~Construction of permeable rock dam, stone bunds, and assisted natural regeneration and mulching.~~
- **Settlement of the ACC for climate-resilient agriculture.** The funding for the initial 4 years is included as part of the project, and after that the project will receive income from the operation of the systems as well as the training of additional communities with interest to develop similar solutions for agriculture and water infiltration.
- Implementation of **trainings** related to soil regeneration, agriculture land management, salt-resilient crops adaptation and water management will be developed, following seasonal dynamics and in accordance with the community necessities. Trainings will be held initially at the CTC and furtherly, practices will be adapted and replicated to the communities' plots.

**b) "Train local staff and communities regarding project management, maintenance, and climate adaptation activities"**

- Raising awareness on the importance of healthy mangroves systems will be carried out through the set-up of trainings on alternative cooking and Blue Carbon Project. The beneficiaries of the trainings will be identified and trainings will be provide at district level for the carbon project, and at community level for alternative cooking.
- Capacity building on resilient housing will be promoted through technical trainings at community level.

**Monitoring and maintenance**

- Maintenance during the project duration will be done by the NGO in collaboration with the local community. The NGO will progressively phase out its role as community members become more proficient in the maintenance and operation of the systems. Maintenance trainings are budgeted in the project and will be conducted by the NGO with the different community groups part of the initiatives.
- CREMA By-laws enacted by the district assembly for the protection of the installed systems and pilot structures which will impose fines etc.

**TIME PLAN**

Table 52, Table 44. Time plan

Year 1		Year 2		Year 3		Year 4	
1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	1 <sup>st</sup> semester	2 <sup>nd</sup> semester

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	Preparation	Operation	Monitoring and maintenance
▲		a. <i>Set up resilient agriculture activities through dedicated plots and one training centre in 6 communities in Ghana and 3 in Cote d'Ivoire"</i> b. <i>"Train local staff and communities regarding project management, maintenance, and climate adaptation activities"</i>	

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**INNOVATION**

This subproject proposes an innovative approach where the role of livelihoods for climate resilience is addressed through a combined approach, by considering the impact of climate change on the livelihoods (in particular, the local food production), as well as the potential impact of livelihoods on the adaptive capacity of a system (in particular, the impact of deforestation of mangrove ecosystems).

However, the strongest element of innovation presented in this subproject, is the introduction of climate resilient agriculture. While programs are already targeting climate-resilient agriculture in other countries of West Africa (particularly in Burkina, Niger, and Senegal), in the coastal areas of Ghana and Cote d'Ivoire such practice is not diffused yet. This emerged from both desk research, consultation with experts and community consultation throughout the years. The innovation led by this subproject, on the one hand, is due to the importing of a technique which proved to be effective in West Africa but is not present in the areas targeted by the project; on the other hand, to the specific type of technique. Thus, the technique adopted does not pursue crop improvement through pure plant breeding. Plant breeding may be adopted, but crop improvement goes beyond business-as-usual plant breeding and represents a much broader continuum of activities at the intersection of agriculture, life and social-science. The use of salt-resilient crops is also combined with other practices to ensure agricultural production despite altered rain-patterns, drought and salinization due to the sea level rise. While soil management practices and water management do not represent an innovation per se, the combination of the three and their evidence-based diffusion in target communities is much needed. Similarly, training to prevent deforestation by building capacity on the carbon credits management, training on resilient housing, and the promotion of alternative cooking, also include concepts and practices that are not globally innovative, but that are not present in the target areas. For further details on innovative solutions, please refer to section 2b of this document.

Locations – Ghana

**Wokumagbe**

**Highlights from the consultation process:**

- Floods:** approximately 2 times/year the community face strong flooding. The floods are caused by the strong rains during raining season (August to October) but also from the rise of lagoon level. Water from rainfall gets cumulated in the agriculture, saturating the soil. There is no vegetation between the community and the lagoon.
- Warning and safe areas:** Due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. No communication or alarm system exist to send early warnings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods.
- Ecosystem:** water from the sea changes the property of the lagoon and sea fishing has become the major source of food (previously also lagoon fishing).

**Direct beneficiaries:**

340 (♀:180, Y:173), 1,699 (♀: 882 Y: 849).



**Akplabanya**

**Highlights from the consultation process:**

- Floods:** approximately 3 times/year the community face strong flooding. Similar to Wokumagbe, water from rainfall gets cumulated in the settlement, among the houses, and the rise of level of the lagoon (both from ocean and rain fall) inundates houses along the lagoon. The community 'receives water from the front (ocean), back (lagoon) and from rainfall'. To address the rainwater in within the houses, people have tried to build small drainage channels, which are too rudimentary and not efficient. There is no vegetation between the community and the lagoon.
- Warning and safe areas:** Due to the flood the people, move to another area (referred as Mokuogo island) for days until the water goes down. Similar to Wokumagbe, no communication or alarm system exist to send early warnings or guidance, but there is a (private) communication centre in the community – the owner uses megaphones to announce and mechanise goods.

**Direct beneficiaries:**

1,063 (♀:542, Y:372), 5,317 (♀:2,656 Y:1,823)





**Goi**

**Highlights from the consultation process:**

- **Floods:** when there are storms or high ocean tides, seawater invades the coastal lagoon, causing accelerated sediment accumulation and flooding of houses near the lagoon. Strong rainfall contributes to the flooding near lagoon and the run-off. Floods mainly impact community health (diseases) and the life of families along the lagoon.
  - The community builds yearly (and manually) a large drainage channel to drain water from the lagoon to the ocean. Additionally, the community places waste between the lagoon and the ocean as a strategy to create a physical barrier.
- **Warning and safe areas:** there is no warning of storms.
- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed. Agriculture has been challenged by the rain pattern change, drought, and heat. Change in properties of the lagoon has reduced fishes. The 'new lagoon' between the ocean and the community changes the environmental characteristics.

**Direct beneficiaries:**



**Kewunor.Azizanya**

**Highlights from the consultation process:**

- **Floods:** When there are storms or high ocean tides, both sea and lagoon level rise. Due to the accumulation of water between the buildings and floods, parts of the communities become 'water points', changing the environmental characteristics, and generation new floodable areas. Floods happen along the Volta River and around the 'water points.'
- **Warning and safe areas:** Floodable areas there is no warning of storms. Even though there are floods within the community, there is no need of high impact on relocation plan. The floodable are already consolidated new water points, impacting the community size and its vulnerability. There is a need of early warnings or guidance during floods. No communication or alarm system exist to send early warnings or guidance, but there is a (private) information centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecosystem:** The few existing plants are concentrated around the consolidated floodable area/water points within the settlement and some coconut trees between the sea and the community, but they do not protect the community from flooding. Change in properties of the lagoon has reduced fishes.

**Direct beneficiaries:**





### Agorkedzi/ Atiteti

#### Highlights from the consultation process:

- **Floods:** similar to Goi, when there are storms or high ocean tides, seawater invades the coastal lagoons, causing erosion, sediment accumulation and flooding of houses near the coastal lagoons. In the back of the community, the lagoons connected to the Volta River also overpass the capacity. Over 20 times/year families need to leave their houses due to the flood. The community has built small, rudimentary channels to drain water, but it is not sufficient.
- **Warning and safe areas:** Due to flood, people find rescue in the 'Safe Heaven', a 50x50m space built by the Volta River Authority. Similar to Wokumagbe, no communication or alarm system exist to send early warnings or guidance, but there is a (private) information centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecosystem:** the few vegetation between in the lagoons' surroundings are limited to coconut and bushes. Not far from Agorkedzi, mangrove has been planted and restored by the Wildlife Commission in collaboration with the community. Change in properties of the lagoon has reduced fishes.

#### Direct beneficiaries:



### Agbledomi

#### Highlights from the consultation process:

- **Floods:** when there are storms or high ocean tides, seawater invades the coastal lagoons, causing erosion and sediment accumulation and flooding of houses near these coastal lagoons. Approximately 1 time/year flooding largely impacts the community.
- **Warning and safe areas:** there is no warning of storms.
- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed to use the wood (build houses, fish cooking and energy generation). Agriculture has been challenged by the rain pattern change, drought, salinization, and heat. To address this issue and boost production, the community has started to use fertilizers and chemicals, however, with the floods it has also harmed the environment. Change in properties of the lagoon has reduced fishes.

#### Direct beneficiaries:



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**Dzita**

**Highlights from the consultation process:**

- **Floods:** 3 times/year Dzita is deeply impacted by floods. Similar to Goi, when there are storms or high ocean tides, seawater invades the coastal lagoons, causing erosion, sediment accumulation and flooding of houses near the coastal lagoons. The road 'between' the lagoon and the main part of the settlement also gets flooded and water runs towards the back of the community (north), area of lower topography, where it accumulates. The community have built small and rudimentary channels to drain water towards the back of the community, to avoid flooding houses along the way.
- **Warning and safe areas:** Due to the flood, people whose houses are flooded find rescue in the 'Safe Heaven', a space built by the Volta River Authority. Similar to other communities, no communication or alarm system exist to send early warnings or guidance. However, information is usually casted through a (private) communication centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed. A major part of the settlement (part that doesn't flood) is extremely arid. Agriculture has been challenged by the rain pattern change, salinity, drought, and heat. Change in properties of the lagoon has reduced fishes.



**Direct beneficiaries:**



**Whuti**

**Highlights from the consultation process:**

- **Floods:** 1 time/year houses near the lagoons are deeply impacted by flooding. Most houses in the settlement are protected of sea and lagoon level rise thanks to the agriculture land, but production gets destroyed with flooding. Coastal lagoon flooding impact fewer houses if compared to the riverine lagoon, where there are more houses and agriculture land is narrower. During the rest of the year, floods impact agriculture and fishing.
- **Warning and safe areas:** there is no warning of storms, although a system to inform the community on accurate weather data would be very helpful to agriculture production.
- **Ecosystem:** agriculture is the only vegetation between the lagoons and the community. Lagoon property have changed due to the sea level rise, risen temperature, run-off and sediment accumulation. Change in properties of the lagoon has reduced fishes.



**Direct beneficiaries:**



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## Lagbati/ Lashibi

### Highlights from the consultation process:

- **Floods:** both agriculture land on the seaside and on the lagoon side flood due to strong rains and high tides. Houses along the lagoons have also been impacted sea/lagoon level rise as a consequence of the accelerated sedimentation of the lagoon. Land on the Keta Lagoon side ('back of the community') has extensive low-level topography and is deeply vulnerable.
- **Warning and safe areas:** Similar to other communities, no communication or alarm system exist to send early warnings or guidance. However, information is usually casted through a (private) communication centre in the community to announce and mechanise goods. The communication does not reach all the community (use of 01 single megaphone). A communication centre exists but does not reach all the community. The EWS to inform the community on accurate weather data would be very helpful to agriculture production.
- **Ecosystem:** agriculture is the only vegetation between the lagoons and the community - the previous existing mangrove in the lagoon area has been destroyed. Agriculture has been challenged by the rain pattern change, floods, drought, salinization, and heat. Change in properties of the lagoon has reduced fishes.

### Direct beneficiaries:

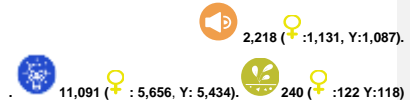


## Woe

### Highlights from the consultation process:

- **Floods:** similar to Lagbati/Lashibi, Land on the Keta Lagoon side ('back of the community') has extensive low-level topography. In Woe, however, there is no barrier of agriculture between the Keta Lagoon and the community, and houses are more impacted. When there are strong rains, water gets cumulated in the community, and the lagoon area next to the agriculture land also overpasses the capacity. The lack of drainage, water run-off, accelerated sedimentation impact contribute to flood of the agriculture land.
- **Warning and safe areas:** similar to other communities, no alarm system exist to send early warnings or guidance. However, an FM radio station (Keta Radio) casts weather information daily (mornings). Additionally 3 (private) communication centres use megaphones to share information and merchandise goods.
- **Ecosystem:** vegetation between the lagoons and the houses do not protect the community (bushes). Agriculture has been challenged by the rain pattern change, floods, drought, salinization, and heat. Change in properties of the lagoon has reduced fishes.

### Direct beneficiaries:





## Tegbi

### Highlights from the consultation process:

- **Floods:** agriculture land floods due to lagoon level rise and rainfall.
- **Warning and safe areas:** similar to other communities, no communication or alarm system exist to send early warnings or guidance. However, information is usually casted through a (private) communication centre in the community to announce and mechanise goods.
- **Ecosystem:** vegetation between the lagoons and the houses do not protect the community (bushes). Agriculture has been challenged by the rain pattern change, floods, drought, salinization, and heat. Change in properties of the lagoon has reduced fishes.

### Direct beneficiaries:



Locations – Côte d'Ivoire

**Tefredji**

**Highlights from the consultation process:**

- **Floods:** when there are storms or high ocean tides (September and October), the community faces erosion, accelerated sedimentation and flooding of roads and few houses near the coastal lagoon. Community has built small, rudimentary drainage channels.
- **Warning and safe areas:** no communication or alarm system exist to send early warnings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods. The flood does not last more than 1 day.
- **Ecosystem:** there is no vegetation between the lagoon and the community, apart from coconut. The previous existing mangrove in the lagoon area has been destroyed.

**Direct beneficiaries:**

765 (♂:382, Y:46). 3,823 (♂:1,863, Y:224).



**Tiémien**

**Highlights from the consultation process:**

- **Ecosystem:** even though sea level rise is not causing floods in the settlement, it is eroding the coast, where agriculture is practiced. In some parts of the community, there are vegetation and mangrove between the lagoon and the community. The previous existing mangrove in the lagoon area and vegetation has been destroyed to create agriculture areas. Agriculture has been challenged by the rain pattern change, drought, and heat. To have better condition for fishing, the community use tree branches to create a better environmental to have more fishing.

**Direct beneficiaries:**

111 (♂:58, Y:28). 555 (♂:233, Y:433). 240 (♂:125 Y:60)



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### Attoutou B

#### Highlights from the consultation process:

- **Floods:** when there are storms or high ocean tides, the lagoon level rises, flooding the agriculture land. Within the settlement, spaces between the buildings and roads cumulate water and only few houses are impacted by flood.
- **Warning and safe areas:** there is no warning of storms, although a system to inform the community on accurate weather data would be very helpful to agriculture production. Women are responsible to produce cassava and this production have been impacted by the flooding from the lagoon.
- **Ecosystem:** there is very few vegetation between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed to use the wood (build houses, fish cooking and energy generation).

#### Direct beneficiaries:

332 (♀:146, Y:131), 1,658 (♀: 711, Y: 638), 240 (♀:106 Y: 95)

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### Grand-Jacques

#### Highlights from the consultation process:

- **Floods:** when there are storms or high ocean tides, seawater invades the coastal line. The water and sediment get stagnated in the community, causing flooding of roads and few houses near the coast. There is no vegetation protection between the ocean and the settlement.
- **Warning and safe areas:** there is no warning of storms. a system to inform the evacuation routes and non-floodable areas, especially in coastal line, would guide the community during floods.
- **Ecosystem:** The previous existing vegetation close to the community have been given place to a large coconut plantation.

#### Direct beneficiaries:

699 (♀:314, Y:84), 1,397 (♀ : 629, Y: 168).





### Koko

#### Highlights from the consultation process:

- **Floods:** when there are storms or high ocean tides, the lagoon level rises, flooding the agriculture land. Within the settlement, spaces between the buildings cumulate water and only few houses are impacted by flood. During raining season, the women that are mostly working with cassava production, are not able to work properly.
- **Warning and safe areas:** there is no warning of storms, although a system to inform the community on accurate weather data would be very helpful to agriculture production.
- **Ecosystem:** there is very few vegetation between the lagoon and the community. The previous existing mangrove and forests in the lagoon area has been destroyed to use the wood (build houses, fish cooking and energy generation).

#### Direct beneficiaries:

160 (♀ :75, Y:29). 802 (♀ : 367, Y: 141).



### Taboth

#### Highlights from the consultation process:

- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed.

#### Direct beneficiaries:

184 (♀ :101, Y:33). 922 (♀ : 494, Y: 162). 240 (♀ :132 Y: 43)



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## Vitré 2

### Highlights from the consultation process:

- **Floods:** when there are storms or high ocean tides, the lagoon level rises, flooding the agriculture land. Within the settlement, spaces between the buildings cumulate water and only few houses near the lagoon flood often. Approximately 1 time/year flooding largely impacts the community. Warning and safe areas: there is no warning of storms. A system to inform the community on accurate weather data would be very helpful to agriculture production.
- **Ecosystem:** there is very few vegetation between the lagoon and the community. There was mangrove before in the lagoon area, but the most part of it has been destroyed to use the wood (build houses, fish cooking and energy generation). Property of the lagoon water has changed and impacted fishing.

### Direct beneficiaries:

290 (♀ : 130, Y:43), 1,448 (♀ : 635, Y:212).



## Azzuretti

### Highlights from the consultation process:

- **Floods:** approximately 3 times/year the community face strong flooding. The community 'receives water from the front (ocean), back (lagoon) and rainfall'. There is no vegetation between the community and the lagoon.
- **Warning and safe areas:** due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. No communication or alarm system exist to send early warnings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods.
- **Ecosystem:** deforestation of mangrove for firewood and water from the sea changes the property of the lagoon.

### Direct beneficiaries:

287 (♀ : 149, Y:72), 1,434 (♀ : 746, Y: 358).





## Quartier France

### Highlights from the consultation process:

- **Floods:** when there are strong rains, approximately 50% of the community gets flooded. People in the community even use traditional boats for transportation within the community. Due to the rising of water level, water from rainfall gets cumulated and easily flood parts of the community. During September and October of 2020, Quartier France was completely flooded. There is no vegetation between the community and the lagoon.
- **Warning and safe areas:** Due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. A Cultural Centre called 'Joao Batista' is used as safe heaven during flooding. No communication or alarm system exist to send early warnings or guidance. However, information is usually casted through a (private) communication centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecosystem:** Agriculture has been challenged by the rain pattern change, drought, and heat.

### Direct beneficiaries:

491 (♀:221, Y:133). 2,456 (♀:1,105, Y:663).



## Mondoukou

### Highlights from the consultation process:

- **Floods:** approximately 2 times/year the community face strong flooding. The floods are caused by the strong rains during raining season (August to October) but also from the rise of lagoon level. Water from rainfall gets cumulated in the agriculture, saturating the soil. There is no vegetation between the community and the lagoon.
- **Warning and safe areas:** due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. No communication or alarm system exist to send early warnings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods.
- **Ecosystem:** water from the sea changes the property of the lagoon and sea fishing has become the major source of food (previously also lagoon fishing).

### Direct beneficiaries:

295 (♀:141, Y:97). 287 (♀:138, Y:95).





## ANNEX 3: CONSULTATION

This annex presents the overview of the consultations held by year, detailing the stakeholders, objective and outcomes by consultation. Throughout the project proposal development, many challenges to involve vulnerable groups were faced due to local content both culture and social dynamics. Women participation has increasingly been achieved. The vulnerable groups AF guidelines on consultation and gender were strictly followed and all efforts prior to consultations were made (communication and identification of each representative, follow-up and active engagement). Detailed list of participants and further detailed information is provided in [Consultation Details and Evidence](#).

The results of all consultations are reflected in the project proposal, specifically under the Part II.I Consultative process, the Annex 1: Vulnerability Analysis and the Annex 2: Subproject Sheets.

### 2016 – Project Phase: Conceptualisation

Ghana and Côte d'Ivoire:

Type: Private meetings.	Participants: government bodies and program entities.
Objective: define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans).	

### 2017– Project Phase: Concept Note Development

Ghana:

In 2017, 17 private meetings were held with government bodies with the objective to define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans). 12 group discussions with the communities were also held with the objective of reflecting the priorities of vulnerable groups into the Concept Note, women representation was 40%.

Table 535342. Consultation 2017

Type: 17 Private meetings		Participants: government bodies and program entities.	
Date	Stakeholder	Consultation objective	Outcomes and Conclusion
16-17 nov Bonn	Ministry of Environment, Science, Technology and Innovation	<ul style="list-style-type: none"> <li>Agree on AF proposal priorities and target areas (districts level)</li> <li>Understand national priorities</li> <li>Identify relevant projects and lessons, concerns and complementary potential</li> </ul>	<ul style="list-style-type: none"> <li>Agreement of roadmap for developing the proposal</li> </ul>
6 nov 2017	Ministry of Local Government and Rural Development	<ul style="list-style-type: none"> <li>Agree on AF proposal priorities and decentralized implementation modality</li> <li>Identify relevant projects and lessons, concerns and complementary potential</li> </ul>	<ul style="list-style-type: none"> <li>Agreement on AF proposal priorities and decentralized implementation modality, including for spatial planning</li> <li>Need to complement WB project for Resilient Greater Accra Metropolitan Area (GAMA) where ministry takes a coordinating role</li> <li>Invite both leading ministries for World Urban Forum 9 (7-13 Feb 2018) to discuss international cooperation and needs</li> <li>Organise National – district workshop to agree on national – local implementation modality and interventions after the WUF</li> </ul>
December 2017	Tema metropolis	<ul style="list-style-type: none"> <li>Agree on AF target areas (community level)</li> <li>Identify focal point</li> <li>Understand local issues and needs</li> </ul>	<ul style="list-style-type: none"> <li>Priority community: new town informal settlement</li> <li>Focal point: Ofori Joseph (assembly representative)</li> </ul>
December 2017	Ningo Prampram district	<ul style="list-style-type: none"> <li>Identify relevant projects and lessons, concerns and complementary potential</li> </ul>	<ul style="list-style-type: none"> <li>Priority communities: Prampram informal harbour area, old ningo and Ayitepa</li> <li>Focal point: Aboagye Aaron (Physical Planning Officer), Old Ningo: Dzamaku Enoch, Prampram: Solomon Tangman, Ayitepa: Sampson Adjaklo</li> </ul>

December 2017	Ada West district		<ul style="list-style-type: none"> <li>Priority communities: Akplabanya, Goi and Kportitsekorpe, Focal point: Agbeve S. S. (Planning Officer), Akplabanya: Amos Kwao, Goi: John Tsiri, Kportitsekorpe: Joseph Ahuakese</li> </ul>
December 2017	Ada East district		<ul style="list-style-type: none"> <li>Priority communities: Totope, Azizanya and big Ada, Focal point: Gyamfi Kwadwo (assistant director), Big Ada: Awal Iddrisu</li> </ul>
December 2017	Keta district		<ul style="list-style-type: none"> <li>Priority communities: Fuvemeh, Woe, Anloga, Vodza, Focal points: Fuvemeh: Oswald Etse, Woe: Victor Amekudzi, Anloga: Ernest Agbota</li> <li>Communities don't always trust government involvement</li> <li>Overlap with other projects has been checked</li> </ul>
6 nov 2017	UN Residence coordinator	<ul style="list-style-type: none"> <li>Agree on cooperation modality / alignment with other UN projects</li> </ul>	<ul style="list-style-type: none"> <li>Complement UNCDF Local project</li> </ul>
6 nov 2017	UNDP	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities.</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp. AF Funded project: 'Increased Resilience to Climate Change in Northern Ghana through the Management of Water Resources and Diversification of Livelihoods and NAP process</li> </ul>	<ul style="list-style-type: none"> <li>Align with NAP process</li> <li>Northern project not relevant</li> </ul>
10 nov 2017	UNCDF	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp. LoCal project</li> </ul>	<ul style="list-style-type: none"> <li>Will align with LoCal project but is very small (US\$125,000)</li> <li>Possible option to scale up Local within UN-Habitat / AF project framework</li> </ul>
7 and 10 nov 2017	Development Institute / Ghana Delta alliance Wing	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp. government and NGO related projects</li> <li>Discuss cooperation options for community assessments</li> </ul>	<ul style="list-style-type: none"> <li>Basic assessments already conducted with Delta alliance in Keta</li> <li>Good understanding of local issues and good network</li> <li>DECCMA project leader is part of Delta Wing board.</li> <li>Cooperate to conduct community level surveys and focus group discussions</li> <li>Use DECCMA assessments already done.</li> </ul>
7 and 10 nov 2017	Hen Mpoano NGO	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp spatial mapping, fishing and community level related work</li> <li>Discuss potential cooperation options</li> </ul>	<ul style="list-style-type: none"> <li>Good understanding community level work and spatial (drone) mapping and modelling.</li> <li>Possibly cooperate to fully map communities and risk areas for full proposal</li> <li>Partner for community level work during project</li> </ul>
7 nov 2017	USAID / Ghana CRC/URI PACT Tetra tech	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp. West Africa Biodiversity and Climate Change Program (WA BiCC) and Ghana sustainable fisheries management project'</li> </ul>	<ul style="list-style-type: none"> <li>WA BiCC project has no implementation in Ghana</li> <li>Little lessons available from other countries because of initial stage</li> <li>Monitor possible lessons in Côte d'Ivoire</li> </ul>
7 nov 2017	Spatial solutions	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp. related to spatial planning in target areas</li> </ul>	<ul style="list-style-type: none"> <li>Good understanding of spatial planning needs and processes</li> <li>No spatial plans exist in target areas (except greater Accra plan which included Tema and Prampram at high level) but new government prioritizes spatial planning</li> <li>Government did not prioritize the development of spatial plans in target areas because of lack of oil and economic need</li> <li>Estimated cost for a structure plan done by private company is US\$ 1,3 m and for a district US\$370,000</li> <li>Willingness and need to develop spatial plans in target areas at district and local level focused on identifying risk areas, current and future land use needs and long-term coastal management needs</li> </ul>

**Type:** 12 Field consultations **Participants:** local community (e.g. fisherman, student, pensioner, oyster trader, food seller, coconut seller)

**Vulnerable groups representation:** Four minority ground participated (women, disabled, youth and elderly). **Gender:** 40% of participants were women

Date	Stakeholder	Consultation objective	Outcomes and Conclusion
December 2017	12 Local communities	<ul style="list-style-type: none"> <li>Understand target population, poverty, poverty rates, means of livelihoods and community assets.</li> </ul>	<ul style="list-style-type: none"> <li>Results are under Part III.C Measures For Environmental And Social Risk Management, As well under the interventions Feasibility sheets from the ESIA.</li> </ul>

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	<ul style="list-style-type: none"> <li>Identify vulnerable groups (women, youth, elderly and disabled) specific challenges and needs.</li> <li>Identify Climate change related hazards, risks, impacts and vulnerabilities.</li> <li>Barriers to adapt to the identified impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Climate change hazards and risks identified. Specifically, it was identified that floods, salinization droughts, sea/lagoon level rise, coastal erosion, accelerated sedimentation and heatwaves challenge various communities. Results are in Annex 1 Vulnerability Analysis.</li> </ul>
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#### Côte d'Ivoire:

In 2017, 14 private meetings were held with government bodies with the objective to define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans). 09 group discussions with the communities were also held with the objective of reflecting the priorities of vulnerable groups into the Concept Note. In that year, women representation was 27%.

Table 545443. Private meetings, Côte d'Ivoire

Type: Private meetings		Participants: government bodies and program entities.	
Date	Stakeholder	Consultation objective	Outcomes and Conclusion
13 nov 2017 Bonn / COP 23	Ministry of Urban Sanitation, Environment and Sustainable Development	<ul style="list-style-type: none"> <li>Agree on AF proposal priorities and target areas (districts level)</li> <li>Understand national priorities</li> <li>Identify relevant projects and lessons, concerns and complementary potential</li> </ul>	<ul style="list-style-type: none"> <li>Agreement of roadmap for developing this proposal</li> <li>Invite both leading ministries for World Urban Forum 9 (7-13 Feb 2018) to discuss international cooperation and needs</li> <li>Organise National – district workshop to agree on national – local implementation modality and interventions after the WUF</li> </ul>
Through above ministry	Ministry of Construction, Housing, Sanitation and Urban Planning		
16 nov 2017	Cocody Department	<ul style="list-style-type: none"> <li>Agree on AF target areas (community level)</li> <li>Identify focal point</li> <li>Understand local issues and needs</li> <li>Identify relevant projects and lessons, concerns and complementary potential</li> </ul>	<ul style="list-style-type: none"> <li>Priority community: Cocody village, Blockhaus, M'pouto, M'Badon</li> <li>Focal point: Mayor: N'goan Aka Mathias</li> <li>M'Pouto: Ceke Nangai</li> <li>M'Badon: Djoman Bogue</li> <li>Target communities identified</li> <li>Mayor is a driver of eco-city concept and emphasises the need to adapt to climate change – thus he could support political mobilization</li> </ul>
16 nov 2017	Bingerville Department		<ul style="list-style-type: none"> <li>Priority community: Bingerville, Aghien, Akanje</li> <li>Focal point: Mayor: Beugre Djoman; Aghien: Alle allée Jean Pierre; Bingerville: Bagodou Augustin; Akanje: Mobio</li> <li>Target communities identified</li> <li>Use good practice of mangrove planting</li> </ul>
17 nov 2017	Jacqueville Department		<ul style="list-style-type: none"> <li>Priority community: Gand-jacq, Techmien, Kouve;</li> <li>Focal point: Aka Auguste (mayor). Grand-Jack: M Sopy Tiakpa Justin; Techmien: N'Geussan Francois</li> <li>Possibly utilise coping mechanisms of moving away from the shore in spatial planning approach</li> <li>Location to understand possible impacts of WACA project in Grand-Lahou</li> </ul>
17 nov 2017	Grand-Bassam Departments		<ul style="list-style-type: none"> <li>Priority community: Moossou and Quartier France</li> <li>Focal point: Georges Ezalé, Mayor of Grand-Basam; Brindoumi, Chief Technical officer of the town hall; Aketchi Anselme, the youth leader</li> <li>Focus on possible involvement of hotels (i.e. private sector) in addressing erosion, possibly together with Assinie and Assouinde (which are tourism hotspots)</li> </ul>
17 nov 2017	Port Bouet Department		<ul style="list-style-type: none"> <li>Priority community: centre and Adjoufou / Gonzagueville</li> <li>Focal point: Tanoh (technical service of the Town hall)</li> <li>Coastal erosion main issue. Possibly involve tourism sector</li> </ul>
13 nov 2017	World Bank	<ul style="list-style-type: none"> <li>Agree on cooperation modality for potential coastal interventions in target areas</li> <li>Understand main issues, concerns and needs in target areas / communities;</li> </ul>	<ul style="list-style-type: none"> <li>Multi sector risk assessment has been done but not in Ghana</li> <li>Based on the assessment, interventions will focus on eco-systems, stabilisation of the coast and opening of the lagune in Grand-Lahou worth US\$ 30 m</li> <li>They lack complementary spatial planning intervention and are very open to coordinate</li> <li>Spatial planning important for ministry of Interior</li> </ul>

13 nov 2017	AfDB	<ul style="list-style-type: none"> <li>Understand relevant projects and lessons, concerns and complementary potential, esp WACA project</li> </ul>	<ul style="list-style-type: none"> <li>✓ There will be a regional climate change observatory</li> <li>✓ Potentially complement WACA project with spatial planning element in Grand-Lahou</li> <li>✓ Involve ministry of Interior in project design</li> </ul>
14 nov 2017	Abidjan Convention / UNEP	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp related to CC and urban development and AF projects</li> </ul>	<ul style="list-style-type: none"> <li>✓ AfdB uses ACCF to develop projects with national government for AF and GCF as a means to create government need for loans</li> <li>✓ No overlap with AF proposal and AfdB process is new and therefore not fast</li> <li>✓ Monitor process of AF project development and potential link with forest livelihoods</li> </ul>
14 nov and 16 nov 2017	Université Felix Houphouet Boigny, Abidjan / CURAT (remote sensing and GIS)	<ul style="list-style-type: none"> <li>Agree on cooperation modality for knowledge management</li> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp related to Abidjan</li> </ul>	<ul style="list-style-type: none"> <li>✓ There will be a regional resource centre funded by USAID and IBM</li> <li>✓ They have great knowledge of regional and national initiatives, projects and relevant documents which they will share</li> <li>✓ They suggested to use scenario's for interventions and emphasize using a blue economy (spatial planning) approach (turning bad situations in opportunities)</li> <li>✓ Use the regional resource centre as the main platform for KM / lessons from this project</li> <li>✓ Identify potential other areas for cooperation</li> <li>✓ Consider using scenario's for proposed interventions and blue economy (spatial planning) approach</li> </ul>
17 nov 2017	Oceanographic Research Centre	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp government and NGO related projects</li> <li>Discuss cooperation options for community assessments</li> </ul>	<ul style="list-style-type: none"> <li>✓ CURAT does modelling of coastal morphology and hydrology in target areas and can do impact assessments</li> <li>✓ Recent study: ocean current goes west – east except in Grand-Lahou and Grand-Bassam</li> <li>✓ They work with WACA project</li> <li>✓ There are 5 climate change / erosion hotspot areas in Côte d'Ivoire: Fresco, Grand-Lahou, Abidjan, Grand-Bassam and Assinie</li> <li>✓ Focus on hotspot areas around Abidjan and Grand-Bassam (since WACA works in Grand-Lahou and USAID in Fresco)</li> <li>✓ Cooperate to conduct community level surveys and focus group discussions</li> <li>✓ Consider working with CURAT to conduct EIA</li> </ul>
14 nov 2017	École d'architecture D'Abidjan		<ul style="list-style-type: none"> <li>✓ They have experience with conducting vulnerability assessments for the WB and USAID</li> </ul>
13, 15 and 16 nov 2017	Earth Right Institute	<ul style="list-style-type: none"> <li>Understand main issues, concerns and needs in target areas / communities;</li> <li>Understand relevant projects and lessons, concerns and complementary potential, esp. government and NGO related projects</li> <li>Discuss cooperation options for implementing (part) of the climate change plan for Cocody.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Include Cocody most vulnerable communities in project</li> <li>✓ Focus on integrating environmental / climate change risks in department and local spatial plans in target areas</li> <li>✓ Cooperate to conduct community level surveys and focus group discussions.</li> <li>✓ Involve ERI for conducting rapid community surveys</li> </ul>

<b>Type:</b> 09 Field consultations.		<b>Participants:</b> local community and government.	
<b>Vulnerable groups representation:</b>		Four minority ground participated (women, disabled, youth and elderly).	<b>Gender:</b> 27% of participants were women
Date	Stakeholder	Consultation objective	Outcomes and Conclusion
December 2017	Local communities	<ul style="list-style-type: none"> <li>Understand target population, poverty, poverty rates, means of livelihoods and community assets.</li> <li>Identify vulnerable groups (women, youth, elderly and disabled) specific challenges and needs.</li> <li>Identify Climate change related hazards, risks, impacts and vulnerabilities.</li> <li>Barriers to adapt to the identified impacts.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Results are under Part III.C Measures For Environmental And Social Risk Management, As well under the interventions Feasibility sheets from the ESIA.</li> </ul> <p>Climate change hazards and risks identified. Specifically, it was identified that floods, salinization, droughts, sea/lagoon level rise, coastal erosion, accelerated sedimentation and heatwaves challenge various communities. Results are in Annex 2 Vulnerability Analysis.</p>

## 2018 – Project Phase: Proposal Development

Ghana and Côte d'Ivoire:

In 2018, private meetings/workshops were held with implementing partners to define the project approach as well as the implementation and coordination mechanisms. Field consultations in targeted communities were also carried out to define the list of priority interventions.

Table 555644 – Consultation 2018




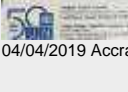


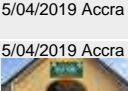

Type: Private meetings/workshops		Participants: government, partner organisations and programmes.	
Date	Stakeholder	Consultation objective	Outcomes and conclusions
07-13 February 2018 at World Urban Forum	Leading ministries from Ghana and Côte d'Ivoire	Bring together leading ministries from Ghana and Côte d'Ivoire to: <ul style="list-style-type: none"> <li>Agree on regional approach and coordination mechanisms</li> <li>Agree on / confirm list of priority interventions and target areas (especially related to larger interventions with potential international impacts)</li> </ul>	<ul style="list-style-type: none"> <li>Regional approach for Ghana and CDI strategized.</li> <li>Priority interventions discussed and alignment with the national priorities and reflected in the project.</li> </ul>
March 2018 In Ghana and Côte d'Ivoire	Leading ministries and target districts in Ghana and Côte d'Ivoire	Bring together leading ministries and target district / department governments in both Ghana and Côte d'Ivoire to: <ul style="list-style-type: none"> <li>Agree on implementation and coordination modalities</li> <li>Agree on / confirm list of priority interventions and target communities (especially related to spatial / land use planning and larger interventions)</li> </ul>	<ul style="list-style-type: none"> <li>Implementation and coordination mechanisms agreed, as well as the outputs involving the government.</li> </ul>
April - November 2018	Institutions to develop required models and conduct assessments	<ul style="list-style-type: none"> <li>Develop models / collect data required to understand impact of proposed interventions</li> <li>Conduct detailed vulnerability / risk mapping</li> <li>Conduct impact assessments / risk screening of proposed interventions / feasibility studies</li> </ul>	<ul style="list-style-type: none"> <li>Data collected for the further vulnerability analysis and mapping.</li> </ul>
Type: Field Consultations.		Participants: local community	
Vulnerable groups representation: During this effort special attention was put to ensure these activities will equally benefit and empower women and youth. Two minority grounds participated (women and youth).			
Date	Stakeholder	Consultation objective	Outcomes and conclusions
April 2018 In Ghana and Côte d'Ivoire	Target communities and vulnerable groups	<ul style="list-style-type: none"> <li>Agree on list of priority interventions at community level and understand specific needs and issues per vulnerable group and inclusion of gender-response interventions.</li> </ul>	<ul style="list-style-type: none"> <li>The outcomes of consultations shaped the selection of proposed interventions at that stage.</li> <li>Some of the proposed interventions were excluded due to cost inefficient (high costs), non-feasibility due to e.g environmental risks (e.g erosion generation in other areas) and non-preference of beneficiary groups.</li> <li>In some discussions, new interventions were suggested by the communities (e.g. pen culture).</li> </ul>
December 2018	Target communities and vulnerable groups in Ghana and Côte d'Ivoire	<ul style="list-style-type: none"> <li>Final selection / verification of proposed interventions by discussing the following criteria: <ul style="list-style-type: none"> <li>Benefits to communities / groups</li> <li>Cost-effectiveness</li> <li>Sustainability / maintenance arrangements</li> <li>Environmental and social risks</li> </ul> </li> <li>Confirm / identify design needs per vulnerable groups of proposed interventions</li> </ul>	





## 2019 – Project Phase: Detail interventions, operability, management, and sustainability.


Ghana:

In 2019, 13 private meetings with partner organisations and government bodies, and 3 focus group discussions with communities' and districts' representatives were held with the objective of gathering information to detail the interventions and their operability, management and sustainability. 2 Workshops with all stakeholders were carried out at the end of the field mission to validate all project components for the proposal submission.

Table 565645 Overview consultations (private meetings and focus group discussions) mission April 2019

Type: 13 Private meetings and 2 workshops			
Participants: academia, government and NGOs, District representatives and programmes.			
Date	Stakeholder	Consultation objective	Consultation Results
 3/04/19 Accra	<ul style="list-style-type: none"> <li>UNDP</li> <li>Gita Welch</li> <li>Resident representative</li> <li>Jennifer Asuako</li> <li>Programme Analyst (gender)</li> <li>Sylvia Sefakor Senu</li> <li>Economic analyst (youth)</li> </ul>	<ul style="list-style-type: none"> <li>Identify relevant projects and lessons, concerns and complementary potential</li> <li>Identify potential project risks and opportunities related to gender and youth</li> </ul>	<ul style="list-style-type: none"> <li>No geographic overlap with UNDP projects</li> <li>Compliment GEF Guinea project about marine ecosystems</li> <li>Compliment REDD+ and GCF work on ecosystems</li> <li>Gender issue: limited participation and platforms; men control resources, including land</li> <li>Youth issue: want to be involved in new / innovative work - not conventional</li> <li>Information could be shared through mobile phones</li> <li>Need to involve both men and women to address resource control issues</li> <li>Youth: use youth groups / associations and focus on 'innovative' work such as ecotourism</li> </ul>
 03/04/2019 Accra	<ul style="list-style-type: none"> <li>UNICEF</li> <li>Muhammad Rafiq Khan</li> <li>Chief of Child protection</li> </ul>	<ul style="list-style-type: none"> <li>Identify relevant projects and lessons, concerns and complementary potential</li> <li>Identify potential project risks and opportunities related to gender and children.</li> </ul>	<ul style="list-style-type: none"> <li>No geographic overlap with UNICEF projects</li> <li>Cholera is an issue along the coast</li> <li>Children issue: human trafficking due to reduction in fish stock (income) + high-rate orphanages in Anloga/ Keta</li> <li>Project should focus on income for fishermen to avoid human trafficking</li> </ul>
 03/04/2019 Accra	<ul style="list-style-type: none"> <li>Dutch embassy</li> <li>Janet Dufie Arthur</li> <li>Policy officer WASH</li> </ul>	<ul style="list-style-type: none"> <li>Identify relevant projects and lessons, concerns and complementary potential</li> </ul>	<ul style="list-style-type: none"> <li>Relevant NGOs / organisations in the Volta area: IUCN, Both End and Wetlands international</li> <li>IUCN, Both End and Wetlands international to be coordinated by the Development Institute (partner UN-Habitat)</li> </ul>
 04/04/2019 Accra	<ul style="list-style-type: none"> <li>UNCDF</li> <li>Angela Yayra Amoah</li> <li>National project coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Identify lessons learned Local project and climate change project approach</li> </ul>	<ul style="list-style-type: none"> <li>UNCDF channels climate change funding from national level to local level using a performance-based approach for districts to use the funding.</li> <li>Buy-in communities is important</li> <li>Project could consider similar approach that UNCDF uses if not too may delays and if makes sense with already identified actions and executing entities</li> </ul>
 04/04/2019 Accra	<ul style="list-style-type: none"> <li>University of Ghana</li> <li>Ayaa K Armah</li> <li>Shrimp Mariculture, coastal management, EIA, marine biodiversity conservation</li> </ul>	<ul style="list-style-type: none"> <li>Understand EIAs requirements and process for Ghana</li> </ul>	<ul style="list-style-type: none"> <li>Process can take up to 9 months but will include comprehensive assessment</li> <li>Consider Ayaa K. Armah for EIAs required by national law</li> </ul>
 5/04/2019 Accra	<ul style="list-style-type: none"> <li>Ministry of Environment, science, technology and innovation</li> <li>Fredua Agyeman</li> <li>Director environment and AF DA</li> </ul>	<ul style="list-style-type: none"> <li>Align with priorities ministry and discuss management arrangement</li> <li>Compliance with rules, technical standards, and regulations</li> </ul>	<ul style="list-style-type: none"> <li>Project is in line with priorities.</li> <li>Mr Agyman will appoint a focal point / deputy for the project to oversee it.</li> <li>District assemblies (district chiefs) and traditional chiefs are key, also to mobilise communities; ensure capacity of district assemblies is build / sustained</li> <li>Coordinate with WACA programme.</li> <li>Involve (the new) Coastal Development Authority (policy and coordination along the coast), EPA (environmental aspect of plans), NDPC, Hydrological authority and fishermen association</li> </ul>
 5/04/2019 Accra	<ul style="list-style-type: none"> <li>Representatives from target districts, land use and spatial planning authority, university, NGO</li> </ul>	<ul style="list-style-type: none"> <li>Agree on priority areas project</li> <li>Agree on content components</li> </ul>	<ul style="list-style-type: none"> <li>Component 1: work with land use and spatial planning authority and build capacity at district level; consider development of coastal / marine spatial plan (is a need, including study sediment flow etc.)</li> <li>Component 2: involve district chiefs and traditional chiefs and women and youth (through community groups / association) and awareness through church</li> <li>Component 3: involve Ministry of housing and construction for engineers (if needed)</li> <li>Component 5: consider involving African centre of coastal resilience – university of Cape (as they already monitor coastal erosion / sediment budget + coordinate with Coastal Development Authority</li> </ul>
 12/04/2019 Accra	<ul style="list-style-type: none"> <li>Ministry of Environment, science, technology and innovation</li> <li>Fredua Agyeman</li> <li>Director environment and AF DA</li> </ul>	<ul style="list-style-type: none"> <li>Verify approach and agree on way forward</li> </ul>	<ul style="list-style-type: none"> <li>Project management arrangements (organigram) to be prepared and agreed upon by Fedua</li> </ul>






12/04/2019 Accra	<ul style="list-style-type: none"> <li>Representatives from target districts, land use and spatial planning authority, university, NGO</li> </ul>	<ul style="list-style-type: none"> <li>Verify / agree upon proposed adaptation measures</li> <li>Get inputs on proposed adaptation measures</li> <li>Agree on way forward</li> </ul>	<ul style="list-style-type: none"> <li>Component 1: work with land use and spatial planning authority and build capacity at district level; consider development of coastal / marine spatial plan (is a need, including study sediment flow etc.) Align with ministry framework</li> <li>Component 2: involve district chiefs and traditional chiefs and women and youth (through community groups / association); and awareness through church</li> <li>Component 3: See above proposed measures</li> <li>Component 5: consider involving African centre of coastal resilience – university of Cape (as they already monitor coastal erosion / sediment budget + coordinate with Coastal Development Authority)</li> </ul>
 12/04/2019 Accra	<ul style="list-style-type: none"> <li>Environmental Assessment and Audit Department of EPA</li> <li>Kwabena Badu-Yeboah</li> <li>Ag Director EAA</li> </ul>	<ul style="list-style-type: none"> <li>Understand process to conduct EIAs required by national law</li> </ul>	<ul style="list-style-type: none"> <li>Steps: <ul style="list-style-type: none"> <li>Prepare a list of proposed adaptation measures and discuss what exactly will be required</li> <li>Register project</li> <li>Conduct studies required by UN-Habitat</li> </ul> </li> </ul>
8 <sup>th</sup> October 9 <sup>th</sup> October Sogakope	<ul style="list-style-type: none"> <li>Blue Deal Programme team</li> </ul>	<ul style="list-style-type: none"> <li>Discuss complementarities and potential overlap with AF project.</li> <li>Presentation on updates of the AF project to main stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Clear alignment between Blue Deal Programme future work in Ghana and UN-Habitat's AF proposal. Current challenge is the difference in timeframes.</li> <li>Well received presentation of UN-Habitat's project by all stakeholders, political will to support its implementation.</li> </ul>
10 <sup>th</sup> October Accra	<ul style="list-style-type: none"> <li>Land Use Spatial Planning Authority</li> </ul>	<ul style="list-style-type: none"> <li>Discussion on component 1. Spatial Planning: objective, outcome, and budget.</li> </ul>	<ul style="list-style-type: none"> <li>Overall agreement with the Land Use Spatial Planning Authority on project component 1 on Spatial Strategies. Follow up on detailing collaboration and geographical scope.</li> </ul>
<b>Type: 3 Focus Group Discussions</b>		<b>Participants:</b> districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
<b>Vulnerable groups representation:</b> Four minority ground participated (women, disabled, youth and elderly).		<b>Gender:</b> 12% of participants were women	
<b>Date</b>	<b>Stakeholder</b>	<b>Consultation objective</b>	<b>Outcomes and Conclusion</b>
 8/04/2019 Ada West communities	<ul style="list-style-type: none"> <li>Ada West</li> <li>Hon A.L. Akrofi</li> <li>District chief executive</li> <li>Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers)</li> </ul>	<ul style="list-style-type: none"> <li>Through focus group discussions, align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)</li> </ul>	<ul style="list-style-type: none"> <li>Possible feasible adaptation measures related to coastal erosion/ tidal/sea floods and siltation (sea level rise, storms, etc.) in line with priorities (in district development plans and confirmed by chiefs): Wokumagwe, Aklabanya and Goi</li> <li>Main issues: Erosion + coastal floods, Flash floods, Dry lagoon in dry season + loss of livelihood in lagoon</li> <li>Possible adaptation measures: Coastal lagoon flood and drought management system + livelihood support (fish)</li> <li>Lolonya: <ul style="list-style-type: none"> <li>Main issues: Erosion + coastal floods</li> <li>Possible adaptation measures: Raising the barrier + planting vegetation (with sand already there and community already trying)</li> </ul> </li> </ul>
 09/04/2019 Ada East Communities	<ul style="list-style-type: none"> <li>Ada East</li> <li>Sarah Dukbakie Pobee</li> <li>District chief executive</li> <li>Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers)</li> </ul>	<ul style="list-style-type: none"> <li>Through focus group discussions, align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)</li> </ul>	<ul style="list-style-type: none"> <li>Possible feasible adaptation measures related to coastal erosion / tidal / sea floods and siltation (sea level rise, storms, etc.) in line with priorities (in district development plans and confirmed by chiefs): Azizanya / Kewunor: <ul style="list-style-type: none"> <li>Main issues: Volta river and lagoon flooding; Limited livelihood options.</li> <li>Possible adaptation measures: Mangrove planting to maintain sediment and regulate water with gateway to reduce flooding + livelihood support (fish, crabs and ecotourism)</li> </ul> </li> <li>Big Ada: <ul style="list-style-type: none"> <li>Main issues: Volta flooding; Limited livelihood options (clams)</li> <li>Possible adaptation measures: Mangrove planting + raising the barrier with sediment from river (in the middle) by community?</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>Keta</li> <li>Oswald Etsey Kpodzo</li> <li>Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers)</li> </ul>	<ul style="list-style-type: none"> <li>Through focus group discussions, align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)</li> </ul>	<ul style="list-style-type: none"> <li>Possible feasible adaptation measures related to coastal erosion / tidal / sea floods and siltation (sea level rise, storms, etc.) in line with priorities (in district development plans and confirmed by chiefs): Fuvemeh and Agorkedzi / Dzita / Agbledomi <ul style="list-style-type: none"> <li>Main issues: rapid erosion / disappearance community</li> <li>No appropriate relocation option.</li> <li>Possible adaptation measures: relocate – use existing pond for fish or related + ecotourism</li> </ul> </li> <li>Anloga (Whuti and Lagbati), Woe</li> </ul>

	10/04/2019 Keta district communities	<ul style="list-style-type: none"> <li>✓ Main issues: salt-water intrusion due to coastal erosion, sea level rise and overuse boreholes– dying crops</li> <li>✓ Possible adaptation measures: Salt resilient crops + rainwater infiltration ponds / recharge groundwater; ecotourism</li> </ul>
		<p>Vodza</p> <ul style="list-style-type: none"> <li>✓ Main issues: Coastal flooding into community</li> <li>✓ Possible adaptation measures: shape the beach with sand already there</li> </ul>




### Côte d'Ivoire:

In 2019, 12 private meetings with government bodies, and 4 consultations with technical experts were held to discuss the details of the interventions and their operability, management and sustainability. 3 Consultations with communities' representatives.

Table 575746 Overview consultations 2019



Type: 12 Private meetings		Participants: government bodies and program entities.	
Date	Stakeholder	Consultation objective	Conclusion
 11/04/2019 Abidjan	- UNEP Angele Luh - Resident representative	<ul style="list-style-type: none"> <li>▪ Identify relevant projects and lessons, concerns and complementary potential</li> <li>▪ Ensure synergies between projects</li> </ul>	<ul style="list-style-type: none"> <li>✓ No geographic overlap with UNEP project</li> <li>✓ Compliment GCF project about mangrove ecosystems restoration in Cocody</li> <li>✓ Cocody Cité verte project; ensure complementarity and no duplication</li> </ul>
 11/04/2019 Abidjan	- Ministry of Interior (DGDDL) Mr. Lazare Dago Djahi General secretary	<ul style="list-style-type: none"> <li>▪ Inform the government of the work developed so far and detail components, agenda of the workshop and field mission and management arrangement</li> <li>▪ Understand the spatial planning structure and governance in Côte d'Ivoire. Which plans are existing and ongoing initiatives</li> </ul>	<ul style="list-style-type: none"> <li>✓ Project is in line with priorities of government</li> <li>✓ Project management arrangements (organigram) to be prepared</li> <li>✓ Component 1: work with Territorial collectivity, Environment Ministry and build capacity at Region and community level; consider development of local plans, Schema Regional Directeur and Agenda 21.</li> </ul>
 11/04/2019 Abidjan	- Ministry of construction, housing and Urban Planning (MCLU) Mr Koalla Celestin, Housing Director Mr. Alexandre Kouame General Director of urban planning and land.	<ul style="list-style-type: none"> <li>▪ Inform the government of the work developed so far and detail components</li> <li>▪ Align with priorities ministry</li> <li>▪ Understand the spatial planning structure and governance in Côte d'Ivoire.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Project is in line with priorities of government</li> <li>✓ Schema Directeur d'Urbanisme du Grand Abidjan is developed and under revision</li> <li>✓ PUD (Not developed yet in target Communes)</li> <li>✓ Some communities have developed their <i>plans de lotissements</i></li> </ul>
 12/04/2019 Abidjan	- Ministries, Professors, Representatives from target departments, etc	<ul style="list-style-type: none"> <li>▪ Agree on priority areas project</li> <li>▪ Agree on content components</li> </ul>	<ul style="list-style-type: none"> <li>✓ Component 1: work with Communities, Ministry of Environment, territorial collectivity (DGDDL), and build capacity at regional level and community level; consider development of local plans / Schema Regional de Grands Ponts, Agenda 21.</li> <li>✓ Need to Involve BNETD, MINEDD, Ministry of the City, Ministry of Interior under the aegis of National Agency for Coastal Management for Coastal Law in the Schemes of planning</li> <li>✓ Component 2: involve Municipality chiefs, community chiefs and women and youth (through community groups / association)</li> <li>✓ Component 3 &amp; 4: Include other vulnerable communities for Jacquelineville and Grand Bassam</li> <li>✓ Component 5: creation of a Excellency centre reuniting different institutions and university, necessity to collaborate with SODEXCAM and CRO for data collection and sharing</li> </ul>
 15/04/2019 Abidjan	- UN Women Antonia N'Gabalala Sodonon – Resident representative	<ul style="list-style-type: none"> <li>▪ Identify relevant projects and lessons, concerns and complementary potential</li> <li>▪ Identify potential project risks and opportunities related to gender and children</li> </ul>	<ul style="list-style-type: none"> <li>✓ No geographic overlap with UN women projects</li> <li>✓ Youth issue: want to be involved in new/innovative work (incubator business) – poverty leading to prostitution, migration to cities for better opportunities, lack of education for children, child labour.</li> <li>✓ Gender issue: limited access to land; men control resources and land, migration issues; high rate of prostitution in cities</li> <li>✓ Youth: use youth groups / associations and focus on 'innovative' work such as ecotourism</li> </ul>



 18/04/2019 Abidjan	<ul style="list-style-type: none"> <li>- UNICEF</li> <li>- Mr. Aboubacar Kampo</li> <li>- Resident representative</li> </ul>	<ul style="list-style-type: none"> <li>Identify relevant projects and lessons, concerns and complementary potential</li> <li>Identify potential project risks and opportunities related to gender and children.</li> </ul>	<ul style="list-style-type: none"> <li>UN Women established partnership with university to implement gender club for open discussion on issues (migration, etc)</li> <li>No geographic overlap with UNICEF projects</li> <li>Children issue: human trafficking due to reduction in fish stock (income)</li> <li>Child labour issues =&gt; forced to work at very early age</li> <li>HIV is a problem among youth (especially girls) community.</li> <li>Social housing project initiative in collaboration with Colombian start up "Conceptos plasticos" using recycled plastic =&gt; to reduce waste pollution and avoid use of natural resources for construction (which is leading to erosion).</li> </ul>
 19/04/2019	<ul style="list-style-type: none"> <li>- Ministries, Professors, Representatives from target departments, NGO, etc</li> </ul>	<ul style="list-style-type: none"> <li>Verify / agree upon proposed adaptation measures</li> <li>Get inputs on proposed adaptation measures</li> <li>Agree on way forward</li> </ul>	<ul style="list-style-type: none"> <li>Component 1: work with Communities, Ministry of Environment, territorial collectivity (DGDDL), and build capacity at regional level and community level; consider development of local plans / Schema Regional de Grands Ponts, Agenda 21.</li> <li>Component 2: involve municipality and traditional chiefs and women and youth (through community groups/association) in the planning process and interventions strategies.</li> <li>Component 3: See above proposed measures</li> <li>Component 5: creation of an Excellency centre reuniting different institutions and university, necessity to collaborate with SODEXCAM and CRO for data collection and sharing.</li> </ul>
 19/04/2019	<ul style="list-style-type: none"> <li>- ANDE</li> <li>- Mr. Amalan Sylvain - Chef de services EIES</li> <li>- Mr. Kouassi Brou N'Gbin - Sous Directeur des evaluations environnementales et sociales</li> </ul>	<ul style="list-style-type: none"> <li>Understand process to conduct EIAs required by national law</li> </ul>	<p>Steps:</p> <ul style="list-style-type: none"> <li>Prepare ToR</li> <li>Validate by ANDE</li> <li>Conduct Feasibility studies by aggregated consultant/company</li> <li>Report</li> <li>Validation by ANDE (2 months process)</li> </ul>


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<b>Type:</b> 3 Field consultations		<b>Participants:</b> districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
<b>Vulnerable groups representation:</b> Four minority ground participated (women, disabled, youth and elderly).			
Date	Stakeholder	Consultation objective	Conclusion
 15/04/2019 Cocody Communities	<ul style="list-style-type: none"> <li>- Cocody communities</li> <li>- Municipality representatives (Direction Serv. Techniques)</li> <li>- Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers)</li> </ul>	<ul style="list-style-type: none"> <li>Align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)</li> </ul>	<ul style="list-style-type: none"> <li>Possible feasible adaptation measures</li> <li>Main issues: rapid Growth, reclamation of land using waste, sand,</li> <li>No appropriate drainage system and sewage system.</li> <li>Flooding, flash floods, lagoon pollution due to waste, loss of livelihood from the lagoon, loss of agriculture land.</li> <li>Possible adaptation measures: development of plan to control urban growth, buffer zone (with public space or agriculture land) around the lagoon to prevent building use as environmental area.</li> <li>Waste collection by communities (in collaboration with UNICEF "conceptos plasticos" initiative)</li> </ul>
 16/04/2019 Grand Bassam communities	<ul style="list-style-type: none"> <li>- Grand Bassam and Port Bouet communities</li> <li>- Municipality representatives (Direction Serv. Techniques)</li> <li>- Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers)</li> </ul>		<ul style="list-style-type: none"> <li>Possible feasible adaptation measures related to coastal erosion / sea floods, sea level rise, and salination of lagoon, etc. in line with priorities (confirmed by chiefs and municipality): Grand Bassam (Gbamlé, Azzuretti, Quartier France, Moossou):</li> <li>Main issues: coastal erosion; high waves intensity, flooding due to storms and high waves. Pollution in the lagoon, salinity of lagoon, Limited livelihood options, Deforestation of Mangrove for firewood</li> <li>Possible adaptation measures: Mangrove planting to regulate water and reduce flooding + livelihood support (fish, crabs, etc), introduce crops for salty environment, Ecotourism, beach sand nourishment for coastal protection</li> </ul> <p>Port Bouet</p> <ul style="list-style-type: none"> <li>Main issues: Coastal erosion; Flash floods, storms and high waves causing damages on infrastructures. Informal settlements close to the lagoon areas facing flooding.</li> <li>Possible adaptation measures: given the high degree of erosion; building with nature would not be suitable solutions for this area.</li> </ul>

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 <p>17/04/2019 Jacquville communities</p>	<ul style="list-style-type: none"> <li>- Jacquville communities</li> <li>- Municipality representatives (Direction Serv. Techniques)</li> <li>- Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Development of plan to control urban growth, buffer zone (with public space or agriculture land) around the lagoon to prevent building.</li> <li>✓ Possible feasible adaptation measures related to coastal erosion / sea floods, sea level rise, lagoon floodings and salination of lagoon, etc. in line with priorities (confirmed by chiefs and municipality): Coastal communities (Akrou, Grand Jack, etc) <ul style="list-style-type: none"> <li>✓ Main issues: Rapid Coastal erosion, coastal flooding, sea level rise,</li> <li>✓ Possible adaptation measures: Sand nourishment (shape the beach with sand already there) for coastal protection + ecotourism</li> </ul> </li> <li>Lagoon communities (Tabot) <ul style="list-style-type: none"> <li>✓ Main issues: low depth of lagoon, salination and pollution of lagoon, use of pesticides for fishing leading to loss of livelihoods, open defecation, mangrove deforestation</li> <li>✓ Possible adaptation measures: Salt resilient crops + fishing/crabs/ ponds, ecotourism, green belt, mangrove planting for livelihood support,</li> </ul> </li> </ul>
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Table 585847 Consultation with international technical experts

Type: technical experts' consultation		Participants: consultancy agencies and partner organisations	
Date	Stakeholder	Consultation objective	Outcomes and Conclusion
Skype calls + 6 -10 nov 2017	Arcadis	<ul style="list-style-type: none"> <li>Discuss cooperation options</li> <li>Identify technical intervention options and feasibility responding to local needs</li> </ul>	<ul style="list-style-type: none"> <li>✓ Arcadis joined the mission to Ghana</li> <li>✓ They did an assessment in greater Abidjan area with UN-Habitat before</li> <li>✓ Arcadis proposed possible technical interventions responding to local needs</li> <li>✓ Conduct assessment together during project development phase</li> <li>✓ Use proposed technical interventions that are relatively low-cost and focus on livelihood enhancement or protection</li> </ul>
Skype calls	Delateres	<ul style="list-style-type: none"> <li>Discuss cooperation options.</li> <li>Understand causes of erosion from coastal morphology and dynamics, hydrology of the lagoons and environmental and social impacts of proposed interventions at local and regional scale</li> </ul>	<ul style="list-style-type: none"> <li>✓ They did some of the larger studies in Côte d'Ivoire on sedimentation, including for opening river mouth in Grand Bassam (to be done by Morocco but no funding)</li> <li>✓ They are interested in working together</li> <li>✓ Possibly involve them when coastal morphology study is needed</li> </ul>
Skype calls	Delta Alliance / Dimi group / Delft university	<ul style="list-style-type: none"> <li>Discuss cooperation options</li> <li>Identify main issues and needs in target areas and parallel academic programme</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cooperate with Ghana Delta Wing</li> <li>✓ Consider cooperating on creating 'urban lab' in both countries</li> <li>✓ Cooperation with Delta Wing in Ghana</li> <li>✓ Assist setting-up Delta wing in Côte d'Ivoire</li> </ul>
Skype call 29 nov	HKV consultants (in Ghana)	<ul style="list-style-type: none"> <li>Discuss complementary potential WB (GFDRR group) funded Greater Accra climate change risk mitigation strategy and investment plan</li> <li>Discuss complementary potential UNDP / Royal Haskoning project community resilient for early warning in Ghana</li> </ul>	<ul style="list-style-type: none"> <li>✓ Great Accra plan focuses on river in Accra</li> <li>✓ HKV developed risk / hot spot maps for greater Accra region</li> <li>✓ HKV will be 'Kernadviseur' from Dutch water sector</li> <li>✓ They will share risk maps and relevant docs</li> <li>✓ Explore option to work together / build on their work for full proposal</li> </ul>

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**2020 – Project Phase: Feasibility and risks assessments**

Ghana  
 In 2020, 8 group discussions with the community members were held to support the development of feasibility assessments, and environmental and social risks screening and impact assessment in both countries. The objective was to solicit views and concerns of the PAPs about the project interventions. The assessments were developed by accredited consultants, following national and AF requirements (e.g. consultations with all beneficiary groups to identify potential risks and impacts, including specific possible concerns of women and youth).

Table 595948 Overview consultations (focused group discussions) during field work 2020.

Type: 8 Field consultations	Participants: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).	

Date	Stakeholder	Consultation objective	Conclusion
 28/02/2020 Agbledomi Agorkedzi	18 participants Assemblyman, Fishermen, Opinion leaders etc Focal Point: Jasper Agbenator (0548302123)	Ask specific questions on <ul style="list-style-type: none"> <li>- Land ownership and where there are protected areas, heritage sites, etc.</li> <li>- Challenges and the local context.</li> <li>- Open for community sharing</li> </ul>	Questions and issues raised: There is a deity associated with the lagoon. The name is called 'Detor'. Also, there are lagoon associated with deities such as Amekutoe, Vitame and Batemc. These lagoons used to be overseen by Batε clan. Are landowners willing to release land for mangrove restoration programme? ANS: YES, we are willing to give our lands. Land ownership - Land is private and we are ready to give out lands where it is due. Will they nourish the beach for the community? ANS: No, the project will not do that.
 13/07/2020 Akplabanya	11 participants Focal Point: Moses Akorli (0249870973)		Heritage sites – Currently, there is not identified heritage site in the community. The deity identified here is called Mama Akorvi Land ownership - Land is private and we are ready to give out lands where it is due. Will there be installation of machines or monitoring systems in the community to do anything with regards to coastal erosion? Heritage sites – Currently, there is not identified heritage site in the community. Land ownership - Land is private and we are ready to give out lands where it is due.
 14/07/2020 Atiteti	11 participants Refer to list of participants Focal Point: Agbanavor Raphael (0244044376)		Will the land eventually turn out to be owned by The UN-Habitat/ The DI? ANS: No, The project belongs to the community and so with the CREMA model or approach, the community will be made to manage the project properly Heritage sites – Currently, there is not identified heritage site in the community. The deity so far identified is Nana Akigeli. Land ownership - Land is private and we are ready to give out lands where it is due.
 14/07/2020 Dzita	14 participants Focal Point: Agbotadua Ahevi (0244116528) (see above table)		Will there be installation of machines or monitoring systems in the community to do anything with regards to coastal erosion? Heritage sites – There is a shrine in the community called "Vitame" The shrine area is made up of small shrubs mixed tall trees (Neem tree, Grape tree and Efor)
 04/07/2020 Goi	16 participants Stool elder, Chief Fisherman, <b>Youth</b> , Focal Point: Nomo Tetteh Ruben Otisepeku (0247266003)		-Will drainage systems be constructed in the community to solve flooding issues around school and library? Will the sea affect the community when we deepen the lagoon Ans: The deepening of the lagoon will rather reduce flooding. Heritage sites – Currently, heritage site in the community close to the lagoon is called "Amalengor".
 28/02/2020 Lagbati/Lashibi	20 participants Focal Point: Mr. Agbota (0240989717)		Meeting commenced with prayer at 9:30 am and self-introduction Will the project give us saline crops to plant? ANS: Yes, this will help solve issue of crop that do not well in salty soils in your area Heritage site – None has been identified in the project area.
 15/07/2020 Whuti	43 members Refer list Focal Point: Joseph Ali (0545165409)		Fear of Crop failure Destruction of agriculture We plead that land-owners around the lagoons should be made to agree to the use of their lands during project implementation Lagoon erosion



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#### Côte d'Ivoire:

In 2020, 6 group discussions with the community members were held to support the development of feasibility assessments, and environmental and social risks screening and impact assessment in both countries. The objective was to solicit views and concerns of the PAPs about the project interventions. The

assessments were developed by accredited consultants, following national and AF requirements (e.g. consultations with all beneficiary groups to identify potential risks and impacts, including specific possible concerns of women and youth). Additionally, 1 private meeting with government and partners was held for ESI discussions.

Table 606049 Consultation 2020






Type: Expert meeting		Participants: government, partner organisations and programmes.	
Date	Stakeholder	Consultation objective	Conclusion
07/02/2020	AF focal point, Abidjan Convention, technical expert from WABICC, UN-Habitat	<ul style="list-style-type: none"> <li>Expert group meeting for ESIA to validate final interventions and prepare for field work and consultations.</li> </ul>	<ul style="list-style-type: none"> <li>With the adequate studies, all interventions are suitable for the target areas both in socio-economic and environmental terms.</li> </ul>
Type: Field consultations		Participants: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).			
Date	Stakeholder	Consultation objective	Conclusion
	42 participants. Community members	<ul style="list-style-type: none"> <li>Public consultation in Grand-Bassam as part of the participatory process of the ESIA.</li> <li>Validate final interventions.</li> </ul>	<ul style="list-style-type: none"> <li>83% of participants were favourable to the project and the interventions.</li> <li>11% were favourable but presented some concerns such as high technical capacities needed and compliance with technical standards.</li> </ul>
	36 participants. Community members	<ul style="list-style-type: none"> <li>Public consultation in Jacqueville as part of the participatory process of the ESIA.</li> <li>Validate final interventions.</li> </ul>	<ul style="list-style-type: none"> <li>87% of participants were favourable to the project and the interventions.</li> <li>Remaining 13% were favourable but presented some concerns such as ensuring social inclusion and realisation of environmental and social analysis.</li> </ul>
07/05/2020	35 participants. Community members	<ul style="list-style-type: none"> <li>Workshop for the formalization and launching of the Technical Committee in Grand-Bassam as part of the participatory process of the ESIA.</li> </ul>	<ul style="list-style-type: none"> <li>All stakeholders have been informed and the technical committee has been established.</li> </ul>
14/05/2020	150 participants. Community members	<ul style="list-style-type: none"> <li>Focused group discussions in Grand-Bassam as part of the participatory process of the ESIA.</li> <li>Discuss the interventions with women and youth.</li> </ul>	<ul style="list-style-type: none"> <li>Women and youth agree on the relevance interventions have in their communities and vulnerable groups.</li> <li>They presented some concerns linked to implementation and maintenance that will be integrated for the execution.</li> </ul>
29.30/06/20 and 17/07/2020	120 participants. Community members	<ul style="list-style-type: none"> <li>Focused group discussions in Jacqueville as part of the participatory process of the ESIA.</li> <li>Discuss the interventions with women and youth.</li> </ul>	<ul style="list-style-type: none"> <li>Women and youth agree on the relevance interventions have in their communities and vulnerable groups.</li> <li>They presented some concerns linked to implementation and maintenance that will be integrated for the execution.</li> </ul>
3,4 and 10/07/2020			






## 2021 – Project Phase: Full Project Proposal Review and Validation






Ghana

In 2021, and 7 private meetings with government and implementing entities were held to validate the proposal. 11 field consultations were also carried out in December with the objective of validating the pre-selected sites for the project interventions and activities in each community.

Table 616150 Overview consultations 2021.

Type: 4 Private meetings		Participants: government bodies, district representatives and programmes.	
Date	Stakeholder	Consultation objective	Conclusion
06/12/2021 Accra	- UN-Habitat Local Team of Ghana - Development Institute	<ul style="list-style-type: none"> <li>Discuss the mission scope</li> <li>Adjust the agenda of the week</li> <li>General organization of the community consultation.</li> </ul>	<ul style="list-style-type: none"> <li>Agreement of the agenda of the week and the mission scope.</li> </ul>
06/12/2021 Accra	- Ministry of Local Government and Rural Development. Focal Point: Samuel Seth Passah.	<ul style="list-style-type: none"> <li>Present the new Theory of Change and validate project proposal.</li> </ul>	<ul style="list-style-type: none"> <li>The Ministry is in alignment and happy to start the project implementation.</li> </ul>
06/12/2021 Accra	- Wildlife Division from the Forestry Commission (WDFC).	<ul style="list-style-type: none"> <li>Technical discussion about the interventions and experiences.</li> </ul>	<ul style="list-style-type: none"> <li>Technical discussion on the mangrove projects in Ada, Dredging in Keta, EWS project from Volta River Authority</li> <li>Mangrove has already been planted 17 years ago as an experimentation. The restored mangrove was successful. There is strong interest in the project.</li> </ul>
10/12/2021 	- Ministry of Environment, Science, Technology and Innovation, specifically the Land Use Spatial Planning Authority (LUSPA).	<ul style="list-style-type: none"> <li>Presentation of the new structure of the project proposal, new theory of change and planning components of the project and the role of LUSPA in the project as Lead Entity of the planning process at sub-regional scale.</li> </ul>	<ul style="list-style-type: none"> <li>LUSPA shared the theory of change, and the project components are aligned with their strategies.</li> <li>Raised the importance to manage expectations of communities and to advance to start implementation.</li> </ul>
07/12/2021 Big Ada, Ada East. 	- Ada East District Assembly	<ul style="list-style-type: none"> <li>Presentation of the new structure of the proposal to be submitted in January, discussion on the planning component, next steps and the target communities.</li> </ul>	<ul style="list-style-type: none"> <li>Ada East District Assembly agrees with the project for the communities and confirmed there is interest to collaborate with the implementation of the project activities.</li> </ul>
08/12/2021 Laqbashi, Anloga 	- Anloga District Assembly		<ul style="list-style-type: none"> <li>Anloga District Assembly does not have plans been development now; the district is drafting the strategies since its creation (previously part of Keta District).</li> <li>The project is aligned with the intentions of the District and they want to collaborate in the development and implementation of the outputs.</li> </ul>
09/12/2021 Keta, Keta. 	- Keta District Assembly		<ul style="list-style-type: none"> <li>Keta District was subdivided into Anloga District and Keta District and the project is no longer working in communities of Keta.</li> </ul>
Type: 11 Field consultations		Participants: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).		Gender: average of women participation was 40%	
Date	Stakeholder	Consultation objective	Conclusion
07/12/2021 Wokumagbe, Ada West 	<ul style="list-style-type: none"> <li>Main focal points:</li> <li>Community rep/chief: Tsikatah Tetteh Tetteh-Narh</li> <li>Women rep: Eva Osabutey</li> <li>Youth rep: Emmanuel Teye Nguledzi</li> <li>Elderly rep: Rev. Philemon Nii Lomotey</li> <li>Disabled rep: Joyce Nubuor</li> <li>14 Community members participated; 43% Women.</li> </ul>	<ul style="list-style-type: none"> <li>Validate main issues: Erosion, coastal floods, flash floods, dry lagoon in dry season and loss of livelihood in lagoon.</li> <li>How these climate issues are impacting women, youth, elderly and disabled.</li> <li>Validate possible adaptation measures: urban flood adaptation projects, mangrove restoration and EWS.</li> <li>Visit the community and identify the sites of the activities.</li> <li>How these climate issues are impacting women, youth, elderly and disabled.</li> </ul>	<ul style="list-style-type: none"> <li>Main issues: floods, erosion, sedimentation of the lagoons and water level rise.</li> <li>During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood.</li> <li>Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells, channels and bio-retention facility), mangrove needs to be restored and EWS is important.</li> <li>Intervention sites identified: mangrove restoration between community and lagoon; Safe area for EWS in dry land; drainage channels where water runs and infiltration where water accumulates (see map in Annex 3).</li> </ul>




<p>07/12/2021 Akplabanya, Ada West</p> 	<p>- Main focal points: Community rep/chief: Tetteh Labia Kamara Women rep: Adayo Paulina Kwao Youth rep: Savior Kitcher Ankra Elderly rep: Jonathan Buenor Disabled rep: Obimpe Charles - 13 Community membres participants; 43% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: Erosion + coastal floods, Flash floods, Dry lagoon in dry season + loss of livelihood in lagoon.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled</li> <li>▪ Validate possible adaptation measures: urban flood adaptation projects, mangrove restoration and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, erosion, sedimentation of the lagoons and water level rise.</li> <li>✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells, channels and bioretention facility), mangrove needs to be restored and EWS.</li> <li>✓ Intervention sites identified: mangrove restoration between community and lagoon where the water level rises strongly; Safe area for EWS in the different dry parts of the community; drainage channels where water runs and where there is space and infiltration where water accumulates (see map in Annex 3).</li> </ul>
<p>07/12/2021 Goi, Ada West</p> 	<p>- Main focal points: Community rep/chief: Abraham Soti Ofoyi Women rep: Juliana Kumado Youth rep: Enoch Tei Otipeseku Elderly rep: Joseph Alimo Disabled rep: Peter Abayateye - 15 Community membres participants; 47% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: Erosion + coastal floods, Flash floods, Dry lagoon in dry season + loss of livelihood in lagoon.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Validate possible adaptation measures: urban flood adaptation projects and EWS.</li> <li>▪ Confirm flooding area, verify if there was mangrove previously.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, erosion, sedimentation of the lagoons and water level rise.</li> <li>✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood. Some of the get sick (diseases).</li> <li>✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important.</li> <li>✓ Intervention sites identified: mangrove restoration in two large parts between community and lagoon where the water level rises strongly; Safe area for EWS in the different dry parts of the community; drainage channels towards the lagoon where water runs and infiltration where water accumulates (see map in Annex 3).</li> </ul>
<p>07/12/2021 Kewunor-Azizanya, Ada East</p> 	<p>- Main focal points: Community rep/chief: Enoch Nartey Ametepe Women rep: Madugu Nartey Youth rep: Amos Amesimeku Elderly rep: William Mankwa Disabled rep: Alice Atsukpe - 15 Community membres participants; 33% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding, limited livelihood options.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Validate possible adaptation measures: urban flood adaptation projects and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, sedimentation of the lagoons, water level rise and erosion.</li> <li>✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important to be prepared.</li> <li>✓ Intervention sites identified: mangrove restoration between Volta River and community and between the water points and the community; Safe area for EWS in dry land; drainage channels where water runs to the Volta River and infiltration where water accumulates (see map in Annex 3).</li> </ul>
<p>08/12/2021 Agorkedzi, Anloga-Keta</p> 	<p>- Main focal points: Community rep/chief: Agbotadua Festus Women rep: Victoria Dokla Youth rep: Atatsi Patrick Elderly rep: Pilo Deter Disabled rep: Margaret Lumor - 14 Community membres participants; 50% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding, disappearance of community, erosion, no appropriate relocation.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Validate possible adaptation measures: urban flood adaptation projects and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, sedimentation of the lagoons, water level rise and erosion.</li> <li>✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells and channel), mangrove needs to be restored and EWS is important.</li> <li>✓ Intervention sites identified: mangrove restoration in the 'back' of the community, between the river-lagoon site and the community; one safe area for EWS in dry land; drainage channels where water runs and infiltration where water accumulates (see map in Annex 3).</li> </ul>
<p>08/12/2021 Agbledomi, Anloga-Keta</p> 	<p>- Main focal points Community rep/chief: Godwin Ahedor Women rep: Agnes Vitashie Youth rep: Dagbi Albert Elderly rep: Zoiku John Disabled rep: William Amemelio - 16 Community membres participants; 50% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: rapid erosion, disappearance of community and no appropriate relocation option.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Possible adaptation measure: relocation.</li> <li>▪ Visit agriculture area and identify main products. Identify water management system and flooding sites.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves.</li> <li>✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food, women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important for agriculture.</li> <li>✓ Intervention sites identified: plot for agriculture; mangrove restoration in the 'front' of the community between lagoon and community; various safe areas for EWS in dry land; drainage channels where water runs (see map in Annex 3).</li> </ul>
<p>08/12/2021 Dzita</p>	<p>- Main focal points: Community rep/chief: Agbotadua Ahevi Women rep: Celestine Teku Youth rep: Christian Ganah Elderly rep: Ashitorkor John Disabled rep: Justina Akakpo</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: rapid erosion, disappearance of community and no appropriate relocation option.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled. Identify main flooding areas.</li> <li>▪ Check old mangrove restoration project within the community and understand the challenges of old project.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves.</li> <li>✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food, women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS.</li> </ul>

	<ul style="list-style-type: none"> <li>- 11 Community membres participants ; 45% Women.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Possible adaptation measures: urban flood adaptation measures, mangrove restoration and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Intervention sites identified: plot for agriculture; mangrove restoration between lagoons and community; 3 safe areas for EWS in dry land; drainage channels where water runs and infiltration cells where water accumulates (see map in Annex 3).</li> </ul>
<p>08/12/2021 Whuti</p> 	<ul style="list-style-type: none"> <li>- Main focal points: Community rep/chief: Tetteh Labia Kamara Women rep: Mamavi kulevome Youth rep: Savior Kitcher Ankra Elderly rep: Togbui Adzaho Disabled rep: Obimpe Charles</li> <li>- 17 Community membres participants; 53% Women.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Validate main issues: salt, water intrusion due to coastal erosion, sea level rise and dying crops. Destruction of agriculture, lagoon erosion.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled</li> <li>▪ Possible adaptation measures: Salt resilient agriculture projects, and rainwater infiltration ponds and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves.</li> <li>✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food, women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important for agriculture.</li> <li>✓ Intervention sites identified: plot for agriculture; mangrove restoration between the community and the rive-lagoon; 4 safe areas for EWS in dry land; drainage channels where water runs and infiltration cells where water accumulates (see map in Annex 3).</li> </ul>
<p>08/12/2021 Lagbati/Lashibi</p> 	<ul style="list-style-type: none"> <li>- Main focal points: Community rep/chief: Sebuava Samuel Women rep: Ahiable meek Dora Youth rep: Daniel Yador Elderly rep: Emmanuel Tetteh Disabled rep: Afedzi Vincent</li> <li>- 15 Community membres participants; 33% Women.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Validate main issues: salt, water intrusion due to coastal erosion, sea level rise and dying crops. Destruction of agriculture, lagoon erosion.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Visit agriculture areas, identify main products and techniques.</li> <li>▪ Identify flooding area and water management system.</li> <li>▪ Possible adaptation measures: salt resilient agriculture, urban flood resilience, mangrove restoration and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods in agriculture area, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves.</li> <li>✓ During extreme events there is lack of food and women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, mangrove needs to be restored and EWS is important for agriculture.</li> <li>✓ Intervention sites identified: plot for agriculture; mangrove restoration between agriculture land and Keta Lagoon and EWS for agriculture (see map in Annex 3).</li> </ul>
<p>09/12/2021 Woe</p> 	<ul style="list-style-type: none"> <li>- Main focal points: Community rep/chief: Akpalu Reinhold Women rep: Edekey Mercy Youth rep: Ekuadzi Godwin Elderly rep: Daniel Afordoanyi Disabled rep: Joseph Kwame</li> <li>- 14 Community membres participants; 29% Women.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Validate main issues: high salinity and flooding.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Visit agriculture areas, identify main products and techniques. Verify salinity levels, identify flooding area and water management system.</li> <li>▪ Possible adaptation measures: Salt resilient agriculture projects, urban flood resilience, restoration and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods in agriculture area, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves.</li> <li>✓ During extreme events there is lack of food in weak harvest season and women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, mangrove needs to be restored; and EWS is important for agriculture.</li> <li>✓ Intervention sites identified: plot for agriculture; mangrove restoration between houses land and Keta Lagoon and EWS for agriculture (see map in Annex 3).</li> </ul>
<p>09/12/2021 Tegbi</p> 	<ul style="list-style-type: none"> <li>- Main focal points: Community rep/chief: Amos Yevu Women rep: Edith Awuye Youth rep: Norvshivi Husunukpe Elderly rep: Robert Anyomi Disabled rep: David Adzika</li> <li>- 14 Community membres participants ; 20% Women.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding, deforestation, salinity levels.</li> <li>▪ How these climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Visit agriculture areas, identify main products and techniques. Verify salinity levels, identify flooding area and water management system. Identify safe area and agriculture plot.</li> <li>▪ Possible adaptation measures: Salt resilient agriculture projects, urban flood resilience, restoration and EWS.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves.</li> <li>✓ During extreme events youth whose houses flood don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food in weak harvest season and women cannot work and loose livelihood.</li> <li>✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS.</li> <li>✓ Intervention sites identified: plot for agriculture; mangrove restoration between houses land and Keta Lagoon, drainage channels and infiltration cells between the houses, and EWS for agriculture (see map in Annex 3).</li> </ul>

## Côte d'Ivoire

In 2021, 2 private meetings with district assemblies were held in April and 6 in December to validate the proposal. Additionally, 3 field consultations in April and 10 in December (one in each of the targeted communities) were carried out with the objective of validating the pre-selected sites for the project interventions and activities in each community.

Table 626254 Overview consultations 2021

Type: 8 Private meetings			
Date	Stakeholder	Participants: government bodies, district representatives and programmes.	Participants: government bodies, district representatives and programmes.
Date	Stakeholder	Consultation objective	Conclusion
16/04/2021 Jacqueville Town Hall 	Mayor, Technical Director and Project Manager/Focal Point – Geomatician) Mayor: Joachim BEUGRE Technical Director: Likes Francis DJETY djetyaimefrancis@gmail.com Project Manager/Focal Point – Geomatician – Romeo N'CHO romeo_ncho2015@outlook.com	<ul style="list-style-type: none"> <li>Interview with local authorities of Jacqueville Department (Préfecture) to gather information on the local dynamics</li> </ul>	<ul style="list-style-type: none"> <li>The urban and land environment is particularly dynamic in this area where coastal land is the main source of income in the population.</li> <li>For a long time, Jacqueville has experienced a demographic and economic boom, however it has been exacerbated since 2013 after the bridge connection to Abidjan.</li> </ul> <p>Protected areas:</p> <ul style="list-style-type: none"> <li>There is a desire to preserve the space but little or no way to enforce a restriction on a protected area.</li> <li>Like all coastal lands, Jacqueville are subject to significant erosion.</li> </ul>
22/04/2021 Grand Bassam 	Mr. Ayemou: Director of the technical department Mr. Brawa Ives Hermann: Assistant - Director of the technical department (0759952031)	<ul style="list-style-type: none"> <li>Interview with local authorities of Grand Bassam Department (Préfecture) to gather information on the local dynamics</li> </ul>	<ul style="list-style-type: none"> <li>Tourism remains the main source of economy of this city since the colonial period. Adding to cultural and recreational aspects, the religious aspect also attracts tourists to Grand Bassam.</li> <li>In addition to tourism, fishing is the subsistence activity of the indigenous people of the commune of Grand Bassam, men practicing it preferentially at sea and women on the lagoon.</li> </ul> <p>Protected areas:</p> <ul style="list-style-type: none"> <li>Buffer zone around Quartier France – an area of 552 HA</li> <li>In Azuretti, there is also a sacred lake and a sacred mangrove</li> <li>Soil fragility – Sandy structure that is not very rich and do not favour agriculture activity</li> <li>Alignment of the reviewed project with the AF new focal point.</li> </ul>
13/12/2021 Abidjan 	Ministère de l'Intérieur et de la Sécurité AF Focal Point : Mr. Fojo	<ul style="list-style-type: none"> <li>Presentation of the new structure of the proposal to be submitted in January, discussion on the planning component, next steps and the target communities.</li> <li>Presentation of mission agenda and consultation objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Levels of SDFs discussed in relation to the plans the government has development (Grand-Bassam) and the strategies of the government that can be strengthen through the Project.</li> <li>Project theory of change and outputs is aligned with the government strategies</li> </ul>
13/12/2021 Abidjan 	Ministère du Plan et du Développement AF Focal Point : Mr. Fojo	<ul style="list-style-type: none"> <li>Presentation of mission agenda and consultation objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Levels of SDFs discussed in relation to the plans the government has development (Grand-Bassam) and the strategies of the government that can be strengthen through the Project.</li> <li>Project theory of change and outputs is aligned with the government strategies</li> </ul>
13/12/2021 Abidjan 	Ministère de l'Environnement et du Développement Durable AF Focal Point : Mr. Fojo	<ul style="list-style-type: none"> <li>Presentation of mission agenda and consultation objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Levels of SDFs discussed in relation to the plans the government has development (Grand-Bassam) and the strategies of the government that can be strengthen through the Project.</li> <li>Project theory of change and outputs is aligned with the government strategies</li> </ul>
14/12/2021 Grand-Bassam 15/12/2021 Jacqueville 	Sous-Préfecture de Grand-Bassam Sous-Préfecture de Jacqueville	<ul style="list-style-type: none"> <li>Presentation of the project strategy</li> <li>Alignment and communication line with community chiefs for consultations</li> </ul>	<ul style="list-style-type: none"> <li>Prefect agrees and is interest in the project</li> <li>Confirmation with the community chiefs that 1 representative of each vulnerable group (women, youth, elderly and disabled) are waiting for us.</li> <li>Adjustment of agenda (order of communities to visit) in order to accomodate local dynamics (e.g. time that women come back from the market).</li> </ul>
17/12/2021 Abidjan	Société d'Exploitation et de Développement Aéroportuaire, Aéronautique et Météorologique - SODEXAM	<ul style="list-style-type: none"> <li>Presentation of similar projects and discussion of collaboration for the Project to support national government resilience strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Identification of collaboration of the Project components through the: <ul style="list-style-type: none"> <li>Plan Nationale d'Adaptation au Changement Climatique : related to agriculture and meteorological data.</li> <li>System d'Alerte Précoce (SAP): conception stage concluded, project with components on coordination and information production at the national scale. The Project can strength the SAP intentions through the implementation at the local level.</li> <li>Projet d'Assainissement et Résilience Urbaine (PARU): focus on flooding, conception stage.</li> </ul> </li> </ul>

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17/12/2021 Abidjan	Ministère de l'Environnement et du Développement Durable	▪ Debrief, presentation of outcomes of December field consultations and meetings and next steps.	<ul style="list-style-type: none"> <li>✓ WACA.</li> <li>✓ Presentation of outcomes of December field consultations and meetings.</li> <li>✓ Project proposal aligned with national and local strategies</li> <li>✓ New AF focal point endorsement</li> </ul>
<b>Type:</b> 13 Field consultations		<b>Participants:</b> districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
<b>Vulnerable groups representation:</b> Four minority ground participated (women, disabled, youth and elderly).		<b>Gender:</b> average of women participation was 40%	
<b>Date</b>	<b>Stakeholder</b>	<b>Consultation objective</b>	<b>Conclusion</b>
16/04/2021 Attoutou B	Attoutou B community members (2 participants) Focal Point: Innocent DATCHA BEUGRE (+2250504269279)	<ul style="list-style-type: none"> <li>▪ Gather specific information on the local dynamics, protected lands, deforestation/mangrove, agriculture and flooding.</li> </ul>	Project areas and land allocation: <ul style="list-style-type: none"> <li>✓ In Otoutou A, the site is reserved for mangrove rehabilitation, currently is being exploited for pig farming. It also serves as a wild dump. Villagers burned up part of the area to make it accessible to plantations. The village has also a preservation area.</li> <li>✓ In Taboth, the place for pen culture is preserved, the fishing activity is already in place, especially fisherwomen. There are women guards, with baskets like water tanks, selling fishing products.</li> </ul>
16/04/2021 Koko	Koko community members		<ul style="list-style-type: none"> <li>✓ In Koko, the mangrove to be rehabilitated has already been set up, as evidenced by a subdivision terminal that was found there.</li> </ul>
16/04/2021 Taboth	Taboth Community members		Project areas and land allocation: <ul style="list-style-type: none"> <li>✓ Pen culture system and mangrove rehabilitation</li> <li>✓ Most of the inhabitants live from fishing and we meet on the water's edge, a kind of public square of the village, a group of about ten women who washed the crabs. They are aware of the project to set up aquaculture facilities.</li> </ul>
22/04/2021 Azuretti	<ul style="list-style-type: none"> <li>• Azuretti Focal point: Essouan Kouassi 0153504540</li> <li>- Gbamélé Focal point: Begeg 07074322525</li> <li>- Mondoukou Focal point: 0707567981</li> </ul>		<ul style="list-style-type: none"> <li>✓ Azuretti – Pen Culture System</li> <li>✓ In this village, we met the chief and his notability as well as a group of women from a socio-economic association.</li> <li>✓ They are all in favour of the project, it would be an alternative for their development and decrease poverty rate. For them, fishing is becoming more and more fruitless because the vessels they are subjected to excessive competition from large fishing vessels.</li> </ul>
22/04/2021 Vitre 2	<ul style="list-style-type: none"> <li>• Vitre 2 Focal point: KOTCAH Wanga Moise – 0707433452</li> <li>President of ADEPAV: YOBOU Albert – 0777883757 (association for fishing and agriculture with about forty members)</li> </ul>		<ul style="list-style-type: none"> <li>✓ The population said that they were informed of the project and they participants were favourable to the project and the interventions.</li> </ul>
14/12/2021 Mondoukou Grand-Bassam	<ul style="list-style-type: none"> <li>- Main focal points: Community rep/chief: Semin Guy Marc</li> <li>Women rep: Rebeca Awa</li> <li>Youth rep: Akow Akoue Joseph</li> <li>Elderly rep: Mahieu Kacacuncine</li> <li>Disabled rep: Amoussou Boareyno</li> <li>- 12 Community membres participants; 24% Women.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding and deforestation.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled</li> <li>▪ Identify flooding areas, safe area and agriculture plot</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: High waves intensity, flooding due to storms and sea/ lagoon level rise, warmer temperature, decrease of fish, clandestine fishing (inadequate quantities).</li> <li>✓ During extreme events there is lack of food, youth don't go to school, women cannot work and loose livelihood, elderly need to be carried out from flooding.</li> <li>✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), EWS is important for timely rescue and agriculture.</li> <li>✓ Intervention sites identified: drainage channels where water runs and 2 dry areas for safety (see map in Annex 3).</li> </ul>

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<p>14/12/2021 Quartier France, Grand-Bassam</p> 	<p>- Main focal points: Community rep/chief: Voiti Samiel Women rep: Kouamelan Allabat Youth rep: Amontchi Elia Elderly rep: Amichia Honouine Disabled rep: Bibe Bognan - 12 Community membres participants; 42% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: pollution in the lagoon, salinity, limited livelihood options, deforestation.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled</li> <li>▪ Identify flooding areas, safe area</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: Sea level rise, accumulation of sediments in the lagoon, agriculture in saturated soil and floods.</li> <li>✓ During extreme events some houses are completely flooded and youth, elderly and women living in these areas are impacted (similar to others). Boats are used for transportation.</li> <li>✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), mangrove restoration and EWS for timely rescue and agriculture.</li> <li>✓ Intervention sites identified: drainage channels where water runs, mangrove restoration between lagoon and community, and 3 dry areas and routes for safety(see map in Annex 3).</li> </ul>
<p>14/12/2021 Azuretti, Grand-Bassam</p> 	<p>- Main focal points: Community rep/chief: Nanan Nognam V Women rep: Gnuan Kpdé Patnce Youth rep: Akesse Kablan Crepin Elderly rep: Abekachi Akissi Disabled rep: Ebagmenem K. ludovic - 24 Community membres participants; 43% Women</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: erosion, salinity, limited livelihood options and deforestation.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify flooding areas, safe area and deforested areas.</li> <li>▪ Visit the community and identify the sites of the activities</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: flooding, coastal erosion, pollution, sedimentation of lagoon, lack of employment and education facilities.</li> <li>✓ During extreme events, youth don't go to school, disabled need support to move, elderly are carried out of the flood by community members and sites where women work are destroyed.</li> <li>✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), mangrove restoration and EWS is important for timely rescue.</li> <li>✓ Intervention sites identified: drainage channels towards the Comoé Lagoon and infiltration cells where water accumulates; mangrove between the lagoon and the community and 1 dry areas and routes for safety (see map in Annex 3).</li> </ul>
<p>14/12/2021 Vitre 2, Grand-Bassam</p> 	<p>- Main focal points: Community rep/chief: M Christophe Tacki Women rep: Mme Taki Jeannelle Youth rep: Kouami Ake Jean Alain Elderly rep: Kouami Brome Disabled rep: M. Kotcha Vengah M. - 8 Community membres participants; 38% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify flooding and safe area.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: Lack of drainage system, warmer temperature, decrease of fish, sedimentation, water level rise.</li> <li>✓ During extreme events, there is lack of food, youth and elderly tend to get sick, disabled need support to move where water is accumulated and if needed to move to a dry are. There is lack of vegetables and women loose work.</li> <li>✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), mangrove restoration and EWS for timely rescue and for agriculture.</li> <li>✓ Intervention sites identified: mangrove between the lagoon and the community, drainage towards the lagoon where water tends to run, infiltration cells in accumulation stops between houses, and 2 dry areas and routes for safety (see map in Annex 3).</li> </ul>
<p>15/12/2021 Grand-Jack, Jaqueville</p> 	<p>- Main focal points: Community rep/chief: Lugon Lavitene Women rep: Abikea Simone Youth rep: Egbio Asaza Anché Elderly rep: Ghy Ezqchiel Disabled rep: Kabi Agbo Mabthinal - 10 Community membres participants; 40% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: rapid Coastal erosion, coastal flooding, sea level rise</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify flooding and safe area.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: Lack of drainage system, accumulation of sediments in the sea, floods, change in the rainfall patterns, drought and sea level rise.</li> <li>✓ During extreme events, youth and elderly tend to get sick, disabled need support to move.</li> <li>✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels) and EWS is important for timely rescue.</li> <li>✓ Intervention sites identified: drainage towards the coast where water tends to run, infiltration cells between floodable houses, and 2 dry areas and routes for safety (see map in Annex 3).</li> </ul>
<p>15/12/2021 Attoutou B, Jaqueville</p> 	<p>- Main focal points: Community rep/chief: Datcha Innocent Women rep: Ksoka Rosabé Youth rep: Atchebi Lovenkin Elderly rep: Aatch Hubert Disabled rep: Becket Madeleine - 33 Community membres participants; 45% Women.</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: rapid Coastal erosion, coastal flooding, sea level rise</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify flooding and safe area.</li> <li>▪ Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: Accumulation of sediments in the lagoon, drought, floods affect agriculture, change in the rainfall patterns and lagoon level rise.</li> <li>✓ During extreme events, there is a lack of vegetables, women loose work, youth and elderly get sick.</li> <li>✓ Strategies the community thinks will help to adapt: mangrove restoration to protect from the risen water level, support for resilient agriculture and EWS is important for timely rescue and for agriculture. Urban flood strategies are not needed, mangrove buffer should be enough.</li> <li>✓ Intervention sites identified: mangrove between the lagoon and the community, and 1 dry area and a plot for agriculture. (see map in Annex 3).</li> </ul>
<p>15/12/2021 Koko, Jaqueville</p>	<p>- Main focal points: Community rep/chief: N'ori Issac Women rep: Asskko Antoinette Youth rep: Lepry Luig Ymmiar Elderly rep: M'Boua Rebecca Disabled rep: N'Guessan Koukran</p>	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify flooding and safe area and areas where mangrove existed previously. Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: flooding, sediment in the lagoon, water level rise, lack of livelihood opportunities.</li> <li>✓ During extreme events, food production is impacted and women that are mostly working with cassava production are not able to work properly. Elderly and disabled tend to get sick.</li> <li>✓ Strategies the community thinks will help to adapt: mangrove restoration and EWS.</li> <li>✓ Intervention sites identified: mangrove between the lagoon and the community, along the coast, and 1 dry area (see map in Annex 3).</li> </ul>

	- 27 Community membres participants; 56% Women.		
16/12/2021 Tiemien, Jaqueville 	- Main focal points: Community rep/chief: N'Giseassian Serge Women rep: Yesso Elise Youth rep: Bouraiman Boubakor Elderly rep: Komia Aui Bakivelery Disabled rep: Almaoujtofu Brouciima - 26 Community membres participants; 27% Women.	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding and deforestation.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify flooding and safe area and areas where mangrove existed previously. Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: land speculation, decrease of fishing, polluted lagoon, accumulation of sediments in the lagoon, risen temperature, change in the rainfall patterns, drought.</li> <li>✓ During extreme events, there is a lack of food, women and disabled cannot work properly and youth and elderly tend to get sick.</li> <li>✓ Strategies the community thinks will help to adapt: mangrove restoration and support for resilient agriculture.</li> <li>✓ Intervention sites identified: mangrove restoration along the coast (between the lagoon and the community and between the lagoon agriculture land), and a plot for agriculture in the inner part (see map in Annex 3).</li> </ul>
16/12/2021 Trefedji, Jaqueville 	- Main focal points: Community rep/chief: Gogo Desnoss Women rep: Beugré Pauline Youth rep: Djiproh M Goncé Elderly rep: Atchô Lea Disabled rep: Adagba Valery - 18 Community membres participants; 44% Women.	<ul style="list-style-type: none"> <li>▪ Validate main issues: flooding and deforestation.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify flooding and safe area and areas where mangrove existed previously. Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: Flooding, lack of sanitation, lack of drainage system, coastal erosion, lagoon level rise, sediment accumulation, erosion.</li> <li>✓ During extreme events, there is a lack of food, women and disabled cannot work properly and youth and elderly tend to get sick.</li> <li>✓ Strategies the community thinks will help to adapt: urban flood adaptation (drainage and infiltration cells), mangrove restoration and EWS.</li> <li>✓ Intervention sites identified: mangrove between the Northwest part of the settlement and the Ebrié Lagoon, drainage towards the dry land where water runs, and 2 dry and safe areas (see map in Annex 3).</li> </ul>
16/12/2021 Taboth, Jaqueville 	- Main focal points: Community rep/chief: Gbango Djady Martin Women rep: Sabokour Arce Youth rep: Adiko Eke Pierre Elderly rep: Fuanga Nare Disabled rep: Agbouajouy Martin - 37 Community membres participants; 41% Women.	<ul style="list-style-type: none"> <li>▪ Validate main issues: low depth, salination and pollution of lagoon, use of pesticides for fishing leading to loss of livelihoods, open defecation, mangrove deforestation.</li> <li>▪ How climate issues are impacting women, youth, elderly and disabled.</li> <li>▪ Identify deforested, floodable, and safe areas. Visit the community and identify the sites of the activities.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Main issues: flood, erosion, sediment accumulation, soil saturation and salinization, lagoon level rise and lack of fishes.</li> <li>✓ During extreme events, there is a lack of food, women and disabled cannot work properly and youth and elderly tend to get sick</li> <li>✓ Strategies the community thinks will help to adapt: mangrove restoration and support for resilient agriculture.</li> <li>✓ Intervention sites identified: mangrove community and the Ebrié Lagoon and plot for agriculture (see map in Annex 3).</li> </ul>

## 2022 – Project Phase: Full Project Proposal Review and Validation

### Ghana

In 2022, bilateral meetings with government bodies were held with the objective of gathering information to detail the interventions and their operability, management and sustainability. Remote meetings with government and implementing entities were held to validate the proposal.

### Cote d'Ivoire

Bilateral meetings with partner organisations, government bodies and executing entities were held with the objective of gathering information to detail the interventions and their operability, management and sustainability. Remote private meetings with government and implementing entities were held to validate the proposal.

## ANNEX 4: GENDER POLICY AND CROSS-CUTTING ISSUES

### Cross cutting issues

#### Marginalised and vulnerable groups assessment

The purpose of this section is to provide an overview and an initial baseline on marginalised and vulnerable groups in the five districts involved in the project. The data was gathered through surveys, local consultations held in the targeted communities, and from official documents collected through desk review, specifically using data from national governments. In general communities in Ghana and Cote d'Ivoire have nearly the same number of women and men.

The poverty headcount ratio considering the national poverty line in Ghana was 24.2 in 2010 and in Côte d'Ivoire 39.5 in 2020. The main religions in the target areas are Christianity (approximately 2/3 of the total population) and Islam (approximately 1/5 of the total population).

Annex Table 5 Initial vulnerable groups baseline

Group	Ada West <sup>87</sup>	Ada East <sup>88</sup>	Anloga/ Keta <sup>89</sup>	Jacqueville <sup>90</sup>	Grand-Bassam <sup>91</sup>
Poverty Rate <sup>92</sup>	11.1%	5.9%	14.6%	30.3% <sup>93</sup>	30.3% <sup>94</sup>
Children and youth rate	40.74% (below 15 years) 11.74% (15-19 years)	36.45% (below 15 years) 11.84% (15-19 years)	Anloga: 33.03% (below 15 years) 12.15% (15-19 years) Keta: 30.42% (below 15 years) 13.57% (15-19 years)	61.3%	61.3%
Women and girls	51.2%	51.53%	Anloga: 52.88% Keta: 53.10%	48.4% <sup>95</sup>	52.1% <sup>96</sup>
Older persons rate	8.33% (55+)	10.33% (55+)	Anloga: 15.15% (55+) Keta: 15.94% (55+)	4%	4%
Indigenous people	NA	Dangme-speaking people	NA	NA	NA
Ethnic groups	Wokumagbe, Akplabanya and Goi	Kewunor/Azizanya	Agorkedzi/Atiteti, Agbledomi, Dzita, Whuti, Anloga (Lagbati/Lashibi), Woe	Alladians, Ahizi and Avikam	Abouré and N'Zima
Displaced/ migrant people	NA	NA	NA	12.8%	15.3%
Refugees	NA	NA	NA	NA	NA
Persons with disabilities rate	2.2% (2.3% female and 2.0% male)	4.3% (4.8% female and 3.8% male)	7.2% (8.0% female and 6.3% male)	1%	1%
People living with HIV/ AIDS rate	1.85% <sup>97</sup>	2.90% <sup>98</sup>	1.29% <sup>99</sup>	2.3% <sup>100</sup>	2.6% <sup>101</sup>

#### Ada West

According to the 2021 Population and Housing Census, the Ada West District has 76,087 inhabitants, and about 56% of its population resides in rural localities. Within the population over the age of 15, 64% are literate. The proportion of literates among male is higher (54.21%) than among women (45.78%).

50.42% of the population aged 15 years and older is employed, 9.92% are unemployed and 39.65% are outside the labour force. Women constitute 59.71% of the unemployed population and 56.71% of the population outside the labour force.

From the employed population that is 15 years and older, 44.36% are engaged in skilled agricultural, forestry and fishery activities which is the main activity in the district, followed by the services and sales sector with 20.19%. The sectors where women are more employed are the service and sales sector representing 82.54% of the workforce and the agricultural, forestry and fishery sector representing 36.09% respectively.

The General Assembly of the Ada West District Assembly is constituted by 21 members, of which 2 are women and 19 are men.

<sup>87</sup> [https://www2.statsghana.gov.gh/docfiles/2010\\_District\\_Report/Greater%20Accra/ADA%20WEST.pdf](https://www2.statsghana.gov.gh/docfiles/2010_District_Report/Greater%20Accra/ADA%20WEST.pdf)

<sup>88</sup> <https://new-ndpc-static1.s3.amazonaws.com/CACHES/PUBLICATIONS/2016/06/06/Ada+East.pdf>

<sup>89</sup> [https://www2.statsghana.gov.gh/docfiles/2010\\_District\\_Report/Volta/KETA%20MUNICIPAL.pdf](https://www2.statsghana.gov.gh/docfiles/2010_District_Report/Volta/KETA%20MUNICIPAL.pdf)

<sup>90</sup> Recensement Général de la population et de l'Habitat (RGPH) 2014

<sup>91</sup> Recensement Général de la population et de l'Habitat (RGPH) 2014

<sup>92</sup> Ghana Poverty Mapping Report (2015) <https://www2.statsghana.gov.gh/docfiles/publications/POVERTY%20MAP%20FOR%20GHANA-05102015.pdf>

<sup>93</sup> Enquete de niveau de vie (ENV) 2015/ Institut National de la Statistique (INS)

<sup>94</sup> Enquete de niveau de vie (ENV) 2015/ Institut National de la Statistique (INS)

<sup>95</sup> [http://www.ins.ci/templates/docss/RGPH2014D.pdf?x\\_tr\\_sl=fr&x\\_tr\\_tl=en&x\\_tr\\_hl=en&x\\_tr\\_pto=nui.sc&x\\_tr\\_sch=http](http://www.ins.ci/templates/docss/RGPH2014D.pdf?x_tr_sl=fr&x_tr_tl=en&x_tr_hl=en&x_tr_pto=nui.sc&x_tr_sch=http)

<sup>96</sup> [http://www.ins.ci/templates/docss/RGPH2014D.pdf?x\\_tr\\_sl=fr&x\\_tr\\_tl=en&x\\_tr\\_hl=en&x\\_tr\\_pto=nui.sc&x\\_tr\\_sch=http](http://www.ins.ci/templates/docss/RGPH2014D.pdf?x_tr_sl=fr&x_tr_tl=en&x_tr_hl=en&x_tr_pto=nui.sc&x_tr_sch=http)

<sup>97</sup> [https://www.ghanais.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%202022%2006%202020%20revised\(1\).pdf](https://www.ghanais.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%202022%2006%202020%20revised(1).pdf)

<sup>98</sup> [https://www.ghanais.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%202022%2006%202020%20revised\(1\).pdf](https://www.ghanais.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%202022%2006%202020%20revised(1).pdf)

<sup>99</sup> [https://www.ghanais.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%202022%2006%202020%20revised\(1\).pdf](https://www.ghanais.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%202022%2006%202020%20revised(1).pdf)

<sup>100</sup> Rapport annuel sur la situation sanitaire (RASS) 2018/ direction de l'informatique et de l'information sanitaire (DIIS)de Cote d' Ivoire

<sup>101</sup> Rapport annuel sur la situation sanitaire (RASS) 2018/ direction de l'informatique et de l'information sanitaire (DIIS)de Cote d' Ivoire

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### Ada East

According to the 2021 Population and Housing Census, the Ada East District has 76,411 inhabitants, and 65% of its population resides in rural localities. Within the population aged 15 year and older 68.35% are literate. The proportion of literates among men is higher (53.25%) than among women (46.74%).

49.21% of the population aged 15 years and older is employed, 8.72% are unemployed and 42.05% are outside the labour force. Women constitute 58.30% of the unemployed population and 56.52% of the population outside the labour force.

From the employed population that is 15 years an older, 31.15% are engaged in skilled agricultural, forestry and fishery activities which is the main activity in the district, followed by the services and sales sector with 29.56%. The sectors where women are more employed are the service and sales sector representing 83.01% of the workforce and the agricultural, forestry and fishery sector representing 30.41% respectively.

Out of the 39 current Assembly members of the General Assembly of the Ada East District, only 4 are women.

### Anloga and Keta

According to the 2021 Population and Housing Census, the Keta District has 78,862 inhabitants and Anloga 94,895. In Anloga, about 35.47% of its population resides in rural areas while in Keta 39.17% of the population live in rural areas. Within the population aged 15 year and older, in Anloga 69.27 are literate. The proportion of literates among men is higher (53.21%) than among women (46.78%) In Keta, the population aged 15 year and older are 74.43 literate. The proportion of literates among men is higher (51.11%) than among women (48.88%)

In Anloga, 43.11% of the population aged 15 years and older is employed, 10.05% are unemployed and 46.83% are outside the labour force. Women constitute 59.29% of the unemployed population and 60.40% of the population outside the labour force.

In Keta, 42.46% of the population aged 15 years and older is employed, 10.41% are unemployed and 47.12% are outside the labour force. Women constitute 59.08% of the unemployed population and 59.73% of the population outside the labour force.

In Anloga, from the employed population that is 15 years an older, 35.32% are engaged in skilled agricultural, forestry and fishery activities which is the main activity in the district, followed by the services and sales sector with 25.45%. The sectors where women are more employed are the service and sales sector representing 86.56 % of the workforce and the agricultural, forestry and fishery sector representing 23.89% respectively.

In Keta, from the employed population that is 15 years an older, 31.86% are engaged in the services and sales sector which is the main activity in the district, followed by the skilled agricultural, forestry and fishery activities with 23.87%. The sectors where women are more employed are the service and sales sector representing 83.79 % of the workforce and the agricultural, forestry and fishery sector representing 25.25% respectively.

### Jacqueville

According to the 2014 Census, Jacqueville has a population of 32,288 inhabitants<sup>102</sup>. The proportion of men is higher (51,5%) than of women (48,4%).

### Grand-Bassam

According to the 2014 Census, Grand-Bassam has 84,028 inhabitants<sup>103</sup>. The proportion of men is lower (47,8%) than of women (52,1%).

### Human Rights Approach

The project has been designed to focus on people's rights, prioritizing the quality of life and improving conditions and rights. The project will implement a people-centred and human rights approach, promoting also sustainable development. For the project development, a desk review was carried out, including the last Human Rights Council Periodic Review "Report of the Working Group on the Universal Periodic Review" for both Countries (Ghana, November 2017 and Côte d'Ivoire, May 2019) and related recommendations for the fulfilment of human rights obligations, and the Amnesty International reports for the two Countries.

At all levels, priority will be given to marginalized and vulnerable groups in the target communities, focusing on those who are not protected by law and have few rights. Their participation at different levels and activities is crucial to improve their capacity to cope with the climate stresses and shocks. By incorporating the needs of vulnerable and marginalized groups, the project will raise awareness among national, subnational and local

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<sup>102</sup> [http://www.ins.ci/templates/docss/RGPH2014D.pdf? x\\_tr\\_sl=fr& x\\_tr\\_tl=en& x\\_tr\\_hl=en& x\\_tr\\_pto=nui.sc& x\\_tr\\_sch=http](http://www.ins.ci/templates/docss/RGPH2014D.pdf? x_tr_sl=fr& x_tr_tl=en& x_tr_hl=en& x_tr_pto=nui.sc& x_tr_sch=http)

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Intensify the implementation of poverty-alleviation initiatives that promote the economic empowerment of vulnerable groups, especially women	▲		X	
Strengthen measures aimed at protecting vulnerable persons and ensure their full access to natural resources	▲		X	
Continue its efforts to tackle unemployment, especially of women, young people and those living in rural areas	▲		X	
Continue to strengthen its social programmes in favour of the most vulnerable groups, particularly women and children	▲		X	
Ensure the effective integration of women in all sectors of public life	▲			X
Intensify efforts to increase women's participation in political and public life	▲			X
Continue to promote women's empowerment	▲			X
Make efforts to increase the number of women in decision-making roles and positions	▲			X
Ensure that women, children, persons with disabilities, indigenous and marginalized communities are meaningfully engaged in the development of legislation, policies and programmes on climate change and disaster risk reduction at the local, national and international levels	▲	X	X	X

### Initial Gender Assessment

The purpose of this specific 'gender and youth' section is to demonstrate how this project will comply with the AF Gender Policy (GP), drafting up a framework for the design and implementation of a gender focused project. Understanding the different needs and capacities of women and men in both countries is crucial to effective project implementation. The gender assessment was conducted to have an overview of the gender group differences in terms of their vulnerability, roles and responsibilities as well challenges and opportunities, adding on gender mainstreaming into project activities and identifying a gender-based action plan for the project implementation.

A gender approach and data baseline have been established, against which implementation progress and results can be measured. In line with UN-Habitat's ESSP, the approach includes the identification and promotion of economic, social and environmental benefits and opportunities for women and youth for each project activity.

During project preparation, a 'gender assessment' was conducted to identify potential project gender equality and women's and youth empowerment issues, but also opportunities and possible gender mainstreaming actions in the project. The outcomes are summarized below, as well as arrangements that will be taken during project implementation to comply with the AF GP, including to show how the project integrates a gender-responsive approach and contributes to improving gender equality, the empowerment of women and youth and the project interventions' suitability to meet the adaptation needs of targeted women, men and youth.

### Methodology

During the project preparation phase, potential gender equality and women's and youth challenges and opportunities have been identified through initial qualitative and quantitative data analysis, desk research, surveys and focus group discussions with women, youth and other vulnerable groups. The main purpose of these public consultation sessions was to capture the beneficiaries' points of view and to collect data for a better design of the project with focus on vulnerable groups, women and youth. Specific needs and perceptions of women and youth were identified, as well as potential gender-related risks and impacts, including possible concerns regarding proposed project activities. This participatory approach aimed at ensuring effective representation of the project beneficiaries during the preparation and planning stages, given the concerns and challenges from different stakeholders. The presence of women in the consultation process provided different perceptions on the challenges of women in access to livelihoods and income generation activity problems.

## Specific considerations and phases

### Determinants for gender-responsive stakeholder consultations

Table 656554 Stakeholders consulted to develop gender approach

Type of stakeholder	Specific stakeholder
National government	<b>Ghana:</b> Ministry of Environment, Science, Technology and Innovation (MESTI) (UNFCCC gender focal point) <b>Côte d'Ivoire:</b> Ministry of Environment and Sustainable Development (UNFCCC gender focal point)
UN agencies	UN Women UNICEF UNDP (Gender and Youth)
Community level	Community consultations and focus group discussions with women and youth in Ghana: Big Ada, Wokumagwe, Aklabanya, Goi, Kewunor, Agorkedzi, Dzila, Agbledomi, Whuti, Woe; and in Côte d'Ivoire: Grand-Jack, Azuretti and Mondukou.

\*See also Part II.I and Annex 3.

### Context

At the regional level, Ghana and Côte d'Ivoire are members of the African Union (AU), which has put gender equality on the agenda through its Agenda 2063, its strategy for Gender Equality and Women's Empowerment (GEWE, 2019), its Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (2003), and the Solemn Declaration on Gender Equality in Africa (SDGEA, 2004). The AU's Women, Gender and Development Directorate (WGDD) aims to ensure that member states implement the respective policies and strategies, and provides guidance to countries in this regard. Environment or climate change related topics are integrated into the GEWE strategy under the pillar of economic justice and sustainable development, where the

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strategy document states that “Women are key managers of the environment; bear the brunt of natural disasters and climate change yet are not meaningfully engaged in climate justice initiatives.”

In 2010 the AU declared the Decade for Women 2010-2020. Among its objectives is to “identify Women’s role in mitigating climate change, as custodians of the environment, making sure they benefit from the new global packages to fight climate change”. Adaptation to climate change however is not specifically included.

In addition, Ghana and Côte d’Ivoire are members of ECOWAS. The Supplementary Act on Equality of Rights between Women and Men for Sustainable Development in the ECOWAS Region from 2015 commits all ECOWAS Member states to the promotion of gender equality and equity in all sectors through appropriate policy and legislative formulation and reviews as well as strategic alignment. It includes Article 37 on Environmental Management and Article 38 on Protection against the Negative Impacts of Climate Change.

#### *Main findings of the Gender Assessment*

Women and men in rural areas in Ghana and Côte d’Ivoire are particularly vulnerable as they rely heavily on local natural resources for their livelihood. Therefore, the unequal access to natural resources and lack of participation in decision-making processes increase the vulnerability of women to climate change.

The Gender Assessment aimed at understanding the differences and similarities in women’s and men’s vulnerability to climate change, their capacity to adapt and their role on climate change and risk management measures that are incorporated into the project.

For the purpose of the project, some aspects have been qualified as being crucial for providing an indication on how resilient women are in relation to climate change variability and exposure to risk. Due to limited official data at city level, some general trends at country level were applied to the cities. Additionally, the consultations organized in different communities also confirmed these dynamics. A deeper gender analysis in all communities will be carried out during the implementation of the project.

#### **Ghana**

The total population of Ghana is estimated to be 30.8 million (2021) of which 50.7% are women. The population is very young with 57% being under the age of 25. The proportion of woman who are married (4.4) is higher compared with men’s proportion (3.9). Women have a higher proportion of widowed (0.9), divorce (0.4) and informal living with a partner (0.9) compared with men (0.1, 0.2 and 0.7 respectively). Literacy rate among women (65.6%) is lower than among men (74.1%). The unemployment rate for women above age 15 is 4.4% and 4.1% for men.<sup>104</sup> Subsistence agriculture is prevalent, but levels of severe food insecurity are still high, with 56.9% among women and 54.4% among men.

In February 2021, only 14.6% of seats in parliament were held by women, and only 33.8% of managerial positions are occupied by women. Overall, women are generally have less access to education compared to men. Women and girls aged 10 and older spend around 15% of their time on unpaid care and domestic work, compared to 3.5% for men. According to UN Woman, In Ghana, 9.6% of the employed population are girls below the international poverty line (1.7% higher than for men). Women also face a lack of social protection, violence, stigma and stereotypes. 10.2% of ever-partnered woman and girls have been subject to sexual violence. 86.7% of women aged 15 to 49 participate in decisions about visiting family, relatives and friends, 76.9% own health care, 73.9% make major household purchases and 61.6% take over major decisions in the household.

Three (Akan, Mole-Dagbani and Ewe) out of the nine major ethnic groups constitute more than three-quarters (77%) of the population which are not located in the targeted areas.

#### **Côte d’Ivoire**

The total population of Côte d’Ivoire is estimated to be 13.08 million (2019) of which 49.5% are women. The population is very young with 59.4% being under the age of 25. 27% of women aged 20 to 24 are married or in a union before age 18, and 7% before the age of 15. Even though the literacy rate among women (47.2%) is higher than among men (40.5%)<sup>105</sup>, the employed population below the international poverty line represents 24.1% among women and 19.8% among men. In February 2021, only 11.4% of seats in parliament were held by women, and 56.9% of managerial positions are held by women.

According to UN Woman, In Côte d’Ivoire, 24.1% of the employed population are girls below the international poverty line (4.3% higher than for men).16.4% ever-partnered woman and girls have been subject to sexual violence.

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<sup>104</sup> UN-WOMAN [Country Fact Sheet](#) | [UN Women Data Hub](#)

<sup>105</sup> [Country Fact Sheet](#) | [UN Women Data Hub](#)



Table 666655 Analysis of national-level gender-specific legal, cultural / religious and policy context (relevant for this project)

	Analysis of legal status of women	Analysis of cultural/religious status of women	Supporting policies / initiatives
Ghana <sup>106</sup> SIGI 2019 Category: medium SIGI Value 2019: 35 percent AGEI: 15 out of 52 African countries CEDAW: ratified in 1986	Household responsibilities		National Gender Policy (2015) Policy commitments: Improve women's rights and access to justice Improve women's empowerment and livelihoods Improvement to accountable governance structures and women's leadership and participation Improve women's economic justice and interrogate; and Improve gender roles and relations. Responsible ministry: Ministry of Gender, Children and Social Protection
	The Head of Family Accountability Act, 1985 does not prohibit women from becoming the heads of households and across Ghana there is a combination of female-headed and male-headed households	Religious and customary practices and norms may require a woman to obey her husband, but the law does not mandate it nor does the law name legal consequences for her failing to do so.	
	Secure access to land and assets		
	Women and men do not enjoy the same legal rights to land and non-land assets in Ghana (Ghana's Intestate Succession Law 1991; CEDAW Shadow Report, 2014). In some communities, women, namely widows and daughters are still not allowed to inherit land (CEDAW Shadow Report, 2014) therefore making in practice, inequitable ownership and use of land	Succession law is not applied consistently across the country and largely depends on whether one's ethnic group is matrilineal or patrilineal in nature	
	Secure access to formal financial resources		
	Though there is no law that prohibits women from opening a bank account in Ghana, there is a paucity in consumer protection legislation and other policies that guarantee equal access regardless of gender	As a result of limited access to formal financial resources, women continuing to dominate positions in the informal sector, low wage jobs and unpaid labour. This impacts the economic position and stability for women and implies that there are social and cultural gendered stereotypes and expectations associated with what is considered as "women's work".	
Côte d'Ivoire <sup>107</sup> SIGI 2019 Category: high SIGI Value 2019: 43 percent AGEI: 43 out of 52 African countries CEDAW: ratified in 1995	Household responsibilities		Politique nationale sur l'égalité des chances, l'équité et le genre de Côte d'Ivoire (2009) Does not include a relation between gender and climate change however <b>Programme d'appui du PNUD à la mise en œuvre des Contributions Déterminées au niveau national (CDN) de la Côte d'Ivoire</b> – The Programme defines the objective to elaborate a National Gender and Climate Change Strategy and Action Plan; and includes capacity building for national actors so that they are capable to implement. The Programme also aims at including a gender dimension in the communication strategy about the NDC Several initiatives have been implemented to increase women's access to credit by the government, such as a "Women and Development Fund" which facilitates women obtaining credit; or a programme to facilitate access to financial resources at a reduced cost for female entrepreneurs (Republic of Côte d'Ivoire, 2014).
	The law on Marriage, art. 58 & 59 provides women with the same rights as men to be recognised as the head of household	The CEDAW Committee (2011) highlights the persistence of "patriarchal attitudes and deep-rooted stereotypes regarding the roles, responsibilities and identities of women and men in the family and society".	
	Secure access to land and assets		
	Married women do not have the same rights as married men to own, use, make decisions and use as collateral land, property and other non-land assets (Law on Marriage, art. 79 & 81). All goods acquired, inherited or earned during the marriage are considered common goods (Law on Marriage, art. 76), and they are administered by the husband (Law on Marriage, art. 79)	Discriminatory customary practices restricting women's access to land continue to be applied (World Bank, 2013). Women may have to negotiate with their families or their in-laws to be granted the right to use a land plot for subsistence farming (World Bank, 2013). Customary norms regarding access to land vary across the 60 ethnic groups composing Côte d'Ivoire, but women are in general marginalised from making decisions, controlling and acquiring land (FAO, n. d.). According to traditions, no land can be registered in the name of a woman (FAO, n. d.).	
	Secure access to formal financial resources		
	The law provides women with the same rights as men to open a bank account at a formal financial institution (Law on Marriage, art. 66) and to obtain credit (no restriction found).	The CEDAW Committee (2011) notes that despite initiatives aiming at increasing women's access to credit, women still face barriers to obtain credit due notably to their inability to use land as collateral.	
Workplace rights			
	The Labour Code mandates non-discrimination on the basis of sex in employment and specifically covers hiring, terms and conditions, promotions, training, assignments and termination (art. 4). Additionally, the law mandates equal remuneration for work of equal value (Constitution, art. 14 & 15). However, women are prohibited from entering certain professions; a decree fixes a list of professions prohibited to women (Labour Code, art. 23. 1).	The CEDAW Committee (2011) stresses that working women are concentrated in the informal economy and are thus deprived of their right to social protection. Additionally, there is a pronounced horizontal segregation: women are mostly employed in sectors such as hotel and catering, retail business, cleaning and clothing industry (Republic of Côte d'Ivoire, 2014). Women tend to face barriers in accessing senior positions or decision-making positions in the private and public sector (ICCP, 2015).	

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106 <https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/GH.pdf>  
 107 <https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/CI.pdf>

*Differentiated climate change impacts on men and women and their differentiated capacities do adapt to these, gender division of labour and gender-based power structures.*

In rural areas, women and men depend on natural resources, such as agricultural crops, wood and forest resources, for energy and livelihoods. In face of climate change, the ability of rural communities to obtain these resources is reduced. Biodiversity decline affects people's material well-being and livelihoods, and impacts on security, resilience, health and social relations.

Table 676756 Typical socio-economic activities and division of labour in coastal communities in Ghana and Côte d'Ivoire

Women	Men
Rice cultivation along the coast Small-scale agriculture (vegetables) and small animal farming (chicken etc.) Small-scale fishing activities Fish smoking and drying Selling of fish and other sea products Preparation of food during post-harvest activities	Fishing Shrimp farming Livestock production Cash crop production

Women are usually responsible for collecting water and firewood, cooking and taking care of the household. Women in the communities tend to be responsible for food preparation as part of the post-harvest process. Women often work, for example, in the production of casava dough for self-consumption. It is common for food requiring cooking to be prepared outside the home on small stoves that use wood obtained from the mangroves as fuel. In other circumstances, community stoves are used for food preparation.

Similarly, women's activities also extend to commercial activities. In community markets, women play an important role in the sale of food. In many contexts, deforestation has led to wood being available further away from their homes. As a result, women and girls have less time to fulfil their domestic responsibilities, adding one more complexity to having time to earn money, engage in political activities, study, acquire other skills, etc. Moreover, they become more vulnerable to injuries from carrying heavy loads over long distances and face risks of assault and sexual harassment.

Coastal risks and hazards have a number of negative consequences for the population and especially women, such as inadequate access to water and poor water quality, impacting women as primary givers as well as the agricultural production due to the increase in the overall amount of labour necessary for collecting, protecting and distributing water. As women are responsible for rice cultivation along the coast and small-scale agriculture, they are directly impacted by salt intrusion in the soil, which hinders the soil productivity and alters their livelihoods and income. Women are also more vulnerable to flood risk as they spend more time inside their houses.

Table 686857 Differentiated climate change impacts on men and women

Country	Main sector/Livelihood relevant to the project	Climate change impact	Gender and youth equality and empowerment issues, incl. specific Vulnerabilities / barriers to adapt	Capacity to adapt and opportunities for promoting 'women' and 'youth' as agents of change
Ghana	Small scale agriculture and fishing	*Crops and fisheries loss due to erosion, inundations, salinization, and loss of mangroves *Reduced water quality *As for the sale of agricultural products on markets, climate change could lead to the flooding of specific areas and render the transport of goods from homes to markets more difficult.	High dependence on the agriculture and fishing sector for income (mostly informal); Limited access to land and financing. Youth unemployment Limited say in decisions related to the agricultural production	Build upon existing women and youth organizations. Promote equal participation of men and women in assessment, planning and decision-making.
Côte d'Ivoire	Small scale agriculture and fishing	Floods in livelihoods--generation areas may also increase the prevalence of water-related diseases		Involve traditional leaders ensuring culturally appropriate understanding of 'gender'; Involve women in agriculture and fishing activities and trainings

*Capacity gaps affecting GP compliance*

Table 696958 Capacity of potential executing entities to carry-out gender responsive activities.

Potential executing entity	Skills and expertise to provide gender mainstreaming inputs	Specific requirements execution entities for compliance	Capacity building needs
LUSPA MdP	Limited (as government entity)	Appoint gender focal point Target women and youth for awareness and capacity building activities Identify specific women and youth needs in roll-out project activities	Awareness on requirements Share guidelines for execution entities to comply and to ensure 'opportunities' are identified and exploited

Habitat for Humanity University of Twente - ITC	Experience and skills on climate adaptation with gender approach.	Where realistic, use quota targets for women and youth participation in project activities Highlight specific gender and youth considerations in knowledge management Have a participatory (women and youth monitoring system)	Develop baseline and approach before project start plus report Awareness on requirements Share guidelines for execution entities to comply
Abidjan Convention	Yes (UN core value)		

*Opportunities for promoting 'women' and 'youth' as agents of change*

Through community-level consultations, it was found that women in Ghana and Côte d'Ivoire have considerable knowledge regarding small-scale agriculture (vegetables), small-scale fishing activities, fish smoking and drying and selling of fish and agricultural products. The project aims to mobilize women's traditional knowledge by targeting women in community-level capacity building activities and trainings with a focus on enhancing their capacities for accessing climate change resilient livelihoods. Opportunities include:

- Have women and youth participate in community assessments and planning processes, including monitoring;
- Assign a specific gender focal point for coastal risk management;
- Include women and youth considerations / roles in strategies and plans;
- Target and strengthen women and youth organizations;
- Women to be involved with O & M;
- Protective measures and fair salaries for women and young adults are put in place for job opportunities in the project;
- Women will be encouraged to apply to the project's job opportunities;
- Women and young adults to be involved in climate resilient innovative agriculture activities;
- Adjust the planning of activities and working hours to take into account the availability of women, identifying the most appropriate days and times of the week.

## Project planning and design

Table 707059 Gender baseline, goals and activities. A detailed action plan will be developed at inception phase

Project outputs	Disaggregated beneficiaries, gender specific issues and needs / baseline	Key gender goals (to improve equality)	Entry points (to integrate gender considerations / empower women / youth)	Suitable interventions to meet specific needs and built on women and youth skills and knowledge	Additional activities needed to ensure gender perspective, incl. potential risk mitigation measures	Specific 'gender' output Indicator	Specific 'gender' targets	Budget required and allocated
1.1 Translational Coastal Development Strategy	Limited participation of women and youth and roles are not specified in plans Women and youth should get a chance to be involved in transnational -level planning	Women and youth to be involved in assessments and planning; Appoint a gender and youth focal point; Involve women and youth in O & M and replication options;	Women and/ or youth focus point and groups Minimum percentage of women and youth in participatory activities	Involve women and youth groups and have specific gender considerations in plans	Follow-up on selected focal point  Check women and youth considerations in plans	Woman and youth focal point identified % of women and youth participation in assessment and planning No. of women and youth considerations in plans	1 focal point for women and 1 for youth Women: 40 % Youth: 20 % At least 2 considerations in plans	A dedicated safeguard compliance staff time is allocated under project execution fees
1.2 National and Sub-national Capacity building activities	Limited participation women and youth trained and involved in decision making process on climate change adaptation	Women and youth to be involved in decision making process; Youth to be involved in awareness raising activities	Women and youth quota	Involve women and youth groups in capacity building activities Have specific gender considerations in knowledge management	Use quota if needed Check women and youth participation in activities	% of women and youth participation in trainings, round tables and events.	Women: 40 % Youth: 20 %	Dedicated AF ESP and GP compliance staff time is allocated under MIE management fee for ROAS
1.3 Sub-national spatial development frameworks	Limited involvement women; Women roles and youth are not specified in plans and knowledge management Women and youth should get a chance to be involved in subnational-level planning.	Women and youth to be involved in assessments and planning; Appoint a gender and youth focal point; Involve women and youth in O & M and replication options;	Quota / Steering committee; Consider gender and youth issues and needs	Involve women and youth groups and have specific gender considerations in plans	Follow-up on selected focal point  Check women and youth considerations in plans	Woman and youth focal point identified % of women and youth participation in assessment and planning No. of women and youth considerations in plans	1 focal point for women and 1 for youth Women: 40 % Youth: 20 % At least 2 considerations in plans	These persons will ensure compliance and develop ESP and GP compliance guidelines for execution entities (with support from UN-H HQ)
1.4 Community level adaptation plans	Limited participation women and youth and roles are not specified in plans Women and youth should get a chance to be involved in community-level planning	Women and youth to be involved in assessments and planning; Appoint a gender and youth focal point; Involve women and youth in O & M and replication options;	Women and youth focus point	Involve women and youth groups and have specific gender considerations in plans	Follow-up on selected focal point  Check women and youth considerations in plans	Woman and youth focal point identified % of women and youth participation in assessment and planning No. of women and youth considerations in plans	1 focal point for women and 1 for youth Women: 40 % Youth: 20 % At least 2 considerations in plans	
2.1 EWS	High % women and youth - to be involved in EWS operation, data management, communication and training and participating on the evacuation plans	Women to be involved in EWS, data management, communication campaigns and evaluation plans	Woman and youth focus point	Involve women and youth throughout the different physical interventions that will be implemented, including workshops and participation activities.	Follow-up on selected focal point Use quota if needed	% women and youth participation in actual implementation, operation and maintenance	Women: 55% Youth: 20 %	
2.2 NBS- Drainage	High % women and youth – women to be involved in drainage systems (channels, bioinfiltration facilities)	Women to manage drainage system						
2.2 NBS- Mangrove	High % women and youth - to be involved in mangrove nurseries and planting	Women managing nurseries and mangrove reforestation				% of contracts signed with women and young adults		
2.3. Alternative livelihoods	High % women and youth to be involved in agriculture-related activities - including production, processing and sale	Women managing salt-resilient crops						
3.1 Compilation best practices	Limited participation of women and youth trained and involved in decision making process on climate change adaptation	Women and youth to be involved in decision making process;	Women and youth quota	Involve women and youth groups in activities Have specific gender considerations in knowledge management	Use quota if needed Check women and youth participation in activities	% women and youth participation in trainings, events and cross-fertilization activities,	Women: 40 % Youth: 20 %	
3.2 Cross fertilization activities for experience sharing								
3.3 Join trainings								

### *Gender Conclusion*

In summary, the results show that a large part of the communities living in the proposed project areas are vulnerable to climate change aggravated floods. The most vulnerable groups in the communities in both countries are women and youth. Gender inequality from historical disadvantages, limited rights, lack of adequate access to resources and limited participation in decision-making processes make women more vulnerable to climate change. Additionally, the poverty due to unlimited and inadequate livelihood and low-income generation, as well as men abandoning their family and heaping to the women all responsibilities, especially in times when facing extreme climate change impacts and flood events.

Regarding job opportunities, most women work in the informal sector, including activities in the agricultural and fishing sector. Young adults have a high rate of unemployment due to the lack of skilled labour. They have limited access to land and financing mechanisms.

### *Project implementation*

UN-Habitat aims to promote a gender-responsive and adaptable management approach, which, when needed, allows adjustment based on learning from earlier decisions and interventions and received feedback. This is done through having gender expertise and focal points in place, who should identify challenges, barriers or restrictions that arise during project/programme implementation, which might hinder the equal participation of men and women in activities.

Capacities of execution entities will be built allowing them to provide gender mainstreaming inputs and identify any challenges that arise during project/programme implementation, which might hinder the equal participation of men and women in activities. This requires appointing a gender and youth focal point and having quota targets for women and youth participation in project activities. Gender focal points from the government will be part of the steering committees.

The project Grievance mechanism established will be capable to accept grievances and complaints specifically related to gender equality and women's empowerment. All the components of the projects are designed to challenge the gender-based discrimination culture characterising the target countries, districts and communities. All project-related actions aim at abating flood risk through enhancing social resilience. Therefore, the project and subprojects contribute directly or indirectly to mainstreaming gender and ensuring equal opportunities to build resilience through planning process which women's voices is raising, improving their capacity to adapt to climate change impact on specific subprojects and increasing access to resources.

**Component 1 and 3** refer to spatial planning for coastal adaptation and enhanced coordination to exchange experience and lessons learned between communities, countries and regions. Planned activities under this component will promote the increase of women's engagement in high-level discussions on climate change and adaptation solutions. Furthermore, gender participation in this type of activities will also be mainstreamed through participatory processes in which women's inputs will be collected and the data generated from these results will strengthen the gender approach, promoting gender equity.

**Component 2** defined a set of 3 sub-projects that will be implemented in 21 target communities. To do so, it is necessary to undertake gender mainstreaming to guarantee the women and youth perceptions over accessibility, representation and participation and decision-making power. The subprojects will offer the opportunities for increasing women's engagement in climate change discussion and decision-making process. Gender-based discussion and informed decision will translate into gender-sensitive tools and guidelines for enhancing climate adaptation. Equal salaries between male and female workers will be guaranteed in all subprojects.

The subproject aiming to **establish early warning system** entail the participation and involvement of at least 55% women. The meaningful participation of women will ensure their role as primary household caregivers on recognising and enhancing risks areas and guide inhabitants to develop evacuation plans, identifying routes and safe areas using a participatory approach. While designing and implementing the system, women and vulnerable groups will be actively involved on training on operation the EWS, addressing their own needs and proposing solutions based on their knowledge and capacity. Means of communication will be reachable and understandable to women, children and elderly.

Regarding subproject focusing on NBS for reducing run-off and adapt to floods will enable women to access important information on conservation and protection of disaster and also have their role in adopt climate

change mitigation/ adaptation measure to address risks. Women's engagement in reforestation will also give them the opportunity of take the lead in advocating on sustainable practices and also be better protected from flooding and stagnating water that can generate from water-related diseases. On the other hand **mangrove restoration** will enable women to increase livelihood diversification and improve job opportunities. While developing the implementation plan, the meaningful participation of women will ensure their role and will actively ensure their own needs are properly addressed.

The subproject regarding **adaptive capacity** through **alternative livelihoods** will entail the participation of women in access important information and training and to promote their role on ensuring productive agri-food systems, involving women in agriculture land management and urban expansion controlling. Those activities will also support gender responsive on land rights and security equal agriculture land tenure.

With alternative energy options, women can reduce or limit the use of wood which requires them to walk long distances to extract it. Avoiding this travel reduces their risk to sexual harassment and the risk of injury during the wood extraction process. Similarly, with more energy-efficient equipment and proper training, they can reduce the time spent on processing food or cooking. This gained time can be used for other purposes, for example, to attend school, to spend more time in decision making process, to continue with other income-generating activities or to be able to care for children which can lead to reducing the levels of orphanhood in the communities.

All components are capable either to create jobs through physical interventions or/and to strengthen capacity building through workshops and trainings, hence the project will put in place measures that guarantee the possibility of women to access to job offers and adjusting working hours considering their availability and their household responsibilities. Trainings and participatory activities will pay special attention to the role of women for increasing climate resilience and at the same time establish options to increase their incomes through alternative livelihoods. This is necessary to strengthen as statistical data shows a higher unemployment rate for women than for men.

Providing access to technical knowledge related to climate change adaptation will raise women's interest and create opportunities. Equal participation of women in trainings will also provide space for women's aggregation, enabling dialogue and promoting space to active participation and involvement in climate change decision making.

Additionally, participatory activities will be implemented with the presence of translators to guarantee the participation of women and other groups that do not speak the mainstreamed language in each country. This is necessary since not all population (special women) have not had the opportunity to learn English or French language as part of their education. This approach will help to overcome any language barrier that may hinder a comprehensive participation of the women and other community members.

#### *Performance Monitoring and Evaluation*

The gender responsive management approach includes gender responsive monitoring and evaluation, which has a participatory approach and where 'gender disaggregated data' will be collected and analysed. Key indicators have been identified in Table 30 as part of the **Results framework** for each project component to monitor and measure their effective contribution to gender equity and justice. Where possible, women and youth will be encouraged to participate in monitoring activities as well. For target indicators:

- Since one-to-one balance is not efficient for equal participation and representation, woman participation in **consultations** for the implementation of spatial planning instruments (O.1.1, O1.2 and O.1.4) and overall **local workshops** and **activities** for component 2 will be 55% considering the mean of woman population in Ghana (52%) and Cdl (47%), thus a combined mean of 50%, plus a 5% more. Additionally, 20% of participation will be expected to be youth considering the same population percentage in both countries<sup>108</sup>.
- Trainings that are targeted to officials of both countries in component 3 and capacity building activities for Output 1.2 which include the participation of national entities such as LUSPA and MMDAs will have a **minimum** quota of 40% women. This has been measured by *doubling* the highest current percentage of woman participation in politics in both countries.

<sup>108</sup> Average rate of women population in the 21 communities is 49.8%, value was approximate to 50% for the purpose of this work. Average rate of youth is 38%, for the purpose of this work, youth engagement has been targeted for at least 50% of the youth population: 20%

- Additionally, **beneficiaries** have been identified including the percentage of women and youth that are benefited by sub-national and community-level plans, capacity training activities and overall physical interventions. The number of beneficiaries varies from output to output depending on the characteristics that were considered for a population to be defined as a beneficiary. All the percentage of women beneficiaries are equal or above 49%.

#### *Knowledge Management, Information Sharing and Reporting*

UN-Habitat aims to have a gender responsive knowledge management approach in place, where specific gender considerations are highlighted through reporting on the project/programme's commitment to gender equality and women's empowerment in all outreach, communication and information sharing efforts. The different reports, media and other products will include the diffusion of specific cases explaining how women were benefited by the interventions and overall process.

## **ANNEX 5: ESP ANNEX, INCL. ESMP**

### **Content**

1. Introduction, purpose, method, project overview / summary of project risks management approach
2. Risks screening and categorization
3. Environmental and social impact assessment (quantification)
4. Environmental and social management plan, including monitoring

### **1. Introduction, including summary description of the project/ programme**

#### **1.1. Introduction**

Social and environmental policies are essential tools to prevent and / or mitigate undue harm of projects and project activities to people and their environment. In line with the Adaptation Fund's ESP and UN-Habitat's Environmental and Social Safeguard Policy (ESSP), UN-Habitat and partners are required to categorize the risk of the project as a whole and to manage potential risks and impacts.

#### **1.2. Purpose**

The purpose of this 'ESP annex' is to demonstrate (in an overview) how this project complies to the AF ESP. The annex shows what potential environmental and social risks and co-benefits and opportunities have been identified per project activity, the potential impacts of the risks and how these will be managed. This proposal and related country-specific ESIA-ESMP and consultation reports are being published on UN-Habitat ROAF website (<https://unhabitat.org/environmental-and-social-impact-assessment-esia-for-côte-d'ivoire-under-the-adaptation-fund-project>; and <https://unhabitat.org/environmental-and-social-management-framework-esmf-for-ghana-under-the-adaptation-fund-project> respectively).

#### **1.3. Methodology**

To ensure compliance with the AF ESP, all proposed project activities have been screened against the 15 AF principles (i.e., safeguards) to identify potential environmental and social risks and to assess related potential impacts. Where risks have been identified, impact assessments have been conducted and measures to avoid or mitigate risks identified (+ monitoring arrangements).

In particular, given the structure of the project, a general risk screening was undertaken for each of the three components of the project, and then a detailed risk screening was undertaken for outputs under outcome 2: the outcome comprising all sub-projects, which imply physical interventions. Thus, planned activities under project outcome 2 may entail more risks than the ones under other outcomes and involve soft activities. The overall **risk screening** (general + detailed one for outcome 2) is presented in **section 2 of this annex**. After such risk screening, for all identified risks, a **risk assessment** (defining probability and significance of risk and describing **possible impacts**) was presented by principle under **section 3 of this annex**. Section 4 is core of this annex and presents the ESMP, which recalls the impact assessment and builds on that the mitigation measures and the monitoring measures to address the risks identified through the screening.

The risk screening and the impact assessment were obtained through a combination of: i) desk research undertaken by the team, social experts and environmental experts; ii) meetings and discussions with external experts and representatives from agencies relevant for specific principles (UN Women, ILO, WWF,...); and iii) on-site community surveys and public consultations were used to collect disaggregated data focused on climate change related issues, needs and perceptions of marginalized and vulnerable groups, activity

prioritisation and the identification and verification of potential risks and impacts. Other relevant information regarding consultation processes, gender policy and vulnerable groups, and the detailed description of the subprojects implying physical interventions are presented in annexes 4, 5, and 3 respectively. Once the information was gathered and the ESMP drafted, findings were subject to public consultations/ disclosure in collaboration with communities and local municipalities (details from the consultation process are presented in annex 4).

Besides that, in both Ghana and Côte d'Ivoire accredited consultants prepared country-specific ESAs. Details in these reports, as well material from the ESMP (including risks mitigation measures), will be integrated in (sub)project execution plans, including for construction, operation and maintenance.

An overview / summary of the risk screening and ESMP (most important findings) is presented in section II.L and section III.C of the proposal. All information identified and reported in this annex has been consolidated in the proposal, including in the budget. The completed risk screening sheets for each project activity are available on request.

## **2. Screening and categorization**

### **2.1. General risk screening**

An initial screening and assessment process was carried out to identify and evaluate the environmental and social risks and impacts of proposed activities for the **entire project**. Due to the nature of some of the proposed sub-projects under outcome 2, the entire project has been categorised as **Medium Risk / Category B** (See section II,L in the full proposal). Consequently, an ESMP was developed.

According to Ghana's EIA Regulations, the project has been categorized as "Category B" project as well. An ESIA-ESMP study and report and consultations report have been prepared by an accredited consultant in Ghana. Although impact assessments were not required for all proposed projects under Ghana law, the study considered all project activities to comply with the AF ESP. According to Côte d'Ivoire's EIA Regulations, the project has been categorized as "Category B project as well. An ESIA-ESMP study and report and consultations report have been prepared by an accredited consultant in Côte d'Ivoire. Although impact assessments were not required for all proposed projects under Côte d'Ivoire law, the study considered all project activities to comply with the AF ESP. ESIA have been approved by both governments.

In terms of process, normative, planning and capacity development activities under all components were screened against the 15 AF principles. Table 1 below shows the results of both the screening and ESMP for the three components. More specifically, for the screening part, it is specified whether the risks exist or not, and evidence for existence or non-existence of the risk is presented. When the risk is presents, risk assessment and mitigation measures are proposed, as ESMP, in the following sections of this annex (section 3 and section 4 respectively).

Overall, results from this screening show that potential risks impacts are not considered to be significant, as the project activities were designed to minimise potential risks. Nevertheless, measures will be undertaken to ensure that no environmental or social impacts can occur. General monitoring measures are presented in **Part III, Section C** of the main project document.



Table 717460 Overview of project activities' screening results against the 15 AF risk areas / principles. For more details see country-specific ESIA reports

Principle	Component 1: Strengthen spatial planning for coastal climate adaptation at different geographical scales	Component 2*: Sustainable development, implementation and management of concrete interventions to reinforce the capacities of coastal communities to adapt to the effects of climate change	Component 3: Enhanced coordination and cooperation between Ghana and Côte d'Ivoire for more resilient coastal communities	Overall presence of the RISK within the project
	<p>Outcome 1: National governments, as well as local level staff, have created enabling conditions for enhancing coastal adaption</p> <p>Outcome 1 comprises 4 outputs:                      O.1.1 One Transnational Strategic Spatial Development Plan for the joint planning and management of the of coastal area of Ghana and Côte d'Ivoire                      O.1.2. National and subnational level capacity building activities for strengthening the capacity to address coastal climate adaptation through spatial development frameworks, and measures to increase coastal resilience                      O1.3 Two sub-national spatial development frameworks are developed at district/department level (1 in Ghana and 1 in Côte d'Ivoire)                      O.1.4. Community level adaptation plans (11 in Ghana and 10 in Côte d'Ivoire) are developed with the purpose of spatializing the pilots and ensuring an integrated climate change adaptation strategy within the planning practice of the community</p>	<p>Outcome 2: Municipal staff, communities and local stakeholders have successfully planned and implemented integrated concrete interventions for increasing the climate resilience of their settlements, and have acquired the capacity to manage and ensure durability of the realized pilots</p> <p>Outcome 2 comprises 3 outputs:                      O.2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire                      O.2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities                      O.2.3. Adaptive capacity through alternative livelihoods is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions</p> <p>*Component 2 is the only component comprising physical interventions.</p>	<p>Outcome 3: Local staff, communities, and national governments of the two countries have built common understanding and learned from each other about best coastal adaptation approaches and practices, and are better prepared to face transboundary climate-related hazards</p> <p>Outcome 3 comprises 3 outputs:                      O3.1 Compilation and dissemination of lessons learned and best practices on climate change adaptation in coastal West Africa through the regional knowledge platform of the Abidjan Convention                      O.3.2. Cross-fertilization activities among Ghana and Côte d'Ivoire at different scales for sharing experiences on project's implementation, and fostering cooperation on coastal adaptation                      O.3.3. Joint trainings including technical staff from both countries to improve transboundary governance systems and planning for coastal climate adaptation</p>	
1.Compliance with the Law	<p>Risk: NONE</p> <p>Evidence: The four outputs constituting this component involve no physical interventions: they focus on capacity building and spatial planning frameworks. All the activities under this component occur in collaboration with the national governments of the two countries involved and district level institutions. All entities involved represent public authorities and have the mandated to comply with the law. In addition, it is among the mandate of UN-Habitat to comply with national laws and international standards. There are no obstacles to comply with the law. No additional measures are needed.</p>	<p>Risk: NONE</p> <p>Evidence: This component implies physical intervention, however, does not trigger any risk under this principle (detailed risk screening is presented in is this annex, in section 2.2). There are no obstacles to comply with the law. Furthermore, all entities involved represent public authorities and have the mandate to comply with the law. In addition, it is among the mandate of UN-Habitat to comply with national laws and international standards. No additional measures are required. Detailed risk screening is presented in this annex, in section 2.2.</p>	<p>Risk: NONE</p> <p>Evidence: All outputs of this component are related to joint meetings and trainings and cross-fertilization activities. These activities occur at regional level and involve regional and national institutions. All entities involved represent public authorities and have the mandate to comply with the law. In addition, it is among the mandate of UN-Habitat to comply with national laws and international standards. There are no obstacles to comply with the law. No additional measures are required.</p>	NONE
2.Access and equity	<p>Risk: YES</p> <p>Evidence: Although the project preparation process aims at equally involving all groups representatives and set up mechanisms to ensure equal participation opportunities to women and men, there may still be a risk of non-equal participation in planning activities, and decision-making. Thus, mitigation measures are needed to prevent such risk, which could negatively affect the outputs.</p>	<p>Risk: YES</p> <p>Evidence: Although the project preparation process has been fully participatory, there may still be a risk of non-equal participation / representation and decision-making during the implementation of physical interventions, awareness raising activities and trainings. Thus, mitigation measures are needed to prevent such risk which could negatively affect the outputs. Detailed risk screening is presented in this annex, in section 2.2.</p>	<p>Risk: YES</p> <p>Evidence: Although the project preparation process aims at equally involving all groups' representatives and set up mechanisms to ensure equal participation opportunities to women and men, there may still be a risk of non-equal participation / representation and decision-making during participatory activities, in particular meetings and trainings. Thus, mitigation measures are needed to prevent such risk that could negatively affect the outputs.</p>	YES
3.Vulnerable and marginalized groups	<p>Risk: YES</p> <p>Evidence: similarly, to what is stated under principle 2, due to the usual composition of institutional environments in the two countries, there is a risk that vulnerable and marginalized groups are not properly involved and represented during the planning activities. There is a potential risk that the needs of vulnerable groups (elderly, youth, women, migrants, disabled persons...) will not be heard. Thus, mitigation measures are needed to prevent such risk which could negatively affect the outputs.</p>	<p>Risk: YES</p> <p>Evidence: In the target communities and areas, women, children, elderly, and people with disabilities represent the most marginalized groups. There is a potential risk regarding limited participation of these groups in the project activities and that the needs of these groups will not be heard. Thus, mitigation measures are needed to prevent such risk which could negatively affect the outputs. Detailed risk screening is presented in this annex, in section 2.2.</p>	<p>Risk: YES</p> <p>Evidence: similarly, to what is stated under principle 2, due to the usual composition of institutional environments in both countries, there is a risk that vulnerable and marginalized groups are not properly represented at national and regional levels. There is a potential risk that the needs of vulnerable groups (elderly, youth, women, migrants, people with disabilities...) will not be heard. Thus, mitigation measures are needed to prevent such risk that could negatively affect the outputs.</p>	YES
4.Human rights	<p>Risk: NONE</p>	<p>Risk: NONE</p>	<p>Risk: NONE</p>	NONE

	Evidence: it is in the mandate of the UN to ensure that human rights are respected. All activities have been designed and controlled to support this principle: the project will, on the contrary, increase the quality of life for people and better ensure human rights in practice. To conclude, compliance with the law (see principle 1) of the countries involved reinforces the compliance with this principle.	Evidence: it is in the mandate of the UN to ensure that human rights are respected. All interventions have been designed and controlled to support this principle: the project will, on the contrary, increase the quality of life for people and better ensure human rights in practice. To conclude, compliance with the law (see principle 1) of the countries involved reinforces the compliance with this principle. Detailed risk screening is presented in this annex, in section 2.2.	Evidence: it is in the mandate of the UN to ensure that human rights are respected. All activities have been designed and controlled to support this principle: the project will, on the contrary, increase the quality of life for people and better ensure human rights in practice. To conclude, compliance with the law (see principle 1) of the countries involved reinforces the compliance with this principle.	
5. Gender equality and women's empowerment	Risk: YES  Evidence: Due to present social and institutional structures, there is a possible risk of unequal access to planning activities and high-level decision-making processes. Thus, mitigation measures are needed to prevent such risk that could negatively affect the outputs. Thus, mitigation measures are needed to prevent such risk which could negatively affect the outputs. Activities under this component need to ensure that the voice of women is considered heard. Gender equality is key in terms of participation of women to planning to take into account their needs and perspectives into the decisions made.	Risk: YES  Evidence: Due to present social structures, there is a possible risk that women's opinions may not be considered sufficiently in the design and implementation of the subproject. Furthermore, given their perceived role and status, they may not be encouraged to participate in awareness-raising activities and to apply for job opportunities related to the maintenance of the outputs. The language barrier represents an additional obstacle to women's participation if active translation is not put in place. Thus, mitigation measures are needed to prevent such risk that could negatively affect the outputs. Detailed risk screening is presented in this annex, in section 2.2.	Risk: YES  Evidence: Due to present social and institutional structures, there is a possible risk of unequal and limited access of women to trainings and cross-fertilization activities. Thus, mitigation measures are needed to prevent such risk that could negatively affect the outputs. Activities under this component need to ensure that the voices of women are heard and to promote their active involvement in trainings.	YES
6. Core labour rights	Risk: YES  Evidence: Participation in planning activities and trainings is voluntary and all activities are provided to beneficiaries free of charge. When contracting is required (e.g., for planning activities), national standard clauses will be addressed. For local contracts NOT all the ILO standards and principles are clearly regulated and exercised in the two national labour legislations. Fundamental ILO standards are included in both countries' legislations, but "technical ILO standards" are not. Thus, mitigation measures are needed to prevent linked risks that could negatively affect the outputs.	Risk: YES  Evidence: Risk is present for subproject preparation and implementation, as explained in this annex. In summary, risk is triggered as national labour legislations comply with fundamental ILO standards, but neither of the two countries comply with all "technical ILO standards", excluding for example the minimum age for hiring labour force. Thus, mitigation measures are needed to prevent such risk that could negatively affect the outputs. Detailed risk screening is presented in this annex, in section 2.2.	Risk: NO  Evidence: Consultants and experts being hired in relation to this component will be hired in full alignment with international standards, including ILO standards and UN-Habitat principles. Regarding cross-fertilization activities and trainings, participation is voluntary, and all activities are provided to beneficiaries free of charge. To conclude, no additional measures are required under this component.	YES
7. Indigenous people	Risk: NONE  Evidence: No indigenous people have been identified in the target areas of the planning activities. National governments, district/departments, NGOs, and municipalities have been consulted (see annex 4). No additional measures are required.	Risk: NONE  Evidence: No indigenous people have been identified in the communities where subprojects will be implemented. NGO's, Municipalities, communities have been consulted (see annex 4). No additional measures. Detailed risk screening is presented in this annex, in section 2.2.	Risk: NONE  Evidence: No indigenous people have been identified in target areas. However, in trainings and discussions, possible presence of indigenous people should be addressed to make sure that authorities in charge, together with relevant institutions, ensure that the rights of these people are properly considered during decision-making processes and interventions linked to coastal adaptation.	NONE
8. Involuntary resettlement	Risk: NONE  Evidence: The activities related to this component do not present any risk of resettlement since they do not imply any physical intervention. No additional measures are required.	Risk: NONE  Evidence: The outputs under this component are meant to comply with local and national laws (principle 1) and fundamental human rights (principle 4). The subprojects and physical interventions do not present any risk of involuntary resettlement, apart from potential temporary short term economic displacement due to construction work. Regarding mangrove reforestation activities, the project will not delimit access to reforested mangrove areas and will not actively prohibit access to these areas in order to maintain access to key livelihoods and avoid economic displacement. No additional measures are required. Detailed risk screening is presented in this annex, in section 2.2.	Risk: NONE  Evidence: The activities related to this output do not present any risk of resettlement since they do not imply any physical intervention. However, in trainings and discussions, possible risks of involuntary resettlement could be addressed.	NONE
9. Protection of natural habitats	Risk: NONE  Evidence: Despite the presence of critical natural habitats in some of the project areas, the activities related to this component do not	Risk: YES  Evidence: Physical interventions present potential risk for natural habitats. Even though the activities are meant to restore and protect habitats, some interventions may unintentionally trigger minor risks, through the origin of the	Risk: NONE  Evidence: Despite the presence of the critical natural habitats in some of the project areas, the activities related to this component	YES

	present any risk for the natural critical habitats, since they do not imply any physical intervention.	materials used (e.g., sand and gravel), the location of planting activities and the species used for reforestation. Detailed risk screening of outputs is included in this annex, in section 2.2.	do not present any risk for the natural critical habitats since they do not imply any physical intervention.	
10. Conserving biodiversity	Risk: NONE Evidence: Despite the presence of the areas considered relevant for biodiversity in some of the project areas, the activities related to this component do not present any risk for biodiversity, as they do not imply any physical intervention.	Risk: YES Evidence: Similarly, to what is stated under principle 9, physical interventions present potential risk. Interventions may unintentionally trigger minor risks because of the origin of plants used for NBS and agricultural activities. Detailed risk screening is presented in this annex, in section 2.2.	Risk: NONE Evidence: Despite the presence of the areas considered relevant for biodiversity in some of the project areas, the activities related to this component do not present any risk for biodiversity since they do not imply any physical intervention.	YES
11. Climate change	Risk: YES. Evidence: This component of the project does not imply any physical intervention, hence none of the sectors considered key causes of GHG emissions are involved. However, flights and transportation needed for meetings, trainings and missions will result in GHG emissions. Impact can be considered marginal, but mitigation measures need to be designed and put in place.	Risk: NO The project does NOT involve the following sectors: energy, transport, heavy industry, building materials, large-scale agriculture, large-scale forest products, and waste management. Thus, no greenhouse gas emissions calculation is required. Interventions will require minor logistics from community to community; thus, no major GHG emission from transport will be triggered. Details are presented in this annex, in section 2.2.	Risk: YES. Evidence: This component of the project does not imply any physical intervention. However, flights and transportation needed for meetings and missions will result in GHG emissions. Impact can be considered marginal, but mitigation measures need to be designed and put in place.	YES
12. Pollution and resource efficiency	Risk: NONE Evidence: The activities related to this output do not present any risk of overuse of resources or pollution since they do not imply any physical intervention and no polluting activities are put in place. Similarly, no risk of overuse of energy needs to be considered. To conclude, the only risk related to this principle is related to GHG emissions, already addressed under principle 11. Hence, the only risk under this principle is already taken into account under principle 11.	Risk: YES Risk emerges primarily from the construction phase - required only for outputs 2.2 and 2.3 in terms of unsustainable use of resources and potential pollution. The risks are related to the origin of the sand and gravels needed for the construction of drainage channels and bioinfiltration facilities, the quality of extracted soils, and the types of fertilizers and substances used by farmers, with potential negative impacts on soil, water, and health. Detailed risk screening is presented in this annex, in section 2.2.	Risk NONE Evidence: The activities related to this output do not present any risk of overuse of resources or pollution since they do not imply any physical intervention and no polluting activities are put in place. Similarly, no risk of overuse of energy needs to be considered. To conclude, the only risk related to this principle is related to GHG emissions, already addressed under principle 11. Hence, the only risk under this principle is already taken into account under principle 11.	YES
13. Public health	Risk: NONE Evidence: Considering the guidelines for health assessments provided by WHO ( <a href="http://www.who.int/hia/evidence/doh/en/index5.html">www.who.int/hia/evidence/doh/en/index5.html</a> , see section 2.2 of this annex), the activities under these outputs have a positive or neutral effect on the determinants of public health. More specifically, activities will have an indirect positive impact on democracy, employment/ education, physical environment, and living habitats. Activities will have neutral impact on financial security, social network, access to health care, and belief in the future. Hence, no risk for public health needs to be considered.	Risk: NONE Evidence: Regarding the subprojects and their physical interventions, the activities do not impact on any of the determinants of health listed by WHO. On the contrary, subprojects will positively contribute to some dimensions of public health. Detailed description of the risk screening per subproject is presented in this annex, in section 2.2.	Risk: NONE Evidence: Considering the guidelines for health assessments provided by WHO ( <a href="http://www.who.int/hia/evidence/doh/en/index5.html">www.who.int/hia/evidence/doh/en/index5.html</a> , see section 2.2. in this annex), the activities under this component have a positive or neutral effect on the determinants of public health. More specifically, activities will have an indirect positive impact on democracy, employment/ education, physical environment, and living habitats. Activities will have neutral impact on financial security, social network, access to health care, and belief in the future. Hence, no risk for public health needs to be considered.	NONE
14. Physical and cultural heritage	Risk: NONE Evidence: The activities under this component do not present any risk for heritage since they do not imply any physical intervention. Hence, no related risk needs to be considered.	Risk: NONE Evidence: Some physical and cultural heritage are present within (or in the immediate surroundings) of the project areas of the communities. However, the project includes only small-scale and localized interventions that will not alter the environmental integrity of existing heritage sites. On the contrary, the activities will increase resilience to climate-related hazards, particularly flooding, and thus help to protect the sites from future damage. Detailed description of the risk screening is presented in this annex, in section 2.2.	Risk: NONE Evidence: The activities under this component do not present any risk for heritage since they do not imply any physical intervention. Hence, no risk needs to be considered.	NONE
15. Land and soil erosion	Risk: NONE Evidence: Despite the presence of valuable land or degraded land in some of the project areas, the activities under this component do not present any risk for land degradation and no risk for valuable lands since they do not imply any physical intervention.	Risk: NONE Evidence: There are valuable and fragile lands within the project area. Subproject activities, in particular resilient agriculture activities, are designed to restore and protect land and soil from erosion and degradation. No major excavations will take place, apart from the soils extracted for the construction of drainage channels and bioinfiltration facilities within the settlements. Thus, no risk is triggered. Detailed description of the risk screening is presented in this annex, in section 2.2.	Risk: NONE Evidence: Despite the presence of the valuable lands or degraded land in some of the project areas, the activities under this component do not present any risk of potential land degradation and no risk for valuable lands since they do not imply any physical intervention.	NONE

## 2.2. Details and results of the risks screening process for component 2

Table 7.2.26+ Details and results of the risks screening process for component 2.

Outputs/subprojects	AF Environmental and Social principles potentially triggered
O.2.1. EWS for coping with coastal floods and extreme rain events are fully developed and implemented in collaboration with municipal staff and communities in 21 settlements of Ghana and Côte d'Ivoire	2, 3, 5
O.2.2. Integrated NBS for reducing run-off and adapting to floods and altered rain patterns are developed and implemented in 21 coastal settlements in Ghana and Côte d'Ivoire, in collaboration with local staff and communities	2, 3, 5, 6, 9, 10, 12
O.2.3. Adaptive capacity through alternative livelihoods is strengthened in 21 coastal settlements of Ghana and Côte d'Ivoire, and municipal staff and communities are trained for ensuring sustainable management of implemented concrete interventions	2, 3, 5, 10, 12

### Principle 1: Compliance with the law

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** All issues relating to compliance with the law have been checked and reported in Part II Section F. For such assessments, legal and regulatory frameworks relevant to each output (including the ones under Component 2) were listed and collected, in collaboration with local authorities, national and international experts. Once the collection was completed, possible conflicts between the outputs and the legal and regulatory frameworks were screened, and outputs were reworked to comply.

**RESULT: NO**, risk is not triggered.

**EVIDENCE:** Regarding permissions and EIA, all outputs were duly analysed. EIA for the project were submitted and approved in both Countries. For any further permission that may be required during the implementation phase, all needed steps will be undertaken. Interventions will be planned and implemented in collaboration with the local authorities and district assemblies. Compliance with relevant technical standards in both countries is detailed in Part II.F of the proposal. It is among the structuring aims of the project to fully comply with the local and national legislations, and to possibly even improve the extent to which international standards are met. In addition, the whole process was initialized and will progress in full collaboration with local authorities, which will guarantee and support compliance with local and national legislations. In general, compliance with relevant legislation is outlined in Part II of the proposal, Section F. Where risks occur under Principle 6, Core labour rights, and Principle 12, Pollution Prevention and Resource Efficiency, there could be potential for breaches of the law, however those risks are addressed specifically under the respective sections. As far as the project not being in compliance with local or national laws, this has been checked (Part II, Section E) and no further risks and thus actions are identified).

### Principle 2: Access and equity

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** Beneficiaries were mapped and consultation occurred for all outputs. During the consultation process with both local authorities and the communities (see annex 4), a risk analysis has been undertaken to assess the provision of: (i) fair and impartial active participation by all groups in all planned activities; (ii) equitable access to benefits from all planned activities, in an inclusive manner that does not impede access to any rights and essential services such as basic health, clean water and sanitation, education, housing, safe and decent working conditions and land rights. The same analysis assessed whether the project exacerbates existing inequities, particularly with respect to marginalised or vulnerable groups. The analysis was carried out through surveys during field missions, collecting information and perceptions from local governments, communities and other stakeholders. In conducting the risk screening surveys, social data and information related to the target communities and vulnerable groups (see Annex 2 and annex 5) was gathered, which served as basis for the assessment. The survey results for Anloga/ Keta, Ada East, Ada West, Grand Bassam, and Jacqueline are presented in Annex 4. Survey, consultation and validation of the results were undertaken in each community (see Annex 4).

To understand risks relating to access and equity (and marginalized and vulnerable groups), we must identify that the outputs under Component 2 (which include physical interventions) provide two different types of adaptation services/benefits; general benefits and targeted benefits. Establishment of EWS (output 2.1.), Integrated NBS for reducing run-off and adapting to floods (output 2.2.), and Adaptive capacity through alternative livelihoods (output 2.3) provide general benefits – they benefit the people and infrastructures in the communities. The activities on resilient agriculture of output 2.3, on the other hand, provide targeted benefits, to a pre-defined group of people (selected farmers). For outputs providing targeted benefits, the risk to access and equity (and marginalized and vulnerable groups) is greater.

**RESULT: YES**, risk does exist.

**EVIDENCE:** While assessing equal access to the whole process of the outputs (from the design to the monitoring), it was stated that **for all outputs of component 2**, if no discrimination in terms of benefits delivering is triggered, there is a **potential risk** to not sufficiently take into consideration the specific needs and/or to not actively involve specific community groups given traditional habits and stereotypes for women,

low-educated people, children, and marginal groups in general during the designing phase of the activities. This would be reflected by a lacking representation of vulnerable groups' needs in the activities, and by a limited participation in trainings and awareness-raising activities.

While assessing equal access to the benefits (as mentioned in the "method adopted to conduct the risk screening") deriving from the outputs in terms of flood mitigation, output **2.2 (integrated NBS for reducing run-off and adapting to floods)** provides general benefits to the whole population. Higher risks are present in terms of access to training activities **within outputs 2.1 (Establishment of EWS) and 2.3 (Strengthening of adaptive capacity)**: children and youth (especially those not attending school) may be excluded from trainings and awareness-raising activities, as well as women, elderly and disabled. Regarding **the activities focusing on resilient agriculture**, given their benefitting nature (targeting specific groups), there is a **higher discrimination risk**. Access issues may also arise regarding **indirect benefits from mangrove reforestation, especially regarding natural resources and economic benefits generated through the Blue Carbon Project**. Thus, while flood mitigation provided by mangrove reforestation will equally benefit the entire population in the communities, access to natural resources, including fish and crabs, that develop as a positive consequence of reforestation of mangroves, could trigger discrimination dynamics. This may result in community conflict around environmental resources usage (fisheries, agricultural products and land). Without effective management and mitigation measures, these two activities could lead to preferential access to land and natural resources for some people if management and/or mitigation measures are not taken. Regarding the Blue Carbon Project, discrimination could arise from unequal access to the economic benefits. However, this risk will be very limited as Blue Carbon projects need to follow specific guidelines and procedures from the corresponding carbon certifying entities, which will guarantee transparency and equal access to benefits. Finally, for all outputs comprised by outcome 2 there is a risk during construction and implementation that people will not have equal access to job creation (an indirect benefit deriving from the outputs). Risk management and mitigation measures are required to ensure that people are allowed equal access to the design of the activities, to derived job opportunities, and to the direct and indirect benefits from the outputs.

**WHY RISK COULD NOT BE AVOIDED:** the social composition of the target communities, with the presence of vulnerable and marginalised groups, makes the risk of non-compliance to the principle a possibility.

### *Principle 3: Marginalized and vulnerable groups*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** Beneficiaries were mapped and disaggregated by different vulnerable groups (see annex 5). In addition, consultation occurred for all outputs and was set up in order to provide safe environments for marginalized and vulnerable groups to express themselves. During the consultation process with both local authorities and the communities (see annex 4), a risk analysis was undertaken to: (i) make sure that the marginalised and vulnerable groups are not excluded from any activities as a consequence of lower motivation, weaker social status, sense of disempowerment and/or lack of skills or knowledge; (ii) to take into consideration their needs/perceptions; and (ii) to avoid imposing any disproportionate adverse impacts on marginalised and vulnerable groups especially children, women and girls, older persons, indigenous people, tribal groups, displaced people, refugees, persons with disabilities, and people living with HIV/AIDS or other vulnerable groups. In conducting the risk screening survey, social data and information related to the target communities and, in particular, the vulnerable and marginalised groups within each community (see Annex 5) was gathered, which served as a basis for the assessment. Survey, consultation and validation of the results were undertaken in each community (see Annex 4).

**RESULT: YES**, risk does exist.

#### **EVIDENCE:**

Consultations with local government have repeatedly indicated that there are no migrants in the communities, as all people coming from outside the communities have been naturalized. The communities host different ethnic groups, but no marginalization or conflict involving specific groups have been reported. However, the project will pay attention to the presence of different ethnic groups in each community and to their representation in the project's activities.

Table 737362 Presence of different ethnic groups within the communities

	Ada West	Ada East	Anloga/ Keta	Jacqueville	Grand-Bassam
Ethnic groups	Wokumagbe, Akplabanya and Goi	Kewunor/Azizanya	Agorkedzi/Atiteti, Agbledomi, Dzita, Whuti, Anloga (Lagbati/Lashibi), Woe and Tegbi	Alladians, Ahizi and Avikam	Abouré and N'Zima

Furthermore, all target areas have a high poverty rate. People below the poverty line can be considered a marginalised and vulnerable group; one sub-set of poor people coincides with single mothers/female heads

of families. Other vulnerable groups present in the communities include women, youth and older adults. Gender inequalities from historical disadvantages, limited rights, lack of adequate access to resources and limited participation in decision-making processes make women more vulnerable to climate change. In addition, young adults face high rate of unemployment in both countries.

Similarly to Principle 2, assessing the involvement of marginalised and vulnerable groups (women, low-income households, children, elderly, disabled persons, ...) in the whole process of the outputs (from the design to the monitoring), it should be highlighted that **for all outputs of components**, if no discrimination in terms of benefits delivered is triggered, there is a **potential risk** to not sufficiently take into consideration the specific needs and/or to not actively involve specific community groups given traditional habits and stereotypes for women, low-educated people, children, and marginal groups. This would be reflected by a lacking representation of marginalised and vulnerable groups' needs in the **activities**, and by a limited participation in trainings and awareness-raising activities around ecosystem services, climate change and livelihoods. Another dimension of risk in the process is related to a non-equal access to the job-creation being triggered by all outputs during the implementation phase: thus, vulnerable groups may be excluded through traditional discrimination dynamics. Focusing on the **benefits** deriving from the outputs, higher risks are present in terms of access to training activities **within outputs 2.1 (Establishment of EWS) and 2.3 (Strengthening of adaptive capacity)**: children and youth (especially those not attending school) may be excluded from awareness-raising activities, as well as women, elderly and disabled persons. Considering the high poverty rate in participating communities, the proposal considers the poor to be a marginalised and vulnerable group. If we assumed that people are marginalised and vulnerable because they are discriminated against or excluded, then **risk arises from the outputs of component 2**. In particular, for activities related to Mangrove reforestation, Climate resilient agriculture, Energy alternatives and improved energy-efficiency, poverty could be a source of discrimination (and represent a barrier from accessing a new source of income or livelihoods) without management or mitigation measures. To conclude, power relations between local communities' members being hired for implementing the outputs' activities and vulnerable youth, especially young women, may result in social tensions.

Table 747463 Details on the presence and risks of the main vulnerable groups identified within the project area

	Low-income households	Women	Youth	Older adults	People with disabilities
<b>Vulnerable groups' presence in the project area</b>	Communities have different levels of poverty, ranging from around 6% to 30% of the communities' population. In general, participating communities in Côte d'Ivoire have higher poverty levels than communities in Ghana.	Depending on the locality, women and girls make up 24 % to about 54 % of the communities' population. Regardless of their presence in the project area, the representation of women in local governance structures is comparatively low, with women usually holding less than 10% of seats (in local assemblies, etc.).	Children and young adults represent large shares of the settlements' population: they make up around 45% to 65% of the local population.	Depending on the locality, older adults represent around 4% to 12% of the local population.	Depending on the locality, the percentage of people with disabilities in the communities' populations ranges from 1% to about 7% and is generally higher in Ghana than in Côte d'Ivoire.
<b>Specific risks regarding each vulnerable group</b>	People living below the poverty line are particularly sensitive to potential income or livelihood loss. Furthermore, poverty could be a source of discrimination and represent a barrier from participating in activities and accessing a new source of income or livelihood option.	Given their perceived role and status in both countries, women may not be encouraged to participate in activities and apply for job opportunities. Women also face various constraints that may hinder their participation, including language barriers and a lack of time as they assume important functions in their communities and families that may prevent them from participating in activities.	Young adults face high rates of unemployment in both countries and in the participating communities. Furthermore, children are generally more vulnerable to climate change impacts, as they have less capacity to migrate, and may be exposed to risks of child trafficking or child labor, if no proper mitigation measures are taken.	Older adults are generally more vulnerable to climate change impacts because they are less able to migrate. Failure to adequately address the specific needs of older adults creates a risk that adaptation measures will not be designed to enhance their resilience (e.g., escape routes with steep slopes or obstacles).	People with disabilities are generally more vulnerable to climate change impacts because they are less able to migrate. Failure to adequately address the specific needs of people with disabilities creates a risk that adaptation measures will not be designed to enhance their resilience (e.g., escape routes with steep slopes or obstacles).

**WHY RISK COULD NOT BE AVOIDED:** given the exiting dynamics and the social composition of the target communities, the risk of non-compliance to the principle is a possibility. However, measures to manage the risk are presented in table 5.

#### Principle 4: Human rights

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** During consultation and through the guidance of a social expert in the proposal writing, a risk screening was undertaken to assess possible violations of human rights or the raising of human rights issues during sub-projects' implementation. The Human Rights Council special procedures in each target country have been analysed (see Annex 5).

**RESULT:** **NO**, risk does not exist.

**EVIDENCE:** The screening of Human Rights special procedures and the screening through consultation and site visits resulted in no risks identified of human rights violation or related issues. On the contrary, the implementation of subprojects included under component 2 represents an opportunity for promoting and advocating the full respect of human rights of all community members. In conducting the risk screening surveys, social data, information and perceptions related to the exercise of human rights in the target communities and for the vulnerable and marginalised groups was gathered and analysed (see principle 3). Survey results for the 5 sites (3 in Ghana and 2 in Côte d'Ivoire) are presented in Annex 5. The human

rights considerations relating to land and involuntary resettlement are analysed under the involuntary resettlement principle - below in this annex. However, none of these outputs which require physical activities will trigger any risk of loss of land property or involuntary resettlement. Output 2.2 (Integrated NBS for reducing run-off and adapting to floods) has been designed in a way not to trigger any risk of resettlement, as locations for construction work were selected together with the communities and NBS will not use any inhabited spaces. To conclude, even though child trafficking happens in the area (see benefits section and consultation annex), the issue is strictly related to fishing: poor income families sell their kids to fishermen. The project does not promote fishing activities. On the contrary, it promotes resilient and alternative livelihoods. At the same time, it is in the mandate of the UN to ensure that human rights are respected, and that no child trafficking occurs. Therefore, UN-Habitat and its project partners will sign a policy that does not allow the recruitment and employment of children. In addition, the recruitment process will be designed together with communities and community resource management to ensure that no children are employed, including the implementation of prevention measures such as ID verification.

Table 757564 Of the 18 Human Rights Treaties, Ghana has ratified 11 ones. Ratification Status Declaration\_Côte d'Ivoire (OHCHR)

International Convention on the Elimination of All Forms of Racial Discrimination :1753	Signature: NA, Ratification/Accession: 1973
International Covenant on Civil and Political Rights :1753	Signature: NA, Ratification/Accession: 1992
Optional Protocol to the International Covenant on Civil and Political Rights :1753	Signature: NA, Ratification/Accession: 1997
Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the abolition of the death penalty :1753	Signature: NA, Ratification/Accession: NA
International Covenant on Economic, Social and Cultural Rights :1753	Signature: NA, Ratification/Accession: 1992
Optional Protocol to the International Covenant on Economic, Social and Cultural Rights :1753	Signature: NA, Ratification/Accession: NA
Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: 1980, Ratification/Accession: 1995
Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: NA, Ratification/Accession: 2012
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: NA, Ratification/Accession: 1995
Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: NA, Ratification/Accession: NA
Convention on the Rights of the Child :1753	Signature: 1990, Ratification/Accession: 1991
Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict :1753	Signature: NA, Ratification/Accession: 2012
Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography :1753	Signature: NA, Ratification/Accession: 2011
Optional Protocol to the Convention on the Rights of the Child on a communications procedure :1753	Signature: 2013, Ratification/Accession: NA
International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families :1753	Signature: NA, Ratification/Accession: NA
International Convention for the Protection of all Persons from Enforced Disappearance :1753	Signature: NA, Ratification/Accession: NA
Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: 2014
Optional Protocol to the Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: NA

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Table 767665 Of the 18 Human Rights Treaties, Ghana has ratified 13 ones. Ratification Status Declaration\_Ghana (OHCHR)

International Convention on the Elimination of All Forms of Racial Discrimination :1753	Signature: 1966, Ratification/Accession: 1966
International Covenant on Civil and Political Rights :1753	Signature: 2000, Ratification/Accession: 2000
Optional Protocol to the International Covenant on Civil and Political Rights :1753	Signature: 2000, Ratification/Accession: 2000
Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the abolition of the death penalty :1753	Signature: NA, Ratification/Accession: NA
International Covenant on Economic, Social and Cultural Rights :1753	Signature: 2000, Ratification/Accession: 2000
Optional Protocol to the International Covenant on Economic, Social and Cultural Rights :1753	Signature: 2009, Ratification/Accession: NA
Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: 1980, Ratification/Accession: 1986
Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: 2000, Ratification/Accession: 2011
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: 2000, Ratification/Accession: 2000
Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: 2006, Ratification/Accession: 2016
Convention on the Rights of the Child :1753	Signature: 1990, Ratification/Accession: 1990
Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict :1753	Signature: 2003, Ratification/Accession: 2014
Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography :1753	Signature: 2003, Ratification/Accession: NA
Optional Protocol to the Convention on the Rights of the Child on a communications procedure :1753	Signature: 2013, Ratification/Accession: NA
International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families :1753	Signature: 2000, Ratification/Accession: 2000
International Convention for the Protection of all Persons from Enforced Disappearance :1753	Signature: 2007, Ratification/Accession: NA
Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: 2012
Optional Protocol to the Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: 2012

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Source: <https://indicators.ohchr.org/>

Principle 5: Gender equality and women's empowerment

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**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** a gender-sensitive risk screening was undertaken on site by the team for each community to make sure that: (i) both women and men have equal opportunities to participate in the different activities; (ii) both women and men equally benefit from the outputs and outcomes of the different initiatives, and women are not disproportionately affected; and (iii) the initiatives do not maintain or exacerbate existing gender inequalities and, on the contrary, represent an opportunity for women's empowerment (see Annex 5). Results from the screening were discussed and validated with communities and local authorities (see annex 4). Experts from UN-Women were also consulted.

**RESULT: YES**, risk does exist.

**EVIDENCE:** There is evidence that in both countries (and all 5 locations that communities belong to) women are more vulnerable to climate change and have generally worse socio-economic development outcomes. During floods, for example, women are disproportionately affected, being more likely to be at home when floods hit, having greater responsibility for caring for children and the elderly and less capacity to migrate. Furthermore, women hold generally important responsibilities within the communities, including responsibility to collect wood, to fish and cook, to sell food on local markets, and to take care of children. They are also vulnerable to sexual harassment, especially when traveling long distances in the dark. At the same time, due to current gender dynamics, women find themselves often excluded from decision-making processes. Thus, regarding women's involvement in all activities related to the outputs of component 2 (from preparation and design to implementation and monitoring), there is a possible risk that women's opinions may not be considered sufficiently relevant in the design of these interventions. Furthermore, given their perceived role and status, they may not be encouraged to participate in awareness-raising activities and to apply for job opportunities related to the maintenance of the outputs. The language barrier represents an additional obstacle to women's participation if active translation is not put in place. The implementation of the activities may reinforce existing discriminatory practices against women due to their perceived status, role and traditionally unbalanced gender dynamics. This may result in: (i) women not being consulted; (ii) difficulty in taking part in mangroves plantation and maintenance related works; and (iii) not fully benefitting from the outcomes of the activities (mangroves management and alternatives livelihood). Ultimately, this would reinforce women's disempowerment. Regarding **direct benefits** deriving from activities, all outputs are designed in order to equally benefit men and women. More specifically, benefits for **output 2.2. (Integrated NBS for reducing run-off and adapting to floods)**, in terms of adaptation and response to hazards, and floods in particular, reach all the populations without specific target groups. On the other hand, **outputs 2.1 (Establishment of EWS) and 2.3 (Strengthening of adaptive capacity)** comprise awareness-raising and training activities from which women (especially single mothers) may be excluded if not carefully designed in terms of time of the day. The activity related to climate resilient agriculture provides targeted benefits to a limited number of people, as there will be a process of selecting beneficiaries beyond those who live in a vulnerable area. Women often find themselves excluded from decision-making regarding the farming production system. There are also some specific productions where women are more involved (e.g., manioc, fishing), and they are also strongly involved in the transformation/processing and selling of agricultural products. However, there might be a risk that women participation in climate resilient agriculture activities will be limited, which focus strongly on the production process. Thus, without management and mitigation, there are risks of discrimination against women in this activity. More information about the research and assumptions underpinning gender equality and women's empowerment can be found in the gender policy annex (Annex 5).

**WHY RISK COULD NOT BE AVOIDED:** given the existing dynamics and the social composition of the target communities, the risk of non-compliance to the principle is a possibility. However, measures to manage the risk are presented in table 5.

#### *Principle 6: Core labour rights*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** a risk screening was undertaken by the team, in collaboration with national consultants: (i) to assess the labour laws of each country and evaluate if the minimum ILO standards are reflected; and (ii) to make sure that that minimum ILO standards are taken into account during implementation of the planned activities, as appropriate. Hence, compliance of countries to the ILO Conventions on the fundamental principles and rights at work has been analysed and assessed against the national legislation. Further details about Core Labour rights and National Technical Standards are described in section II.F of the full proposal.

**RESULT: YES**, risk does exist.

**EVIDENCE:** Both Ghana and Côte d'Ivoire ratified all 8 fundamental ILO standards (see <https://www.ilo.org/dyn/normlex/en/f?p=1000:11001>). This means that national labour legislations comply with fundamental ILO standards. However, none of the two countries comply with all "technical ILO



standards”, excluding for example the minimum age for hiring labour force. This means that risks can arise in this process through the potential for exploitative practices, such as hiring school-age children, hiring people on insecure contracts, paying below the minimum wage, discrimination against women or unsafe working conditions. During the implementation phase, the initiatives entail intensive labour which does not require specific technical skills. To promote job creation and capacity building, local people will be hired. Consequently, contracts will be established in the two countries. Since the above-referred national labour laws do not clearly regulate and enforce the ILO standards and principles -especially those related to social security and occupational safety and health - it may result in unfair treatment concerning compensation (living wage), gender equity, health and security standards in relation to dangerous and unhealthy work.

More specifically, during the implementation phase the project will use some community labour for unskilled construction/plantation related tasks (in all outputs of component 2), in accordance with UN-Habitat’s proven People’s Process approach and some specialist hired (i.e., non-community labour). In particular, output **2.2 on Integrated NBS for reducing run-off and adapting to floods** will require around 70 - 80 people hired for several weeks or more. Once the outputs will be implemented, only output 2.2 (Integrated NBS for reducing run-off and adapting to floods) will create proper job opportunities. **Output 2.1 (Establishment of EWS)** will train people to deal with EWS but will not hire them or create contracts. Contracts may be set up by local municipalities and communities to hire the trained people. Regarding activities related to climate resilient agriculture and alternative cooking and energy-efficiency solutions, there will be no hiring process, but the project will support work-related activities, including farming and food transformation. For mangrove reforestation activities, only people taking care of the nursery will be hired after the implementation phase. Hence, contracts will mainly involve the implementation phase and the risk is small. However, UN-Habitat will legally oblige (through Agreements of Cooperation) it’s the executing partners to uphold international labour standards, and both countries have ratified and transposed into law all eight fundamental conventions of the International Labour Organisation. Furthermore, UN-Habitat will ensure that human rights are respected, and that no child labour occurs. Therefore, UN-Habitat and its project partners will sign a policy that does not allow the recruitment and employment of children. In addition, the recruitment process will be designed together with communities and community resource management to ensure that no children are employed, including the implementation of prevention measures such as ID verification.

**WHY RISK COULD NOT BE AVOIDED:** national labour laws do not clearly integrate some of the ILO core principles (technical standards) and rights. Hence there is a potential risk of non-compliance with this principle.

#### *Principle 7: Indigenous people*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** an assessment was undertaken to determine whether the planned activities under the outputs of component 2 bear any risk in relation to indigenous people, according to the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments related to indigenous people. Through the risk screening, the presence of indigenous people was checked (see annex 5).

**RESULT:** **NO**, risk does not exist.

**EVIDENCE:** There are no indigenous people in the project area, as evidenced by the census and reinforced through numerous consultations with both communities and local authorities (who are responsible for registering births). Hence, no further assessment is required to demonstrate compliance.

#### *Principle 8: Involuntary resettlement*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** the project team has repeatedly visited all target sites, most recently in December 2021 (see Part II, Section I). The risk screening was conducted through local consultations, field missions, expert interviews and mapping of the areas of intervention against the location of households and socio-economic activities. In addition, location of all physical activities has been discussed with local communities and located in areas where no one lives, and where no economic activities take place.

**RESULT:** **NO**, risk does not exist.

**EVIDENCE:** Establishment of EWS (output 2.1.) will not imply the construction of any infrastructure or building: on the contrary, the evacuation routes will be selected among existing routes. Regarding Integrated NBS for reducing run-off and adapting to floods (output 2.2.), this output will create bioinfiltration facilities and drainage channels in the settlements in determined sites where no houses or economic activity/service exist. Due to construction work, possible displacement of economic activities (e.g., street vendors) would need to be considered, which would however only be temporary. In the case of identified temporary short term economic displacement, the project will proceed to identify the types of activities concerned, the possibility

to relocate the activity during the construction work and, in case of the impossibility to relocate, compensation for economic losses during construction work. Furthermore, regarding mangrove reforestation activities, these will occur in areas where mangroves already exist—[and on land made available through agreements made with the Chiefs and Elders of the communities](#). The project will not delimit access to reforested mangrove areas and will not actively prohibit access to these areas in order to maintain access to key livelihoods and avoid economic displacement. Thus, rather than prohibiting deforestation, the project will raise awareness and provide alternative sources of income and cooking solutions that will alleviate pressure on mangroves. Lastly, regarding climate resilient agriculture activities of output 2.3, these will only support activities on existing farming land. The only “building” being built will be the nurseries for mangroves, under output 2.2.: consultation and site visits were organized to identify a location on vacant plots, in order not to require any resettlement. Thus, none of the planned activities in the different outputs of component 2 will generate involuntary resettlement. Nevertheless, participatory planning and constant involvement of local residents in decision-making, through regular consultations and by ensuring that grievance mechanisms work well, will minimize any potential negative impact and/or difficulty caused by the planned sub-projects’ activities. Consultations and participatory planning sessions will be organized with the potentially affected community groups under the leadership of the local authorities. Therefore, there is no risk of involuntary resettlement that needs to be considered. No further assessment is required for compliance.

*Principle 9: Protection of Natural Habitats.*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** Presence of protected areas at international, national or local level was assessed through a set of sources and databases, such as: the UNESCO Man and the Biosphere programme, the IUCN website, Environmental Ministries in the two countries, departments in charge of the environment at local level and environment-related stakeholders (NGO, universities, ...) in the five sites (Ada East, Ada West, Anloga/ Keta, Jacqueline and Gran Bassam). The information was cross-checked through community consultation. Based on the definition of critical natural habitat of the Convention of Biological Diversity, some risks were identified, and some critical natural habitats may be harmed. Below, more specifically, possible risks are identified for each subproject.

**RESULT: YES,** risk does exist.

**EVIDENCE:** According to the IUCN red list, there is presence of known biological diversity of importance in the macro area (2000 km<sup>2</sup>), of all 5 sites (Anloga/ Keta, Ada East and Ada West in Ghana; Gran Bassam and Jacqueline in Côte d’Ivoire). There are also two RAMSAR sites (one in Ghana and one in Côte d’Ivoire) within the project areas. However, no UNESCO biosphere reserves are present in Ghana and in Côte d’Ivoire in the project areas. Critical natural habitats identified within the project areas are: **For Ghana (Anloga/ Keta, Ada East, Ada West):** two RAMSAR sites, one in Anloga/ Keta and one next to Ada East; **For Côte d’Ivoire (Grand Bassam, Jacqueline):** one RAMSAR in Gran Bassam. No areas of national or international interest were identified in the surroundings of Jacqueline.

Despite the presence of critical natural habitat, **output 2.1 (Establishment of EWS)** is not triggering any risk of harming natural habitats, as it requires no construction, physical intervention or land-use/land-cover change. Being a soft measure happening within the settlements, no risk is triggered. On the contrary, **output 2.2 (Integrated NBS for reducing run-off and adapting to floods) may trigger risks**, as it will include physical interventions in some spots in order to create drainage channels and bio-infiltration facilities. However, risks are minor, as NBS interventions will be implemented within the settlements, and not in the areas of critical natural habitat. The construction of NBS will use sand and gravels, and the sand will be extracted from surrounding areas. Thus, this activity may trigger risks if sand is collected in an uncontrolled/unsustainable manner that may negatively affect natural habitats in the surroundings. For this, mitigation and monitoring measures will be undertaken. Mangrove reforestation is meant to restore existing mangrove sites and will support critical habitats’ state of health. However, since mangroves are located in wetlands and coastal areas with fragile ecosystems, the inadequate selection of species or the planting location can increase ecological sensitivity and bring disturbances to the local biodiversity. To conclude, **output 2.3 (Adaptive capacity through alternative livelihoods)** will not occur within critical habitats, as the climate resilient agriculture activities, which include physical interventions, will only be implemented in existing peri-urban agricultural plots and simply convert the type of crops and improve soil and water management practices. Hence, no risk will be triggered from this output.

**WHY THE RISK COULD NOT BE AVOIDED:** the sites need to undertake measures to contrast soil erosion and impacts of climate change-related floods. The interventions implemented under output 2.2 (Integrated NBS for reducing run-off and adapting to floods) will create drainage channels and bioinfiltration facilities in specific location. Interventions, which were discussed with both communities and technical experts, were

selected among a set of alternative solutions as the less impacting option for the habitats, compared to other more impacting green-grey or grey measures to contrast floods and soil erosion. Still, it can imply some risks. However, mitigation measures are presented in this Annex (see table 5).

#### *Principle 10: Conservation of Biological Diversity*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** To assess that the activities do not trigger any reduction or loss of biological diversity or introduce invasive species, we assessed presence of species at risks or areas of relevant biological diversity mentioned in the IUCN red list, the UNESCO Man and the Biosphere reserve programme, and the Ramsar sites (Convention on Wetlands of International Importance, called Ramsar Convention). The information was cross-checked through community consultation. Below, more specifically, possible risks are identified for each subproject.

**RESULT: YES,** risk does exist.

**EVIDENCE:** Overall, some areas involved in the outputs are considered relevant for biological diversity. The general risks are the same as outlined above under Principle 9 on the Protection of Natural Habitats. For example, **output 2.1 (Establishment of EWS)** does not trigger any risk, as no physical interventions are included. However, biodiversity specific risks are triggered **by outputs 2.2 (Integrated NBS for reducing run-off and adapting to floods) and 2.3 (Adaptive capacity through alternative livelihoods)**, as the activities make use of plants (for bioinfiltration facilities, vegetated drainage channels, mangroves, and crops respectively). Even though the design takes into account this risk and aims at adopting native and compatible plants (for details, see subprojects descriptions under annex 3), failure and/or introduction of unsuitable species as plants/seedlings/crops carries the risk of damaging biodiversity, including plants, birds, crabs and shellfish that depend on the specific ecosystems/plants/crops for feeding and breeding. In particular, the inadequate selection of species or the planting location for mangrove reforestation can increase ecological sensitivity and bring disturbances to the local biodiversity.

**WHY THE RISK COULD NOT BE AVOIDED:** the areas hosting the RAMSAR sites need to undertake measures to contrast soil erosion and problems derived from impacts of climate change-related floods. The project's interventions, which are being designed in order not to harm biodiversity and not to import non-native species, are the less impacting option for local habitats, compared to grey measures. However, given the existence of possible risks, mitigation measures are presented in this Annex (see table 5).

#### *Principle 11: Climate Change*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** According to the IPCC Guidelines for national GHG inventories, relevant sectors to focus on when considering GHG emissions are energy; industrial processes (with sub-category 'construction') and product uses; intensive agriculture; and waste. The EU (EU, 2014: GHG emissions from waste disposal) considers road transport as an additional sector. The project does NOT involve the following sectors: energy, transport, heavy industry, building materials, large-scale agriculture, large-scale forest products, and waste management. Thus, no greenhouse gas emissions calculation is required. However, the activity focusing on mangrove reforestation (within output 2.2) will allow for carbon sequestration, and is linked to the Blue Carbon Project, as described in output 2.3 (Adaptive capacity through alternative livelihoods). To calculate the carbon sequestration capacity, the project used the A/R Large-scale Methodology AR-AM0014: Afforestation and reforestation of degraded mangrove habitats version 0.3. The measurements include the calculation of total soil organic carbon sequestered and total carbon sequestered in the vegetation. The vegetation capacity of absorbing carbon is constituted by the above-ground and below-ground carbon sequestered. A project effectiveness percentage was defined in order to calculate gross carbon benefit. The gross CO<sub>2</sub> Benefit of the Project per year (tCO<sub>2</sub>e/year) was multiplied by the USD value of a carbon offset in the carbon market.

**RESULT: NO,** risk does not exist.

**EVIDENCE:** Output 2.1 (Establishment of EWS) implies no GHG emissions. In output 2.2 (Integrated NBS for reducing run-off and adapting to floods) includes small and localized construction interventions (drainage channels and bioinfiltration facilities), but no industrial nor massive construction activities will be put in place. In addition, for the drainage channels, no concrete will be used, but gravels and vegetation to stabilize the channels. Reinforcing key channels with gravels can help improve the durability and the proper functioning, but no hard construction activities will be undertaken. Regarding the nurseries for the mangrove reforestation activities, existing nurseries will be used: no construction will be needed. Agriculture-related activities of output 2.3 (Adaptive capacity through alternative livelihoods) involve no large-scale agriculture intervention, nor intensive agricultural practice, so no risk of further GHG emissions needs to be considered. The trenches and irrigation systems that will be installed will adopt low-tech approaches and the two training centres, one per country, will be small scale shelters, and will not require industrial nor massive construction activities. To

conclude, no risk of GHG emitted are to be considered. On the contrary, NBS, mangroves and climate resilient agriculture practices will contribute to improving GHG storage.

#### *Principle 12: Pollution Prevention and Resource Efficiency*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** The risk screening assessed possible presence of activities under the project that require major use of energy or water, or the production of waste and pollutants. In addition, use of materials and resources for outputs' implementation was assessed considering the whole life cycle of materials. Findings were double checked and validated with communities during consultation, and with national and local teams of experts, with expertise in EWS, mangrove reforestation and reforestation, coastal ecosystem restoration, hydrology, and agriculture respectively.

**RESULT: YES**, risk does ~~not~~ exist.

**EVIDENCE:** activities under the outputs apply low-tech approaches and do not imply major use of energy and water, or the production of waste and pollutants. In addition, all subprojects comprise activities of small scale at local level. No risk related to massive use of energy and water, or production of waste will occur. None of the outputs of component 2 will use hazardous materials in the construction processes, so there are no realistic risks of pollution arising from hazardous materials such as asbestos. None of the interventions generate waste or bi-products resulting from their day-to-day operation; thus, risk emerges primarily from the construction phase - required only for outputs 2.2 (Integrated NBS for reducing run-off and adapting to floods) and 2.3 (Adaptive capacity through alternative livelihoods). In particular, **output 2.1 (Establishment of EWS)** triggers no risk, as it requires no construction, no use of resources (or energy), nor production or use of polluting substances. **Output 2.2 (Integrated NBS for reducing run-off and adapting to floods)** triggers potential risk, due to the construction of drainage channels and bioinfiltration cells, which will use sand and gravels for reinforcing the new infrastructure. Based on common practice, sand and gravels are usually provided through local uncontrolled process. This may harm local ecosystems, in particular beaches. Furthermore, the soil extracted for the construction of channels and bioinfiltration facilities may be contaminated with pollutants. Thus, the construction phase of activities under this output may trigger non-sustainable use of resources and potential pollution. Dedicated solutions to prevent such dynamic need to be undertaken. However, due to the small-scale nature of the construction works, the amount of sand and gravels needed, and the quantity of soil extracted will be minor. There are no industrial zones in the areas concerned by this infrastructure, which will lower the risk for the rainwater to get contaminated while running through streets and channels. In addition, the drainage channels' surroundings will be vegetated, which will contribute to improving the water quality by removing pollutants, and some channels will be equipped with biofilters at the end of the channels to allow for phyto-purification before water reaches the lagoons. This will allow to improve the quality of the water discharge, as compared to the present state of things. Mangrove reforestation activities present no risk, as they do not imply major use of energy, or production of waste and pollution. To conclude, **output 2.3 (Adaptive capacity through alternative livelihoods)** may imply the use of fertilizers, but the output will only promote the use of organic fertilizers and only when necessary. On top, training activities will help raise awareness to reduce other types of fertilizers and substances with a negative impact on the soil, water and health. Lastly, activities focusing on energy alternatives and improved energy-efficiency for cooking will look for solutions that simultaneously allow to reduce the use of wood as well as air pollution. There are numerous relevant laws in the area of pollution prevention in the two countries (such as the water use regulation, the effluent discharge act, the pesticide control and management act, the plants and fertilizers act, etc.; see section II F), and subprojects are designed to comply with the law (see the risk screening for principle 1 above in this annex).

**WHY THE RISK COULD NOT BE AVOIDED:** the subprojects represent a risk of overuse of resources because of local common and uncontrolled practices in the construction sector that have to be considered. Furthermore, there is a risk of pollution from contaminated water transported through the drainage channels, due to other polluting activities that may take place near the channels. However, mitigation measures are presented in this Annex (see table 5).

#### *Principle 13: Public Health*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** to assess potential significant impacts on public health of activities, we adopted a screening tool present among the "short guides" listed within the WHO website ("focusing on health", Sweden). The tool is based on a matrix considering as determinants of health: democracy, financial security, employment/education, social network, access to health care centres, belief in the future, physical environment, and living habitats ([www.who.int/hia/evidence/doh/en/index5.html](http://www.who.int/hia/evidence/doh/en/index5.html)).

**RESULT: NO**, risk does not exist.

**EVIDENCE:** Generally speaking, no activity within the project represents any risk for democracy or belief in the future. This is because key principles of the design are participation and equity (with a specific focus on the inclusion of all vulnerable groups), gender aspects were always considered, and freedom of choice pursued. The project will not harm employment or education, but on the contrary provide more opportunities in terms of job creation and capacity building. The activities enhance sustainable financial security as well. Risk related to living habitats are already presented under principle 9 (we considered natural critical habitats equal to the item "living habitats" of the list of determinants of public health). To conclude, outputs were designed with the specific aim of also providing a cleaner environment. For example, in output 2.2 (Integrated NBS for reducing run-off and adapting to floods) biofilters will be introduced to clean the water of the drainage system before it reaches the lagoons, and mangrove reforestation will support the absorption of pollutants. Furthermore, in output 2.3 (Adaptive capacity through alternative livelihoods) climate resilient agriculture activities will promote the use of clean water and will discourage from the use of pesticides and other chemicals that can harm people.

*Principle 14: Physical and Cultural Heritage*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** To assess possible impacts of each subproject on the physical and cultural heritage, the presence of physical and cultural heritage in the five project locations (Anloga/ Keta, Ada East, and Ada West in Ghana; Grand-Bassam and Jacqueline in Côte d'Ivoire) was analysed. The UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage was taken as reference for international recognition of physical and cultural heritage, and the list of World Heritage in Danger as well as the List UNESCO World Heritage was adopted.

**RESULT: NO**, risk does not exist.

**EVIDENCE:** Regarding national and locally recognized heritage identified within the project areas, the list comprises for Ghana the Okor Forest at Anyamam, a fort in the surroundings of Ada East, and two monuments in Anloga and Antorkor. Furthermore, the forts and castles of the Volta, Greater Accra, Central and Western Regions were inscribed in the list of UNESCO World Heritage in 1979. However, none of the forts and castles listed as part of the UNESCO World Heritage site is located within the communities of the project. In Côte d'Ivoire, 38 buildings have been classified as historical monuments in the city of Grand-Bassam, and the Historic Town of Grand-Bassam was inscribed in the list of UNESCO World Heritage in 2012.

UNESCO's monitoring and assessment of the state of conservation of the UNESCO World Heritage sites in Ghana and Côte d'Ivoire have shown that the localities and their heritage sites are exposed to climate-related risks, including sea level rise and flooding. The proposed project will contribute to the preservation of landscapes, heritage sites and cultural heritage within the communities. In addition, construction under the sub-projects involves small-scale and localized interventions that will not alter the environmental integrity of existing heritage sites. On the contrary, the activities will increase resilience to climate-related hazards, particularly flooding, and thus help to protect the sites from future damage.

Table 77766 Presence of cultural heritage within the communities

	Ada West	Ada East	Anloga/ Keta	Jacqueline	Grand-Bassam
<b>UNESCO world heritage sites</b>	The Forts and Castles, Volta, Greater Accra, Central and Western Regions were inscribed in the list of UNESCO World Heritage in 1979. The "collective historical monument" is constituted of numerous castles and forts, some of which are partially in ruins. However, none of the forts and castles listed as part of the UNESCO World Heritage site is located within the communities of the project.			No UNESCO heritage sites	The Historic Town of Grand-Bassam was inscribed in the list of UNESCO World Heritage in 2012. This site includes the communities of Azuretti (N'zima) and Quartier France.
<b>National and local heritage</b>	The Okor Forest by Anyamam is recognized as cultural heritage site within the district.	Fort Kongenstein is located in Ada, within the Greater Accra Region. The fort was in the process of being made a national cultural heritage site, but it is not being followed up on for now.	Torkor – Atorlia at Anloga: The idea of this place is to establish a monument to illustrate how punishments were inflicted on perpetrators in the past. Atorkor slave market: The assembly intends to re-engineer the existing slavery monument, to upgrade and transform it into an international UNESCO accredited slavery centre.	Jacqueline does not have any buildings officially classified as national monuments. However, in addition to its beaches and its characteristic natural environment, the locality is strongly linked to the traditions and customs of the lagoon population, especially artisanal fishing, which also constitutes one of its tourist attractions.	38 buildings have been classified as historical monuments by the decree n°91-23 of January 30, 1991, on the classification of historical monuments of the city of Grand-Bassam, modified by the decree n°2012-489 of June 7, 2012, including the Old Governor's Palace, the Old Court House, the Town Hall, etc.

*Principle 15. Lands and Soil Conservation*

**METHOD ADOPTED TO CONDUCT THE RISK SCREENING:** To assess possible impacts of each subproject on soil conservation, we focused on two aspects: soil conservation (as defined by FAO: "Avoiding changes in the health status resulting in diminished capacity of the ecosystem services provisioning"); and conservation of valuable lands. For the first aspects, we checked possible fragile soils and identified subproject activities that may diminish the capacity of the soil to provide ecosystem services. We based the identification of fragile soils on the knowledge of local experts from the municipality and other soil-related departments. We mainly looked at coastal soils, soils located on steep slopes, rocky areas with very thin

soils, and areas showing evidence of soil erosion due to lack of water, water erosion during run-off, or deforestation. In the second case, we mapped the presence of valuable lands, such as agricultural land or ecosystems crucial to the resilience and livelihoods of the city. We also considered as valuable land areas mentioned under principle 9 and 10 due to their biodiversity value or relevance as habitat: we checked possible fragile valuable lands and identified activities included in the subprojects that may convert them or damage them. In this case again, we based the identification of fragile soils on the knowledge of local experts from the municipality and other environmental-related departments.

**RESULT: NO**, risk does not exist.

**EVIDENCE:** Fragile soils and valuable lands were identified as follows: For Ghana (Anloga/ Keta, Ada East, and Ada West): for all three sites, the coastal system needs to be considered as being extremely fragile; For Côte d'Ivoire (Grand Bassam and Jacqueville): similarly, to the case of Ghana, for both sites, the coastal system needs to be considered as being extremely fragile. However, for both countries, the activities under the component 2 are meant to protect and improve the state of these systems, by preventing erosion of soils and improving soil quality. Thus, despite the presence of fragile soils and valuable lands in the project areas, the project ensures that no negative impacts on land and soil conservation will result from project activities. All proposed project activities of component 2 aim to enhance sustainable land and soil use, especially by improving agricultural practices through output 2.3 (Adaptive capacity through alternative livelihoods). Regarding output 2.1 (Establishment of EWS), as explained above, it requires no construction nor intervention on the land as it constitutes a soft activity. Regarding output 2.2 (Integrated NBS for reducing run-off and adapting to floods), the activities, occurring in areas characterized by fragile soils, contribute to the protection and restoration of the soil and will prevent future erosion of soils. No major excavations will take place, apart from the soils extracted for the construction of drainage channels and bioinfiltration facilities within the settlements. Thus, no risk is triggered. On the contrary, the activities will support soil protection and improve the state of these systems.

### 3. Environmental and social impact assessment

To provide a better understanding of the interlinkages between impacts, potential risks and mitigation measures, the impact assessment is presented in Table 67 of this annex (below).

#### 4. **Environmental and Social Management Plan**

Content:

- 4.1. Allocated roles and responsibilities of the environmental and social risk management/implementation of the ESMP
- 4.2. Opportunities for adaptive management
- 4.3. Arrangements to supervise executing entities for implementation of ESMP
- 4.4. Budget provision to manage environmental and social risks / implement of the ESMP
- 4.5. Measures to avoid, minimize, or mitigate potential risks (presentation of the overall ESMP)
- 4.6. Risks monitoring system/indicators
- 4.7. Grievance mechanism

#### 4.1. Allocated roles and responsibilities for environmental and social risk management / implementation of the ESMP

The Regional Project Supervision Unit will be responsible for environmental and social risks management, including implementation of the Project ESMP. An AF and UN-H policies and reporting compliance expert will be part of the RPUI. This expert will also supervise Project Execution Entities on the implementation of the Project ESMP. Guidelines showing how to comply to the AF ESP and GP will be shared with all execution entities and they will be guided on process, including monitoring. Also, a detailed action plan to comply to ESP and GP will be developed during the project inception phase.

A Safeguarding system compliance expert will also be part of the RPUI. Monitoring staff part of the RPUI will require having expertise in social risk management and be familiar with the AF safeguarding system. The RPUI will be backstopped by UN-Habitat HQ, with experts on climate change, human rights, environmental and social risks managements and gender policies.

In both Ghana and Côte d'Ivoire government stakeholders responsible for compliance to national environmental and social policies and standards will be part of the Regional- and National-level Steering Committees, as well as government gender focal points.

This ESMP will allow country-specific management of the potential risks and impacts identified under in country-specific ESIA and ESMP reports (see link at beginning of this document).

All project-related ToR's and contracts will include clauses stating contractors will need to comply to the AF ESP, especially principle 1 (law), 4 (human rights), 5 (gender) and 6 and 13 (labour and safety) and the AF GP. This includes:

- **Principle 1:** References to standards and laws to which the activity will need to comply will be included in all legal agreements with all sub-contractors, including steps and responsibilities for compliance.
- **Principle 4:** References to relevant Human's rights declarations will be included in all legal agreements with all sub-contractors.
- **Principle 5:** Reference to relevant gender policies
- **Principle 6:** Employment and working conditions following ILO standards will be included in legal agreements with all sub-contractors.
- **Principle 13:** Ensure that ICSC international health and safety standards are clearly accessible and understood. E.g., by putting clearly visible signs detailing health and safety standards to be located at projects sites and by supplying protective equipment.

#### 4.2. Opportunities for adaptive management

When changes in project activities or additional activities are required, these will need to go through a new risks screening and impact assessment process in compliance with AF, UN-Habitat and national policies and standards. When this is required, this will be led by the RPUI and the Regional-level Project Steering Committee would need to approve the changes. As for opportunities, this would be possible following above process. With the Covid-situation, physical meetings may need to be online. Budget savings may be re-allocated through approval of the steering committee and if over 10 percent change, by the AF.

#### 4.3. Arrangements to supervise executing entities for implementation of ESMP

Annex Table 26 Capacity of potential executing entities to carry-out gender responsive activities

Potential executing entity	Skills and expertise to provide gender mainstreaming inputs	Specific requirements execution entities for compliance	Capacity building needs
ITC (University of Twente)	Yes (Project experience)	Appoint a focal point for ESP and gender compliance	Awareness about requirements
Habitat for Humanity	Yes (Project experience)	Capacity to comply with the AF ESP and implementation of the ESMP guided by UN-Habitat	Share guidance for executing entities to comply and ensure "opportunities" are identified and acted upon.
Abidjan Convention	Yes (UN core value)	Capacity to comply with the AF GP	Support development of baseline and approach prior to project start and reporting requirements

#### 4.4. Budget provision to manage environmental and social risks / implement of the ESMP

Dedicated safeguard compliance staff time is allocated under project execution fees for USD 30,000. Also, dedicated AF ESP and GP compliance staff time is allocated under MIE management fee for ROAF of USD 170,000. These persons will ensure compliance and develop ESP and GP compliance guidelines and action plans for execution entities and guide these execution entities through the process, including baselines and reporting requirements. Besides these measures are budgeted, through the execution entities, to supervise and monitoring proposed project activities, including e.g., water sampling, remote monitoring system, etc. Costs for risks mitigation measures are integrated in the budget, including e.g., monitoring of the implementation of the subprojects, including the origin of materials (sand and gravels) and plants, soil and hydrodynamics analysis.

#### 4.5. Measures to avoid, minimize, or mitigate potential risks

Table 787867 Overview of project activities' screening and assessment results against the 15 AF risk areas / principles, including measures to avoid or mitigate risks / impacts

Risks identified through the screening, by principle	Potential risk impact assessment	Measures to avoid or mitigate the impacts	M&E arrangements indicator and method	Responsibility and frequency
<p><b>Principle 2: Access and equity</b></p> <p>For all outcomes</p>	<p>For all outcomes (except outcome 2), the probability of risk is low, as all institutions involved have the mandate to ensure that equity and access are guaranteed into decision-making and participation processes, capacity building activities, and spatial planning processes. In addition, UN-Habitat, in collaboration with other UN agencies, will ensure that all activities are designed to meet this principle (which is also aligned with the UN SDGs). However, although the project preparation process has been fully participatory, there may still be a risk of insufficient participation / representation in decision-making processes, physical interventions, awareness raising activities and trainings. The significance of the impact was thus assessed as <b>"medium significance"</b>.</p>	<p>For all outcomes (except outcome 2), different stakeholders and groups will be mapped. Organization of all activities will be designed to ensure equitable access to different groups, in particular to vulnerable groups. Decision making processes for the development of spatial plans and frameworks (component 1), will be designed taking into account the views and needs of different groups (as already initialized in the preparation of the project through the consultation process). In addition, the project will put a specific focus on equal access to trainings and capacity building activities. To conclude, the importance of equity and access will be highlighted and discussed in transnational activities for cross-fertilization and lesson-learned mainstreaming.</p>	<p>Indicators: % of women per meeting/training Presence of marginal-groups representatives</p> <p>Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -meetings' attendance lists and minutes -Grievance reports</p>	<p>UN-H in cooperation with execution entities / government entities</p> <p>For all outcomes (except outcome 2): every 6 months.</p>
<p>Dedicated zoom on Outcome 2 to better detail mitigation measures for the physical interventions within the subprojects</p>	<p>For outputs under outcome 2, the probability of risk is positive, and significance was assessed as <b>"medium"</b>. Flood mitigation measures implemented will equally benefit and reduce exposure to climate hazard for all inhabitants of the communities. However, there may be a risk that people cannot equally access all the benefits of the project. In particular, if women and vulnerable groups find themselves excluded from trainings, generated income sources and job opportunities, the safety and economic situation of these groups will be affected. Access issues may arise for job opportunities created under outcome 2 (for construction and mangrove reforestation), which will allow for an income of approx. 600 USD per month for five months (see budget for more details). Furthermore, this risk also exists for indirect job opportunities, economic and livelihood benefits deriving from the mangrove reforestation activities, including from the Blue Carbon project and from natural resources (fish, crabs). These situations may result in community conflict around environmental resources and preferential access to job opportunities for some people if management and/or mitigation measures are not taken.</p>	<p>Regarding outcome 2, a risk of non-equal participation / representation and decision-making has been identified. Implementation activities will be presented to the different communities and their views will be taken into account in the final design and implementation of the activities and physical interventions. In addition, monitoring and controls will be set up to ensure that implementation activities continue including representatives from all groups of the communities throughout the project (with a particular focus on vulnerable and marginalized group: see principle 3 below). Regarding the Blue Carbon project, the creation of specific committees will be facilitated which will oversee the project and design implementation to follow the procedures and guidelines of carbon certifying entities, which will allow to guarantee transparency and equal access to economic benefits. Finally, as described under section 4.7 (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for people affected by the project to safely express their concerns regarding equity and access to project benefits. These options, which will be provided in the local languages, will offer the opportunity for people affected by the project to express their concerns and provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.</p>	<p>Indicators: % of women in participatory activities and among beneficiaries Presence of marginal-groups representatives</p> <p>Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -meetings' attendance lists and minutes -Grievance reports</p>	<p>For outcome 2: every 3 months.</p>
<p><b>Principle 3: Marginalized and vulnerable groups</b></p> <p>For all outcomes</p>	<p>Similarly, to principle 2, in the case of principle 3 the probability of risk is low for all outcomes (except outcome 2), as all institutions involved have the mandate to ensure that vulnerable groups are included into participation processes, and capacity building activities, and that their needs are considered for decision-making and spatial planning processes. In addition, UN-Habitat, in collaboration with other UN agencies, will ensure that all activities are designed to meet this principle. In communities in Ghana, poverty rate is low (around 3% of the population) while in Côte d'Ivoire it reaches 30%. The youth population represents approximately 40% in Ghana and 60% in Côte d'Ivoire. No migrants or refugees are present in the communities. However, disabled people and people affected by HIV represent respectively around 4% and 2% in Ghana, and 1% and 2.5% in Côte d'Ivoire. Overall, these numbers show the existence of vulnerable groups in the targeted communities that need to be considered. If the project fails to fully achieve inclusion of all vulnerable groups in the activities and their access to the project's benefits, significance of the impact was assessed as <b>"medium significance"</b>.</p>	<p>For all outcomes (except outcome 2), activities under components 1 and 3 will ensure that the voice of the most marginalized and vulnerable groups is heard. Additionally, a specific focus will be put on the inclusion of most vulnerable and marginalized groups in the cross-fertilization and lesson-learned mainstreaming activities.</p>	<p>Indicators: % of women per meeting/training Presence of marginal-groups representatives</p> <p>Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -meetings' attendance lists and minutes -Grievance reports</p>	<p>UN-H in cooperation with execution entities / government entities</p> <p>For all outcomes (except outcome 2): every 6 months.</p>
<p>Dedicated zoom on Outcome 2 to better detail mitigation measures for the physical interventions within the subprojects</p>	<p>For outputs under outcome 2, the probability of risk is positive, and significance was assessed as <b>"medium"</b>. There may be a risk that marginalized and vulnerable people can't equally access all the benefits of the project. In particular, marginalized and vulnerable groups might find themselves excluded from trainings, generated income sources and job opportunities, which can affect their safety and economic situation. Access issues may arise for job opportunities created under outcome 2 (for construction and mangrove reforestation), which will allow for an income of approx. 600 USD per month for five months (see budget for more details). Furthermore, this risk also exists for indirect job opportunities, economic and livelihood benefits deriving from the subprojects. It is key to remember that given the poverty rate of the target areas, the poor are also considered a vulnerable group. This group is particularly sensitive to potential income loss. In particular, for activities related to Mangrove reforestation, Climate resilient agriculture, Energy alternatives and improved energy-efficiency, poverty</p>	<p>Regarding outcome 2, detailed mapping of the most vulnerable people in the participating communities will be realized, in order to be sure to include them in the different activities and trainings of outcome 2. Final specifications of the subprojects will be presented and discussed with representatives from the most vulnerable/marginalized groups/households (in particular women, youth, elderly and disabled persons). Work plans and indicative timeframes of the activities will be presented and discussed in "safe" platforms. Communication channels with vulnerable groups/households will be established. Requirements for employment (for the different jobs and positions of the project) will be drafted in consultation with representatives of vulnerable groups to ensure equal access to job opportunities. As described under section 4.7 (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for people affected by the project to safely express their concerns. These options, which will be provided in the local languages, will offer the opportunity for people</p>	<p>Indicators: % of women per meeting/training Presence of marginal-groups representative</p> <p>Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -meetings' attendance lists and minutes</p>	<p>For outcome 2: every 3 months.</p>



	could be a source of discrimination (and represent a barrier from accessing a new source of income or livelihoods) without management or mitigation measures.	affected by the project to express their concerns and provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.	-Grievance reports	
<b>Principle 5: Gender equality and women's empowerment</b> For all outcomes	For all outcomes (except outcome 2), the probability of risk is low, as all institutions involved have the mandate to ensure that gender equality is guaranteed for decision-making and participation processes, capacity building activities, and spatial planning processes. In addition, UN-Habitat, in collaboration with other UN agencies, will ensure that all activities are designed to meet this principle (which is also aligned with the UN SDGs). However, in Ghana and Côte d'Ivoire, in most institutions, women remain in supportive positions such as typists, secretaries, receptionists and caterers. Given these numbers and the existing trends, women could be excluded from decision-making and capacity building activities. This would further perpetuate the current gender dynamics in the two countries, not allowing women to pursue specific careers, limiting their decision-making power and hindering them from attaining higher salaries. Thus, significance has been assessed as "medium".	For all outcomes (except outcome 2), activities will ensure that the voice of women is included and heard. Organization of all activities will be designed to ensure gender equality and promote the participation of women above current levels. Decision-making processes, trainings, and activities for the development of spatial plans and frameworks will directly involve women in the different steps and processes and take into account their needs (as already initialized in the preparation of the project through the consultation process). The project will assign a specific gender focal point for coastal risk management. In addition, the trainings and capacity building activities under the different components will be used to ensure that women are involved in the process. To conclude, the importance of gender equality will be highlighted and discussed in transnational activities for cross-fertilization and lesson-learned mainstreaming.	Indicators: % of women per meeting/training % of contracts issued to women  Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -review of contracts signed -meetings' attendance lists and minutes -Grievance reports	UN-H in cooperation with execution entities / government entities  For all outcomes (except outcome 2): every 6 months.
Dedicated zoom on Outcome 2 to better detail mitigation measures for the physical interventions within the subprojects	For outputs under outcome 2, the probability of risk is positive, and significance was assessed as "medium". Considering the current gender dynamics in the two countries, there may be a risk that women can't equally access all the benefits of the project and that women might find themselves excluded from trainings, participatory activities, generated income sources and job opportunities, which can affect their safety and economic situation. In particular, given their perceived role and status, they may not be encouraged to participate in awareness-raising activities and to apply for job opportunities related to the maintenance of the outputs. The language barrier represents an additional obstacle to women's participation if active translation is not put in place. Access issues may thus arise for job opportunities created under outcome 2 (for construction and mangrove reforestation), which will allow for an income of approx. 600 USD per month for five months (see budget for more details). Furthermore, this risk also exists for indirect job opportunities, economic and livelihood benefits deriving from the subprojects. Considering that in the target areas, female population is slightly above 50% in communities in Ghana, while it is around 25% in communities in Côte d'Ivoire (see annex 4), the risk would impact between 25% and 50% of the populations in the communities.	Regarding outcome 2, in general, to ensure not only their formal presence, but women's real contribution to the subprojects, community associations and group leaders will be made aware of the role of women in the communities/households and the importance to capture their perceptions and needs. Furthermore, to ensure that women have equal opportunities to participate in the project's trainings and participatory activities, the planning of activities will take into account the availability of women in order to identify the most appropriate days and times of the week. The presence of translators will also be guaranteed in all participatory activities, so that women can overcome any language barriers that may prevent them from actively participating. Regarding the jobs created through the project, protective measures and fair salaries will be put in place, and women will be encouraged to apply. During implementation, working hours will be adjusted to allow women to meet their household responsibilities. Furthermore, in order to strengthen the role of women in the agricultural sector and allowing them to learn about climate resilient agricultural practices, specific attention will be placed on their active involvement in the trainings. As described under section 4.7 (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for women affected by the project to safely express their concerns. These options, which will be provided in the local languages, will offer the opportunity for women affected by the project to express their concerns and provide suggestions on how to improve project design and implementation, especially regarding gender equality and women's empowerment, which will be reviewed and taken up by the project implementation team.	Indicators: % of women per meeting/training % of contracts issued to women  Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -review of contracts signed -meetings' attendance lists and minutes -Grievance reports	For outcome 2: every 3 months.
<b>Principle 6: Core labour rights</b> For all outcomes	For all outcomes (except outcome 2), the probability of risk is low, as all institutions involved have the mandate to ensure that core labour rights are guaranteed for decision-making, planning and participatory processes, as well as capacity building activities. In addition, UN-Habitat, in collaboration with other UN agencies, will ensure that all activities are designed to meet this principle (which is also aligned with the UN SDGs). However, for activities addressed at national and subnational level, it is key to remember that Ghana and Côte d'Ivoire have not included all key ILO technical standards in their legislation. Hence, there could be legal contracts that do not comply with ILO standards, such as minimum labour age. This could result in people working in unsafe environments, minors being hired and unfair salaries. It is thus crucial to ensure that any contract being issued under the project complies with international standards. Significance of the impact was assessed as "medium significance".	For all outcomes (except outcome 2), when contracting is required, national and international standard clauses will be used as a reference. In agreement with the governments and communities, the project will require the inclusion of minimum social security, occupation safety and health standards when contracting community members and local enterprises. All the employment contracts will be in written documents and registered according to the countries' labour law and conditions. Finally, "safe" spaces will be established for workers to share their complaints and dissatisfactions.	Indicators: N of contracts being registered % of contracts issues to women % of contracts issued to minors % of contracts issued to marginal groups N of people injured during working hours Average number of working hours per day  Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -review of contracts signed -Grievance reports  Entities in charge of issuing contracts will have to monitor the indicators above and report on them.	UN-H in cooperation with execution entities / government entities  For all outcomes (except outcome 2): group): every 6 months.
Dedicated zoom on Outcome 2 to better detail mitigation measures for the physical interventions within the subprojects	Regarding outcome 2, the probability of risk is positive, and significance was assessed as "medium". Around 100 people will be hired for the implementation of subprojects. Ghana and Côte d'Ivoire have not included all key ILO technical standards in their legislation. Hence, there could be a risk that contracts do not comply with ILO standards, such as minimum labour age. This could result in people working in unsafe environments, minors being hired and unfair salaries. It is thus crucial to ensure that all contracts being issued also comply with international standards. Significance of the impact was assessed as "medium significance".	Regarding outcome 2, in agreement with the governments and communities, the project will require the inclusion of minimum social security, occupation safety and health standards when contracting community members and local enterprises. All the employment contracts will be in written documents and registered according to the countries' labour law and conditions. UN-Habitat and its executing project partners will also sign an agreement to uphold international labour standard and that does not allow the recruitment and employment of children. In addition, the recruitment process will be designed together with communities and community resource management to ensure that	Indicators: N of contracts being registered % of contracts issues to women % of contracts issued to minors % of contracts issued to marginal groups N of people injured during working hours Average number of working hours per day	For outcome 2: every 3 months.

		no children are employed, including the implementation of prevention measures such as ID verification. Finally, "safe" spaces will be established for workers to share their complaints and dissatisfactions. As described under section 4.7 (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for workers recruited for the project to safely express their concerns. These options, which will be provided in the local languages, will offer the opportunity for workers to express their concerns and provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.	Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -review of contracts signed -Grievance reports  Entities in charge of issuing contracts will have to monitor the indicators above and report on them.	
<b>Principle 9:</b> Protection of Natural Habitats.  Only for outcome 2	Principle 9 is only triggered by outputs under outcome 2 (subprojects). The <b>probability of risk is positive, and the impact was assessed as "medium significance"</b> . In particular, the output triggering the risk is output 2.2 (Integrated NBS for reducing run-off and adapting to floods), which will include physical interventions in some spots for the construction of drainage channels and bio-infiltration facilities. Despite the presence of critical natural habitat in the project area, the NBS will be only implemented within the settlements, and not in the areas of critical natural habitat. However, the construction of NBS will use sand and gravel. The sand is meant to come from surrounding areas. Thus, this activity may trigger risks if sand is collected in an uncontrolled/unsustainable manner that may negatively affect natural habitats in the surroundings. Furthermore, mangrove reforestation is meant to restore existing mangrove sites and will support critical habitats' state of health. However, since mangroves are located in wetlands and coastal areas with fragile ecosystems, the inadequate selection of species or the planting location can increase ecological sensitivity and bring disturbances to the local biodiversity.	<b>Regarding outcome 2</b> , the design of the implementation strategy will pay particular attention to ensure that sand and gravels are collected in a way that will not degrade or negatively impact on the surrounding ecosystems. By-laws to ensure proper and sustainable sandmining will be enforced in a strict manner, including payment of penalties in case of non-respect. Furthermore, the local population will be involved in this process through awareness-raising and surveillance mechanisms. Assessment of hydrodynamics and soil characteristics will be developed as a first step of reforestation activities. This will include calculating water flows and salinity levels, assessing tidal changes and circulation, transport and dispersal of biochemical organic and inorganic materials, local biodiversity interactions and ecological dynamics. The assessment will allow adapt the reforestation process and selection of species to the conditions of the local environment.	Indicators: Tons of sand/gravels collected from one single site  Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -monitoring on the interventions on a regular basis during implementation -monitoring on the state of surrounding natural habitats and protected areas -progress reports	UN-H in cooperation with execution entities / government entities  -monitoring of the interventions on a weekly basis during implementation  -monitoring of the state of surrounding natural habitats and protected areas every 4 months
<b>Principle 10:</b> Conservation of Biological Diversity  Only for outcome 2	Principle 10 is only triggered by outputs under outcome 2. (subprojects). The <b>probability of risk is positive, and the significance is "medium"</b> . In particular, the outputs triggering the risk are output 2.2 (Integrated NBS for reducing run-off and adapting to floods) and output 2.3 (Adaptive capacity through alternative livelihoods), regarding the use of plants and crops that will be used for NBS, reforestation, and agricultural purposes respectively. Channels and bioinfiltration facilities represent minor interventions that will be put in place within the settlements. However, mangrove reforestation will cover around 582 hectares and the resilient agriculture activities will be implemented on around 220 ha of agricultural land. If not controlled, there may be a risk of introduction of non-native and invasive species that could damage local biodiversity.	Subprojects are designed to only make use of native and local species (existing species were mapped and listed). The design of the implementation strategy will pay particular attention to ensure that plants and crops are collected from surrounding areas with similar characteristics, in order not to import any new plant or organism that may affect the biodiversity of the natural areas. By-laws that prevent the importation of non-native species will be enforced in a strict manner, including payment of penalties in case of non-respect. Furthermore, the local population will be involved in this process through awareness-raising and surveillance mechanisms. A list of adapted plants and collection sites will be provided to each community. Also, assessment of hydrodynamics and soil characteristics will be developed as a first step of reforestation activities. This will include calculating water flows and salinity levels, assessing tidal changes and circulation, transport and dispersal of biochemical organic and inorganic materials, local biodiversity interactions and ecological dynamics. The assessment will allow to select to right species and adapt the reforestation process to the conditions of the local environment.	Indicators: N of plants used classified by species Origin/Collection sites of the plants  Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -monitoring on the interventions on a regular basis during implementation -monitoring on the state of surrounding natural and protected areas -list of plants used, with their species and origin -progress reports	UN-H in cooperation with execution entities / government entities  -monitoring of the interventions on a weekly basis during implementation  -monitoring of the state of surrounding natural and protected areas every 4 months
<b>Principle 12:</b> Pollution Prevention and Resource Efficiency  Only for outcome 2	Principle 12 is only triggered by outputs under outcome 2 (subprojects). The <b>probability of risk is positive, and the significance is "medium"</b> . In particular, it is triggered by outputs 2.2 (Integrated NBS for reducing run-off and adapting to floods) and 2.3 (Adaptive capacity through alternative livelihoods), in terms of unsustainable use of resources and potential pollution. The risks are related to the origin of the sand and gravels needed for the construction of drainage channels and bioinfiltration facilities, the quality of extracted soils (which could be polluted), and the types of fertilizers and substances used by farmers, with potential negative impacts on soil, water and health.	<b>Regarding outcome 2</b> , subprojects will be designed to comply with the existing national laws in the area of pollution prevention in the two countries (such as the water use regulation, the effluent discharge act, the pesticide control and management act, the plants and fertilizers act, etc.). The design of the implementation strategy will pay particular attention to ensure that sand and gravels for reinforcing the drainage channels are collected from surrounding areas with similar characteristics. Furthermore, soils extracted for the construction of drainage channels and bioinfiltration facilities will be analyzed to evaluate their quality, before deciding on the possibility to be reused for other purposes. Climate resilient agriculture activities will only promote the use of organic fertilizers if needed. Furthermore, training activities will raise awareness to reduce other unsustainable types of fertilizers and substances.	Indicators: Tons of sand/gravels collected from one single site Quantities of fertilizers used by type of fertilizer Quantities of soils extracted  Method: Implementation of mitigation measures will be assessed, and indicators will be collected through: -monitoring on the interventions on a regular basis during implementation -monitoring on the state of surrounding natural and protected areas -monitoring of soil quality -progress reports	UN-H in cooperation with execution entities / government entities  -monitoring on the interventions on a regular (weekly) basis during implementation  -monitoring on the state of surrounding protected areas and the mentioned impacts every 4 months

#### 4.6. Risks monitoring system / indicators

The environmental and social risks management approach includes monitoring of potential risks and implementation of risks mitigation measures. This monitoring program commensurate with project activities and will report on the monitoring results to the Fund in the mid-term, annual, and terminal performance reports. Monitoring will be done to ensure that actions are taken in a timely manner and to determine if actions are appropriately mitigating the risk / impact or if they need to be modified in order to achieve the intended outcome. Annual reporting will include information about the status of implementation of this ESMP, including those measures required to avoid, minimize, or mitigate environmental and social risks. The reports shall also include, if necessary, a description of any corrective actions that are deemed necessary.

The Regional Project Supervision Unit will be responsibility for environmental and social risks management, including monitoring of the implementation of the Project ESMP. An AF and UN-H policies and reporting compliance expert will be part of the RPUI. A Safeguarding system compliance expert will also be part of the RPUI. Monitoring staff part of the RPUI will require having expertise in social risk management and be familiar with the AF safeguarding system. Gender specific indicators and targets have been developed as shown in the results framework and Annex 6. Specific budgets for risks monitoring are covered by M & E staff time under the execution fee (USD 30,000).

Table 792969 Monitoring arrangements for general risks management

Action	Indicator and method	Responsibility and frequency
Monitoring of capacity execution entities to comply	Guidelines and action plans shared Monitoring reports comply to requirements	RPUI; within half a year from inception RPUI; when reports are required
Implementation of grievance mechanism	Grievance mechanism information is at target locations (buildings, etc.) Grievance mechanism information is shown on UN-Habitat project website	RPUI in coordination with execution entities; within half a year from inception RPUI in coordination with execution entities; within half a year from inception
Monitoring of measures to avoid or mitigate risks/ impacts per output	See table above	RPUI in coordination with execution entities; when reports are required

#### 4.7. Grievance mechanism, consultation and public disclosure

UN-Habitat in coordination with the execution entities will implement a grievance mechanism in the target areas, which will allow an accessible, transparent, fair and effective means of communicating if there are any concerns regarding project design and implementation. Project employees, and people benefitting / affected by the project will be made aware of the grievance mechanism for any criticism or complaint of an activity. The grievance mechanism will be open to beneficiaries and non-beneficiaries alike.

This mechanism considers the special needs of different groups as well as gender considerations and potential environmental and social risks, especially human rights (as shown on posters). It combines: i) anonymous mailboxes at community level, ii) a trained local facilitator in each community who can listen to grievances while assuring anonymity, and iii) a telephone number that enables people to call anonymously.

These options allow people to make their grievance in their own language, with options for illiterate people or people with low levels of literacy. This approach recognizes that internet and smart phone penetration is not universal in the target area. In addition, any stakeholder involved with the project can use any event, workshop, training or any other initiative organized by the project, either in public (i.e., through open floor discussion) or in private (i.e., discretely with UN-Habitat or executing entity staff involved with the workshop) to raise a grievance verbally.

The redress process will be carried out by the Grievance Committee, which will hear the complaints, provide solutions, and reduce unnecessary litigation by resolving disputes through mediation, with the support of the NPMs. The committee will be responsible for preparing and explaining to the communities the potential project impacts and negotiating with the project proponent on any matter that may be of interest at the implementation stage. The target areas shall play a role in the committee through representatives headed by a Chairperson, to be elected by the target areas who will carry out the following as regards redressing grievances:

- Hear the grievances of the targeted people and provide early solutions to those they are able to;
- Immediately bring any serious matters to the attention of the Grievance Redressing Committee/Focal Points;
- Inform the aggrieved parties about the progress of their grievances and the decisions of the Grievance
- Redressing Committee/Focal Points, and
- Grievance Redressing Committee/Focal Points address grievances.

To comply with national law and ensure compatibility between the grievance mechanism adopted by the project, and the national requirements for grievance mechanisms, a higher level for grievance redress (for both Countries) is the Court of Law. When all the forms of alternative dispute resolution fail, the law courts represent the last resort for an aggrieved person. Under this project the courts also represent the last resort when the Grievance Committee fail to bring a satisfactory outcome.

In addition to institutional responsibilities (of the Grievance Committee and of the National Courts of Law), the whole project staff and executing entities will be informed about the procedures. In particular, project staff and executing entities will be trained to recognize grievances from community members and how to deal with grievance reports. The local facilitators (LF, under the Grievance Committee) in each community will also be trained on to recognize dissatisfaction and on how to report grievances. Monitoring activities will also provide an opportunity for beneficiary communities to voice their opinions as they wish. This recognizes that in the target areas, some people do not feel confident in directly confronting grievances and do not like to be seen to complain. The mechanism is thought to allow people to raise issues in a subtle and anonymous way.

All stakeholders will be made aware of the grievance mechanism, their options for reporting, what constitutes a grievance and their right in anonymity at the start of the project, and/or whenever the project first makes contact with them (i.e., during the inception phase, whether in training, or whichever activities come first). Stakeholders will be reminded of the grievance mechanism periodically throughout the project. All inputs derived from grievances will be anonymized and presented to the Project Management Committee. All inputs from grievances will be treated with equal and urgent importance, regardless of who raised them, or the modality.

The address and e-mail address of the Adaptation Fund will also be made public (i.e., project website, Facebook and mailbox) for anyone to raise concerns regarding the project: Adaptation Fund Board Secretariat Mail stop: MSN P-4-400; 1818 H Street NW; Washington DC.

Regarding public disclosure, the results of the environmental and social screening and a draft environmental and social assessment, including any proposed management plan, have been presented and validated in all communities. In addition, the material has been made available for further public consultations and held free of coercion and in an appropriate way for communities that are directly affected by the proposed project/programme. The implementing entity is responsible for disclosing the final environmental and social assessment to project-affected people and other stakeholders. Project/programme performance reports (including the status on implementation of environmental and social measures) will be publicly disclosed throughout the process of the outcomes. Any significant proposed changes in the project/programme during implementation will be addressed and presented for public consultation with directly affected communities.

## ANNEX 6: DETAILED PROJECT ALIGNMENT WITH NATIONAL AND SUB-NATIONAL STRATEGIES

Table 808069 Ghana project alignment with National and sub-national priorities

Policy / Document	Year submitted / ratified	Compliance with the project (Relevant priorities)
<b>Ghana</b>		
<b>Climate Change strategies / plans</b>		
National Adaptation Planning (NAP)	2018	Support goals of the NAP process: Identify priority climate adaptation actions in the medium and long terms Facilitate institutional coordination around climate change adaptation Accelerate the mobilization of funds for climate change adaptation
Updated Nationally Determined Contribution	2021	Alignment with priority sectors such as sustainable land use including food security, climate proof infrastructure, equitable social development, and sustainable forest management. Support on achieving the goal "increase climate resilience and decrease vulnerability for enhanced sustainable development". Alignment with priority adaptation policy actions: agriculture and food security, sustainable forest resource management, water resources, gender and the vulnerable.
National Climate Change Policy	2013	Support the vision of the plan "ensure a climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth for Ghana." Alignment on 2 of the main objectives: effective adaptation and social development. Alignment on main thematic areas: natural resource management, agriculture and food security, disaster preparedness and response.
National Climate Change Adaptation Strategy 2010-2020	2010	Support the intentions of the plan: Deepen awareness and sensitisation for the general populace particularly policy makers about the critical role of adaptation in national development efforts, Strengthen International recognition to facilitate action, Facilitate the mainstreaming of Climate change and disaster risk reduction into national development.  Alignment with key principles such as: Promotion of sustainable development and poverty reduction are focus areas of the adaptation strategy, Stakeholder participation is central, Gender sensitivity and reduction of vulnerability are extensively adopted
Plan of Action on Disaster Risk Reduction and Climate Change Adaptation 2011-2015	2011	Alignment with strategic goals: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation. Identify, assess and monitor disaster risk Use knowledge, innovation and education to build a culture of safety and resilience at all levels. Reduce the underlying risk factors
<b>National Development strategies / plans</b>		
Long-Term National Development Plan for Ghana, 2018-2057	2017	Support achieving the long-term goals such as building a resilient economy, and build safe, well-planned and sustainable communities.
National Spatial Development Framework 2015-2035	2015	Continue efforts of national and local governments on developing Spatial Development Frameworks understood as "roadmap for the future development of a limited geographical area". Support the pillars of the spatial strategy: Emphasise balanced polycentric development. Improve regional, national, and international connectivity. Ensure sustainable development and protect ecological assets.
Ghana's Shared Growth Development Agenda II (GSGDA II)	2015	Alignment with prioritised thematics such as accelerated agricultural modernisation and natural resource management; infrastructure and human settlements development; and human development, productivity and employment.
<b>Environmental strategies / plans</b>		
National Environmental Policy (NEP)	2014	Aligned with policies goals: Reversing the current insufficient commitment to environmental objectives, policies and interventions Reversing rapid population growth, economic expansion, persisting poverty, poor governance and institutional weaknesses and failures Improving quality and flow of information Creating an understanding of the nature and causes of environmental problems

		Establishing a clear definition of the national environmental agenda and its links to economic growth and poverty reduction and weak legal, regulatory, financial, technical, human and institutional capacity Mainstreaming international relations into the national environmental agenda Improving the current environmental quality control programme by which prior environmental impact assessments of all new investments that would be deemed to affect the quality of the environment are undertaken.
Environmental Policy and Action Plan	1990	Alignment with the outcomes of the policy: Maintenance of ecosystems and ecological processes. Sound management of natural resources and the environment. Protection of humans, animals, plants and their habitats. Guidance on healthy environmental practices in the national development effort. Common approach to regional and global environmental issues. Support on addressing key challenges such as forestry and wildlife, land management, water management, marine and coastal ecosystems, human settlements.
Ghana REDD+ Strategy (2016-2035)	2016	Denotes the suite of interventions that seek to reduce emissions from deforestation and forest degradation whilst incorporating the role of conservation, sustainable forest management and enhancement of forest carbon stocks in developing countries.
Forestry Development Master Plan 2016 – 2036	2016	The objective of the Master Plan is to ensure sustainable forest management, ecosystem preservation, biodiversity conservation, wildlife protection, environmental protection, soil conservation, land use planning, sustainable use of forest resources, afforestation, rehabilitation and restoration of degraded landscapes, and plant cultivation, in a socially equitable manner.
<b>Sectoral strategies / plans</b>		
National Gender Policy	2015	The implementation of the interventions will take all necessary steps to ensure the full integration of men and women into the mainstream operations of the project.
Forest and Wildlife Policy	2012	Aligned with policy objectives: Manage and enhance ecological integrity of forest, savannahs, wetlands and other ecosystems. Promote rehabilitation and restoration of degraded landscapes. Promote the development of viable forest and wild-life based livelihoods. Promote and develop mechanisms for transparent governance, equity sharing and citizens' participation in forest and wildlife resource management.
National Wetlands Conservation Strategy,	2007	The project will follow the recommendations and frameworks necessary to ensure the conservation of Ghana's wetlands and their associated ecosystem goods and services. Aligned with the objective: promote the use of wetlands for farming, grazing, fishing, timber production and salt-winning, provided that such uses also serve to conserve the ecosystem, biodiversity and sustainable productivity of the wetlands.
National Water Policy (NWP).	2007	Support on the sustainable development and utilization of Ghana's water resources.
National Land Policy	1999	Support objectives of the policy: Ensure that every socio-economic activity is consistent with sound land use through sustainable land use planning in the long-term Promote community participation and public awareness at all levels
Coastal Wetlands Management Plan	1991	Support adequate management of prioritised lagoons and surrounding environments: Songor and Keta lagoons. Supports continuity of activities to be rolled out such as development of management systems for the coastal zone, protection of selected coastal areas, and set-up of coastal zone data base.
National Climate-Smart Agriculture and Food Security Action Plan of Ghana (2016-2020)	2016	Support the implementation of climate-resilient activities and improved livelihoods as the plan formulates specific strategies that contribute developing climate-resilient agriculture and food systems for all agro-ecological zones, as well as the human resource capacity required for a climate-resilient agriculture promotion in Ghana.
Gender and Agricultural Development Strategy II (GADS II)	2015	Alternative livelihoods for increasing climate resilient capacities through climate resilient agriculture are based on this strategy, being aligned with objective 1 on strengthening institutional capacity for gender responsive projects programmes within the agricultural sector, objective 2 to enhance Equitable Delivery of Agricultural Services and Access to Inputs and Develop and disseminate Gender-sensitive Appropriate Technologies along the Agriculture Value Chain including climate smart practices.
<b>Sub-national plans</b>		
Greater Accra Spatial Development Framework	2017	Support on the implementation of the Land Use Planning and Management Project through "preparation of improved maps and spatial data for land administration" which includes the preparation of Regional Spatial Development Frameworks". Alignment with the Manual for the Preparation of Spatial Plans 2011.
Ada West District Medium Term Development Plan (2018-2021)	2017	Support on identified key challenges: Over exploitation of fisheries resources. Increased vulnerabilities of coastal communities. Weak development control Lack of alternative livelihoods for coastal communities.

		<p>Weak capacity to manage the impacts of natural disasters and climate change.</p> <p>High levels of youth unemployment.</p> <p>Incidence of poverty among farmers and fishermen.</p> <p>Weak citizens engagement in decision making.</p> <p>Low women representation and participation.</p> <p>Support the implementation of policy objectives:</p> <p>Promote seed and planting material development.</p> <p>Enhance fish production and productivity.</p> <p>Promote aquaculture development.</p> <p>Ensure sustainable management of natural resources.</p> <p>Increase capacities to adapt to climate change impacts.</p> <p>Enhance capacity to mitigate and reduce the impact of natural disasters, risks, and vulnerability.</p>
Keta District Medium Term Development Plan (2018-2021)	2017	<p>Support on addressing development priorities:</p> <p>Build a prosperous society (economic development). Linked to challenges such as inadequate job creation, loss of soil fertility, low agriculture production, coastal area erosion, depletion of mangrove vegetation.</p> <p>Safeguard the natural environment and ensure a resilient built environment. Linked to challenges such as poor environmental sanitation and hazardous development.</p>
Ada East District Medium Term Development Plan (2018-2021)	2017	<p>Support on addressing identified key challenges such as provision of planning schemes and improvement in revenue generation.</p> <p>Support addressing objectives and implementing programmes:</p> <p>Promote a sustainable spatially integrated, balanced and orderly development of human settlements: infrastructure development sub-programme</p> <p>Enhance climate change resilience: disaster prevention and management sub-programme.</p> <p>Improve popular participation at the regional and district level: general administration sub-programme.</p> <p>Promote economic empowerment for women: trade, tourism and industrial development sub-programme.</p>

Table 818470 Côte d'Ivoire project alignment with National and sub-national priorities

Policy / Document	Year submitted / ratified	Compliance with the project (Relevant priorities)
<b>Côte d'Ivoire</b>		
Climate Change strategies / plans		
Programme National Changement Climatique 2015-2020	2014	The programme aims at establishing by 2020 a framework for sustainable socio-economic development that integrates the challenges of climate change in all sectors in Côte d'Ivoire and that contributes to improving resilience. This programme emphasizes on vulnerable sectors including coastal resources, with promotion of adaptation actions.
Programme d'appui du PNUD à la mise en œuvre des Contributions Déterminées au niveau national (CDN) de la Côte d'Ivoire	2018	The Programme defines the objective to elaborate a National Gender and Climate Change Strategy and Action Plan; and includes capacity building for national actors so that they are capable to implement. The Programme also aims at including a gender dimension in the communication strategy about the NDC
Cadre National des Services Climatiques (CNSC)	2017	Optimize the management of risks related to climate change and promote adaptation to climate change by producing scientifically-based information and forecasts on climate and taking them into account in planning processes, policies development,
Stratégie Nationale de Gestion des Risques de Catastrophes (SNGRC) & Plan d'Action	2011	Management of risks and disasters in the face of growing risks Strengthen disaster preparedness to respond effectively and to 'rebuild better' during the recovery, rehabilitation and reconstruction phase.
Nationally determined contribution (CDN) Côte d'Ivoire	2022	Strengthen country's resilience to climate change adaptation Align sectoral policies and strengthen its mechanism and implementation tools to facilitate the achievement of these objectives Priority vulnerable sectors; coastal areas, agriculture, aquaculture, water resources, forests, gender, health
National du Développement durable	2012	Aims at revising the success and gaps at the achievement of SDGs Provide proposals related to green growth and Sustainable development framework

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en Côte d'Ivoire dans la perspective de Rio+20		
<b>National Development strategies / plans</b>		
Plan National de Développement 2016-2020	2016	reinforce governance and institutions capacities Preserve environment and manage natural resources to attenuate climate change Promote regional integration
Plan National de Développement 2021-2025		Consistency with pillar related to Strengthening social inclusion. Regional development and support to infrastructure  Ministry partners whom follow the 2021-25 NDP in Côte d'Ivoire have been involved in the AF project design, thus alignment with national development priorities is ensured
Stratégie nationale de développement durable	2011	Aims at establishing harmony between environment, economy and social while ensuring a quality of life throughout the territory and in all sectors of activity. Integrate the principles of sustainable development in the management of territorial collectivities Integrate sustainable development into spatial planning
Territorial Development Policy Framework	2006	This framework defines the allocation of competences and the empowerment of cities and regions and establishes the principle of concerted development land use plans and local development plans
<b>Environmental strategies / plans</b>		
Code de l'environnement	1996	Governs all actions related to environmental management. Consider sustainable development issues, coastal erosion, climate change impacts
Code Forestier	2019	Supervise national forest management adapted to fight against climate change Prioritize vulnerable areas and marine ecosystems such as mangrove reforestation
National Policy on Forest Preservation, Rehabilitation and Expansion.	2018	Aims to achieve the preservation of biodiversity; the maintenance of favorable climate for the development of socio-economical activities and agricultural area; and the respect of Côte d'Ivoire's international commitments. In parallel, the four objectives settled for the policy are: preservation of biodiversity; National Climate Conducive to agricultural activities and living conditions; Compliance with international commitments; and Social & economic development.
<b>Sectoral strategies / plans</b>		
Code de l'eau	1995	To preserve marine ecosystems and wetlands To protect against all forms of pollution and floods To restore water surface Protection against inundation Fisheries agriculture
National REDD+ Strategy of Côte d'Ivoire.	2017	The vision of the Ivorian government through the REDD+ mechanism is to stabilize and sustainably reverse the trend of natural forest loss from 2017 and to simultaneously restore forest cover in a progressive manner to reach 20% forest cover by 2030.
National Second Generation Agricultural Investment Program (PNIA II, 2017-2025)	2017	Defines the development actions needed to reduce the incidence of poverty at the national and rural levels, based on an in-depth analysis of the pace of growth of the economy in general, and the agricultural sector in particular
<b>Sub-national plans</b>		
Agenda 21 Grand Bassam	2017	Instrument established for the management of natural resources and the preservation of the environment Establish environmental actions plan at commune and national level to promote sustainable development
Appui à la préparation de plan d'investissement multisectoriels IDA-17 et du plan d'investissement pour la ville de Grand-Lahou, République de Côte d'Ivoire.	2017	To strengthen capacity and skills of stakeholders Promote participatory socio-economic development and blue green development Organize operational governance for integrated resource management

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