



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: REGULAR-SIZED PROJECT CONCEPT

Country/Region: Honduras, Central America
Project Title: Constructing Resilience Together to Face Climate Change and Variability in Western Honduras
Thematic Focal Area:
Implementing Entity: Comisión de Acción Social Menonita (CASM)
Executing Entities: International Center for Tropical Agriculture (CIAT)
AF Project ID:
IE Project ID: **Requested Financing from Adaptation Fund (US Dollars):**
Reviewer and contact person: Micol Ullmann Auger **Co-reviewer(s):** Imen Meliane
 IE Contact Person:

Technical Summary

The project “Constructing Resilience Together to Face Climate Change and Variability in Western Honduras” aims to increase the governance capacity, adaptability, and resilience to climate change of the communities of the Santa Bárbara Mountain region and the Yojoa Lake subwatershed area. This will be done through the three components below:

Component 1: Promote participatory processes of territorial planning and decision-making to cope with the impacts of climate change and climate variability (USD 885,600);

Component 2: Support the adoption of diversified Climate-Smart Agri-food Systems (USD1,804,000);

Component 3: Increase understanding and knowledge about climate variability and adaptation processes (USD 590,400).

Requested financing overview:

Project/Programme Execution Cost: USD 380,000

Total Project/Programme Cost: USD 3,660,000

Implementing Fee: USD 340,000

Financing Requested: USD 4,000,000

	<p>The proposal includes a request for a project formulation grant and/or project formulation assistance grant of USD 50,000.</p> <p>The initial technical review raises several issues, such as the need for more details regarding concrete adaptation measures, particularly related to climate-smart agriculture activities, cost effectiveness, environmental, social benefits and risks, and the need to reduce the implementing entity fee, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.</p>
Date:	June 26, 2023

Review Criteria	Questions	Comments
Country Eligibility	1. Is the country party to the Kyoto Protocol, or the Paris Agreement?	Yes.
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	Yes. Honduras is a developing country with a high climate risk index, and is facing rising temperatures, increased water scarcity and the frequency and duration of droughts, flooding, and possible emergence of pests and diseases in crops, all of which will lead to crop losses and threaten local livelihoods.
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	Yes. As per the Endorsement letter dated May 15, 2023.
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	Unclear. The proposal is 43 pages, however the annexes have not been included in the body of the proposal and the google drive links to the 3 annexes do not work. CAR1: Please include annexes within the body of the document.

		<p>CASM: Arrangements have already been made to include these annexes in the document</p>
	<p>3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?</p>	<p>Unclear. The project aims to increase resilience and adaptive capacity of communities of the Santa Barbara Mountain region and Yojoa Lake subwatershed through capacity building in local governance, planning, knowledge management, and adoption of CSA practices. While the project proposes some concrete activities to enhance implementation of early warning systems and climate resilient agriculture, most of the proposed activities are related to planning and capacity building. In addition, more details are needed regarding the scope of the project’s implementation of EWS and the specific CSA practices that will be implemented, as well as the approximate number of farmers/direct beneficiaries.</p> <p>It would be useful to identify the approximate location of the EWS stations and their range of coverage.</p> <p>CR1: Please provide more details regarding concrete adaptation measures, including the scope of EWS activities and which specific CSA practices will be implemented.</p> <p>CASM: An indicative list of CSA practices that can be implemented is developed, however the methodology establishes that the practices are established with those with the communities according to specific criteria and conditions, therefore this will be done in the development of the complete proposal.</p> <p>CR2: Please specify what type of “basic equipment for climate measurement” will be purchased and whether</p>

		<p>or not it will be able to adequately assess and provide sufficient climate data.</p> <p>CASM: More information is included in section II.A where it is described in more detail what the SATs consist of, however, also during the Development of the complete proposal in conjunction with the communities and the Governing Body of Risk Management and climate monitoring other more specific aspects will be determined</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 and Gender Policy of the Fund?</p>	<p>Unclear.</p> <p>Please also see CR1.</p> <p>The proposal mentions that the project will facilitate the adoption of CSA practices by approximately 17,850 people in the Santa Barbara Mountain region and the Yojoa Lake sub watershed area. However, which communities will benefit, and how they would benefit, cannot be assessed without more detail on the concrete measures that will be implemented.</p> <p>An initial gender analysis is outlined on page 26. However, for the gender activities outlined on page 24, it's unclear which actions will be undertaken as part of the project formulation phase, and which will be carried out as part of the project activities.</p> <p>CASM: in section II.B adjustments have been made related to this commentary</p> <p>CR3: Please provide more details regarding the expected beneficiaries of the project/programme, with particular reference to the equitable distribution of benefits to vulnerable communities, households, and</p>

		<p>individuals. For example, please provide more detail regarding which CSA practices will benefit which producers, including coffee producers, versus livestock producers, and how many of these are women or vulnerable groups.</p> <p>CASM: In section II.B provides more information on the communities and selection criteria</p> <p>CR4: Kindly integrate the gender activities outlined on page 24 into the appropriate component.</p>
	<p>5. Is the project / programme cost effective?</p>	<p>Unclear.</p> <p>While capacity building, technical support, and early warning systems for adaptation, and exploring continued financing for CSAs are generally important cost-effective measures, cost-effectiveness can only be evaluated once the CSA activities are further defined. Please see CR1.</p> <p>CR5: Please provide a rationale for why the proposed measures are the best adaptation option for this particular context.</p> <p>CR6: Please include a description of alternative options and comparison to other possible interventions that could have taken place to help adapt and build resilience in the same sector and geographic region, with quantitative estimates where feasible.</p> <p>CASM: Se fortalece mas el analisis sobre el costo beneficio en el apartado II.C</p>

	<p>6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?</p>	<p>Yes.</p> <p>As outlined on pages 26-28. The project is in line with the National Climate Change Adaptation Plan, Nationally Determined Contribution, the 2022-2026 Government Plan, the Reconstruction Plan for Sustainable Development, particularly as related to early recovery and resilience to disasters, and the National Climate Change Strategy of Honduras, part of Objective 3 of the National Plan of the Republic of Honduras, effective for the period 2010- 2022.</p> <p>CR7: Please provide more details on how the project activities will contribute to the NDC.</p> <p>CASM: More details of how the Project is linked to the NDC of the country are incorporated in section II.D</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>Unclear.</p> <p>Please also see CR 1.</p> <p>The concept note outlines alignment with a number of laws and regulations including: the National Climate Change Law, the General Environmental Law (Decree No. 47-2010), the Regulation of the National System of Environmental Impact Assessment (SINEIA), the Environmental Categorization Table, as per the Ministerial Agreement 705-2021, the Forestry, Protected Areas and Wildlife Law (Decree No. 156-2007), the Territorial Ordering Law (Decree No. 180-2003), the Sinager Law, as related to the creation of a national risk management system. However, given the lack of specificity regarding climate smart agricultural practices, more details are needed on relevant sector-specific regulations, particular standards that the EWS</p>

		<p>instruments would need to comply with, and codes related to agriculture.</p> <p>CR8: Please ensure that the relevant sector-specific regulations are identified, and compliance stated in a logical manner.</p> <p>CASM: Adjustments have been made to section II. E where the Project is linked to legal regulations</p>
	<p>8. Is there duplication of project / programme with other funding sources?</p>	<p>No. More details are needed on the framework for coordination during design and implementation.</p> <p>It would also be useful to elaborate on how the project will draw lessons from the earlier initiatives during the project design, learning from their problems/mistakes.</p> <p>CR9: Please provide more details for how the project team will coordinate with existing initiatives to ensure synergy or avoid overlap, including with the GEF CONECTA+ and the World Environment financed Environmental Management of the Montagua River Basin projects.</p> <p>CASM: Section II.F was adjusted with respect to these comments</p>
	<p>9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?</p>	<p>Yes.</p> <p>As per component 3 outlined on page 31.</p> <p>Knowledge management activities include quarterly newsletters and meetings with project stakeholders to share information, the dissemination of technological</p>

		<p>innovations and climate adaptation practices via institutional portals and social media, and communication products to share project experiences and best practices.</p> <p>Please see CR9 regarding the coordination mechanism with other relevant projects.</p> <p>Additionally, given the project's focus on technical assistance activities, please consider what would constitute successful experiences and best practices and how these would be disseminated.</p> <p>CASM: Aspects related to these comments were added in section II. G</p>
	<p>10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Yes.</p> <p>As outlined on pages 32-34. An initial consultative process has taken place, with key stakeholders of the project/programme, including gender considerations and vulnerable groups.</p> <p>Please see CR1 regarding the inclusion of the participant lists and other annexes in the body of the proposal and provide gender disaggregated attendance lists, wherever possible including principles of choice, role ascription, date of consultation, and a description of the consultation techniques (tailored specifically per target group).</p> <p>CASM: The points raised in Section II have been considered. H</p>
	<p>11. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>Unclear.</p> <p>Please see CR1.</p>

		<p>The proposal explains the additionality of mainstreaming climate adaptation into local planning, the need for increased awareness on climate adaptation, and especially for the inclusion of vulnerable groups, including women, children, and indigenous groups into project planning and implementation. However, the proposal needs to address its additionality in adapting to climate change, which may be only possible once the activities are better defined.</p> <p>CASM: Section II. I has been adjusted considering these comments</p>
	<p>12. Is the project / program aligned with AF's results framework?</p>	<p>Yes.</p>
	<p>13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?</p>	<p>Unclear.</p> <p>While the potential for increased awareness of climate change impacts and adaptation, strengthened capacity and governance, and the participatory nature of the project activities can ensure ownership of activities and improve their sustainability, more details are needed regarding specific measures.</p> <p>Additionally, more details are needed regarding financial sustainability of CSA practices, the proposed promotion of local savings and credit mechanisms. How will the project support savings and what kind of arrangements will be made with local banks or the private sector?</p> <p>CR10: Please explain how the project will ensure the sustainability and maintenance of proposed EWS instruments.</p>

		<p>CR11: Please provide more details regarding how the project will ensure access to financial resources to sustain CSA practices (pending clarification of which specific CSA practices will be implemented).</p> <p>CASM: Se han considerado estos comentarios y se ha ajustado el apartado II. J</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>Unclear. An overview of environmental and social impacts and risks is included on page 38, and the project is categorized as a Category B, medium risk project. However, without the identification of the specific CSA measures, it is not possible to evaluate the potential risks. Please see C1.</p> <p>While an initial gender analysis is included on page 26, more details are needed regarding qualitative and quantitative data for gender roles, activities, needs, and available opportunities and challenges or risks for men and women in the project area.</p> <p>CR12: Please reevaluate potential risks and impacts once the project activities have been further defined.</p> <p>CASM: This preliminary analysis of risks and impacts has been reevaluated according to the established comments, considering that during the formulation of the complete proposal a more in-depth analysis will be made.</p>

Resource Availability	1. Is the requested project / programme funding within the cap of the country?	Yes.
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	<p>No. The implementing entity fee is USD 340,000 (approximately 9.3 percent of the project/programme budget before the fee).</p> <p>CAR2: Please revise implementing entity fee to be at or below 8.5 per cent of the total project/programme budget before the fee.</p> <p>CASM: The corresponding modification has been made in the percentage according to the established.</p>
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	<p>No. The Execution costs are above 9.5% (at 10.4%).</p> <p>CAR3: Please revise the Execution Costs to be at or below 9.5 per cent.</p> <p>CASM: The corresponding modification has been made in the percentage according to the established.</p>
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	<p>Yes. Comisión de Acción Social Menonita (CASM), is an Board-accredited Implementing Entity.</p>
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage
	3. Are there measures in place for the management of for environmental and social risks, in line with	n/a at concept stage

	the Environmental and Social Policy and Gender Policy of the Fund?	
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage
	6. Is a detailed budget including budget notes included?	n/a at concept stage
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage
	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?	n/a at concept stage
	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?	n/a at concept stage
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage



CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT INFORMATION

Title of Project: **Constructing Resilience Together to Face Climate Change and Variability in Western Honduras**

Country: Honduras, Central America

Thematic Focal Area: Agriculture, Risk Management

Type of Implementing Entity: National Implementing Entity

Implementing Entity: CASM – Comisión de Acción Social Menonita

Executing Entities: CIAT – International Center for Tropical Agriculture
Oficina de Coordinación de Proyectos (OCP-SERNA).

Amount of Financing Requested: 4,000,000 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes No

Amount of Requested financing for PFG: 50,000 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes No

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission:

- This concept has been submitted before
- This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: [Click or tap to enter a date.](#)

Please note that concept note documents should not exceed 50 pages, including annexes.

List of Acronyms and Abbreviations

English Acronym or Abbreviation	Spanish Acronym or Abbreviation	Meaning
AF		Adaptation Fund
	AHROCAFE	Honduran Coffee Producers Association
	BCIE	Central American Bank for Economic Integration
CASA		Climate-Adapted Sustainable Agriculture
CASM	CASM	Comisión De Acción Social Menonita – Mennonite Social Action Commission
CEDRA		Climate Change and Environmental Degradation Risk and Adaptation Assessment
	CEPRENAC	Center for the Coordination of Preventing Natural Disasters in Central America
CIAT	CIAT	International Center for Tropical Agriculture
	COPECO	Office Of Risk Management and National Contingencies
COVID-19		Coronavirus disease of 2019
CSA		Climate-Smart Agriculture
ECLAC	CEPAL	Economic Commission for Latin America and the Caribbean
	ENCC	National Climate Change Strategy of Honduras
EWS		Early Warning Systems
GDP		Gross Domestic Product
Ha		Hectare
IDB	BID	Inter-American Development Bank
Km		Kilometer
	MAP	Participatory Agroclimatic Roundtables
	MAS	Santa Barbara Environmental
	PANACAC	Cerro Azul Copan National Park
	PANAMOSA	Montaña De Santa Barbara National Park
	PICSA	Integrated Participatory Climate Services for Agriculture
	PMACC	Municipal Climate Change Adaptation Plans
	PRDS	Reconstruction Plan for Sustainable Development
RCP		Representative Concentration Pathways
	SERNA	Secretary Of Natural Resources and The Environment
	SINAGER	National Risk Management System
	(SINEIA):	National System of Environmental Impact Assessment
TOT		Training Of Trainers
UNFCCC		United Nations Framework Convention for Climate Change

Project/ Background and Context:

1. National Context

Honduras is a Central American country located between 12° and 16° N latitude and 83° and 89° W longitude (Map 1). The country of 112,490 km² is divided into 18 administrative departments. Honduras has 63,600 km² of forests and 10.9% of the territory is in protected terrestrial and marine areas. In 2012, the arable land in Honduras was 3.1 million ha and 1.475 million cultivated ha, which is divided between 1.02 million ha of annual crops and 455,000 ha of permanent or perennial crops (FAO, 2015). Honduras' northern limit is 880 km of coastline with the Caribbean Sea; to the southeast Honduras shares a border with Nicaragua; the southern limit is 153 km of coastline with the Pacific Ocean; to the southwest Honduras shares a border with El Salvador; and to the northwest the country shares a border with Guatemala.

Map 1: Political map of Honduras; Source: Hermes, 2014



Most of Honduras, especially the inter-mountain areas and the coastal area of the Gulf of Fonseca has two well-defined seasons – one rainy and one dry. The mountainous landscape (orography) of the Honduran territory contributes to the diverse climatic patterns across the country. The general circulation of the atmosphere and pressure systems combined with the surface troughs, variable elevations, cold fronts, cyclones, and tropical waves produce different rainfall regimes on the Caribbean slope, the Pacific slope and in the Central inter-montane zone.

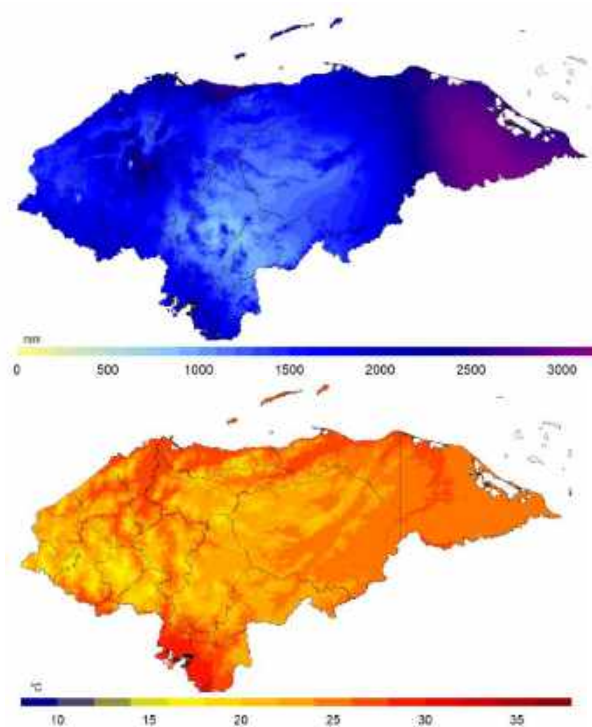
The rainy season in the country begins in May and ends in November. From June to November, the rains are widespread with greater volumes of water at high altitudes (>1600 MASL) and less in the lowland areas. The dry season begins in November, when the rain has subsided. From December to February, there is seasonal drought in most of the country. During the rainy season in the southern and central regions of the country, especially in mountainous areas and the Pacific coast (Gulf of Fonseca) there is a decrease in precipitation in a period known as *Canícula* or *veranillo*¹, which typically occurs in July and August (Argeñal, 2010).

Due to the latitudinal position of Honduras, the amount of sun is relatively consistent throughout the year and thus the temperature is also relatively homogenous throughout the year. Some variations are produced by the proximity to the sea and by its altitude. From December to March or April, throughout the dry season, cold fronts from the north reach Honduras. Consequently, the temperature is lower in this quarter and rises during the rest of the year.

The lowest median temperatures occur in December when temperatures oscillate from a median temperature of 8°C in the upper parts of the Sierra de Celaque and up to 28°C median temperature in the southern plains. In the warmest month of April, the median temperatures range from 10°C in the Sierra de Celaque to 31°C median temperature in the southern plains (Argeñal, 2010). In June, the highest temperature in all of Honduras is recorded in the Sula Valley, right before the rainy season begins in the northwestern region. (CIAT, SERNA, UNDP, 2018). The following figure shows the accumulated annual precipitation and the average annual temperature of the Honduran territory (Map 2).

¹ *Canicula* and *Veranillo* are terms that refer to a short period of hot and dry weeks during the rainy season.

Map 2: Accumulated Annual Precipitation (left) and Median Annual Temperature (right);
Source: CIAT, SERNA, UNDP, 2018.



According to the latest estimate, Honduras has a total population of 9,656,299 inhabitants (INE, 2022). The Human Development Index reached 0.634 in 2020, which places Honduras in 132nd out of 182 countries ranked on the Index. In 2020, 48% of Hondurans lived in poverty (CEPAL, 2020). In 2021, poverty in Honduras increased by 70% and extreme poverty increased by 53% because of the COVID-19 pandemic and the extreme climate events (UNAH, 2021).

From 2003-2005, there were 800,000 undernourished people in Honduras (FAO, 2006), which represents 12 percent of the total population. Life expectancy in 2020 was 73 years for men and 77.6 for women, and the expected years of schooling was 10.1 years. In 2006, the infant mortality rate is 27 out of every thousand births. In 2005, women had an illiteracy level of 21.7 percent and men 22.4 percent (UNDP, 2006).

Honduras has a US\$23.66 trillion gross domestic product (GDP) of which agriculture, forestry, and fisheries account for 12%. Honduras registered the second highest economic growth rates in Central America, behind only Panama; GDP growth reached 4.8% in 2017, 3.7% in 2018, and 2.7% in 2019, above the average for Central America and Latin America and the Caribbean. Despite this growth, Honduras faces high levels of poverty and inequality and the second highest poverty rate in Latin America. According to 2021 World Bank estimates, before the impact of the COVID-19 pandemic and hurricanes Eta and Iota, 14.8% of the Honduran population lived on less than US\$1.90 per day and almost half (4.8 million people) with less than US\$5.50 per day. In addition, Honduras has high levels of violence, with more than 38 homicides per 100,000 inhabitants (2018), although this rate has decreased in recent years, from a peak of 83 homicides per 100,000 inhabitants in 2011 (www.worldbank.org/en/country/honduras/overview#1)

The Economic Commission for Latin America and the Caribbean (ECLAC) reports that the damage caused by the two tropical storms Eta and Iota amounted to US\$1,879 million and it is expected that in the coming years social and economic inequality will deepen, especially affecting women and youth in rural areas. Additionally, the private sector was impacted with 69% and the public sector with 31% of the total effects. Among the most affected sectors are commerce, industry, agriculture, and housing. These recent events illustrate the severe impact that recent tropical storms have on the lives of the Honduran population and the economy.

The IDB reiterates that Honduras is exposed to natural hazards such as earthquakes, floods, hurricanes, and droughts, which are estimated to increase in frequency and intensity as the effects of climate change increase. The country is also vulnerable to pandemics like the current COVID-19 pandemic and epidemics like dengue, chikungunya, and Zika .

At a global level, Honduras is one of the countries most impacted by climate change. According to the Germanwatch Global Climate Risk Index 2021, Honduras was the second most affected country by hurricanes in the last decade and among the ten most vulnerable countries to climate change in the world. For example, in November of 2020, within only two weeks, two extreme climate events - the tropical storm Eta and the hurricane Iota - both impacted Honduras (ECLAC and IDB, 2021). These two events affected more than 437,000 people, 95 people lost their life, and 92,646 homes were damaged. Damages and losses are estimated at USD 2.13 Million. Additionally, 388 medical and health buildings and 534 educational buildings were damaged between these two extreme climate events in 2020.

According to the latest climate change scenarios developed for Honduras and presented in the third country communication to the United Nations Framework Convention on Climate Change, even by 2030, Honduras will receive significant impacts from climate change mainly due to increases in temperatures and variations in rainfall patterns. It should be noted that within the framework of the Third National Communication, climate change projections were made for short-, medium- and long-term time horizons. Averages of 30-year futures were used, delimited as follows: 2020-2049 (2030s), 2040-2069 (2050s) and 2070-2099 (2080s). Likewise, the entire range of the 4 Representative Concentration Pathways (RCPs) were considered: 2.6, 4.5, 6.0 and 8.5, in the generation of the projections (CIAT, SERNA, PNUD, 2018).

Seasonal precipitation deficits are projected throughout the Honduran geography in the wettest quarter of the year (June, July, August), in comparison with the climatological normal 1981-2010, in the short, medium, and long term. For all the other seasons, the tendency is to increase, especially in the quarters of March, April, and May, which suggests that in the future the rains could begin earlier in the year, compared to normal conditions. The changes in precipitation fluctuate between -10% and +20% with greater increases towards the centre and south of the country, and deficits towards the Caribbean Coast. The trend of change is the same through all future periods, but with greater contrasts (positive/negative) towards the end of the century. In the same way, the change trend is similar between scenarios, except for the RCP 8.5 scenario, where there is a marked projection towards a decrease in precipitation in all seasons of the year and in the annual accumulated precipitation.

In the case of monthly minimum and monthly maximum temperatures, temperature increases are projected for all scenarios and times of the year. For RCP 2.6 the changes in maximum temperature are a maximum of +1.5°C, for RCP 4.5 of +2.0°C and for RCP 8.5 up to 4.5°C towards the end of the century. The greatest increases in temperature are accentuated towards the June, July, August quarter. Even though the distribution of maximum and minimum temperatures is very homogeneous throughout the region, warming could intensify towards the centre and southwest of the country. The projections also indicate a faster increase in maximum temperature than in minimum. This discrepancy, in which the maximum temperature grows at a higher rate than the minimum in most scenarios and seasons, suggests higher degree days throughout the year and consequently higher evapotranspiration rates and larger arid areas (CIAT, SERNA, PNUD, 2018).

2. Project Location

The Project will be carried out in two areas of Honduras, Santa Barbara Mountain region and Yojoa Lake sub watershed Area, in the communities of 5 municipalities, 4 from the Santa Barbara Region: Concepción Sur, Las Vegas, Gualala and Santa Bárbara and 1 in Yojoa Lake: Santa Cruz de Yojoa located in the department of Cortes.

The Santa Barbara Mountain National Park (PANAMOSA in Spanish) is the main tributary of Lake Yojoa, which means the conservation in the core and intermediate zone directly impact the of the levels of water in Lake Yojoa.

The municipalities of Gualala, Concepción Sur and Santa Barbara in Santa Barbara make up the upper zone of the Ulua River Basin, which belong to the Ulua Alta sub-basin. This area drain towards the Sula Valley. By developing the climate change adaptation project in these high-basin areas there will also benefit the lower parts of the basins.

Biophysical Characteristics

In Santa Barbara, the median annual temperature of the region is heterogeneous, registering the highest temperatures in the east and north (26°C), and the lowest temperature is recorded in the Santa Bárbara Mountain (14°C). Total annual precipitation increases from west to east, reaching maximum values around Lake Yojoa and the Santa Bárbara Mountain (2,500 mm), and minimum values approximately 1,400 mm (SERNA, 2019).

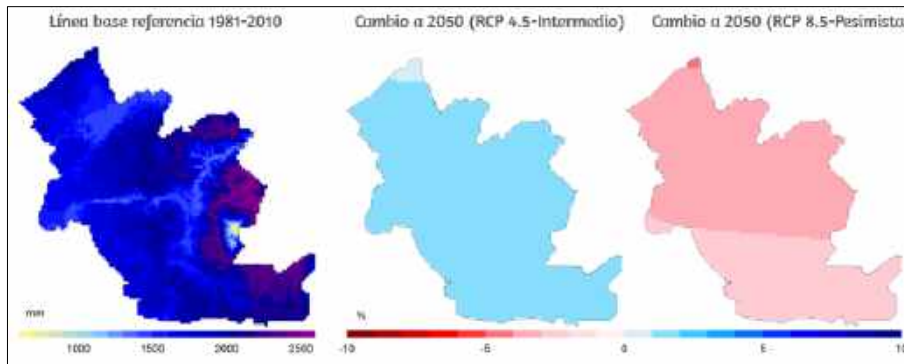
In the Santa Barbara Mountain region, the humid broadleaf forest predominates which rich in biodiversity, where epiphytic plants of all kinds and ferns of various species stand out. Orchids also predominate this ecosystem. Similarly, at the top of the mountain an endemic species of salamander called *Dendrotriton sanctibarbarus* and an endemic species of lizard, *Norops rubribarbaris*, have been reported (AFE-COHDEFOR, 2003).

3. Climate Scenarios

1. Santa Barbara Mountain Area

In the Santa Barbara region, the trend of precipitation change is towards a slight increase throughout the region under the intermediate scenario, and a slight decrease (accentuated towards the north) under the pessimistic scenario (Map). The scenarios project increases in precipitation for the region of up to 7% by 2050s and decreases of up to 12% by the end of the century. Increases are projected at the beginning and end of the rainy season (May, October, and November) and decreases in the intermediate months (June to September), as well as in the dry season.

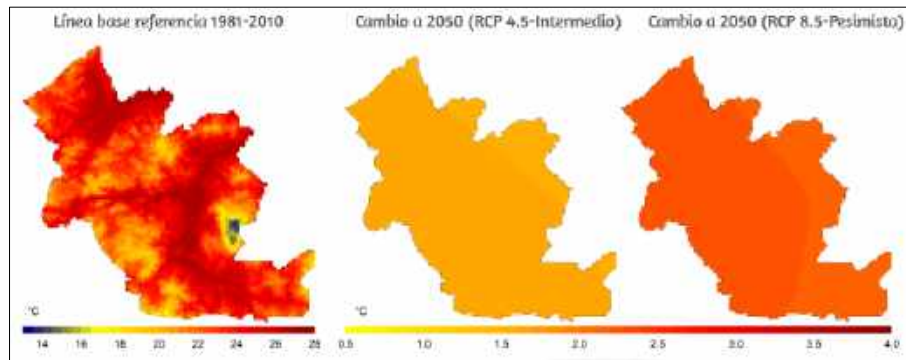
Map 3: Climate Scenarios of Total Precipitation; Source: CIAT, SERNA, UNDP, 2018.



The scenarios show considerable increases in temperature, even at a higher rate than other regions of the country. The median annual temperature would increase 2.3°C by 2050 and almost 4°C by the end of the century. The temperature change is homogeneous, accentuated towards the southwest of the region, but it would also affect the area of the Santa Bárbara Mountain. The climatic scenarios for precipitation and median annual temperature are presented below (

Map 43).

Map 43: Climatic Scenarios of the Median Annual Temperature; **Source:** CIAT, SERNA, UNDP, 2018.



Potential Impacts of Climate Change on Livelihoods

Rising temperatures and potential disruptions to the hydrological cycle will modify water availability, arid conditions, and the frequency and duration of droughts. These conditions are conducive to a greater frequency of forest fires, loss of grain production, and lags in the execution of agricultural practices such as planting, pest control, and harvesting. Temperature increases added to precipitation deficits could generate higher costs for crops.

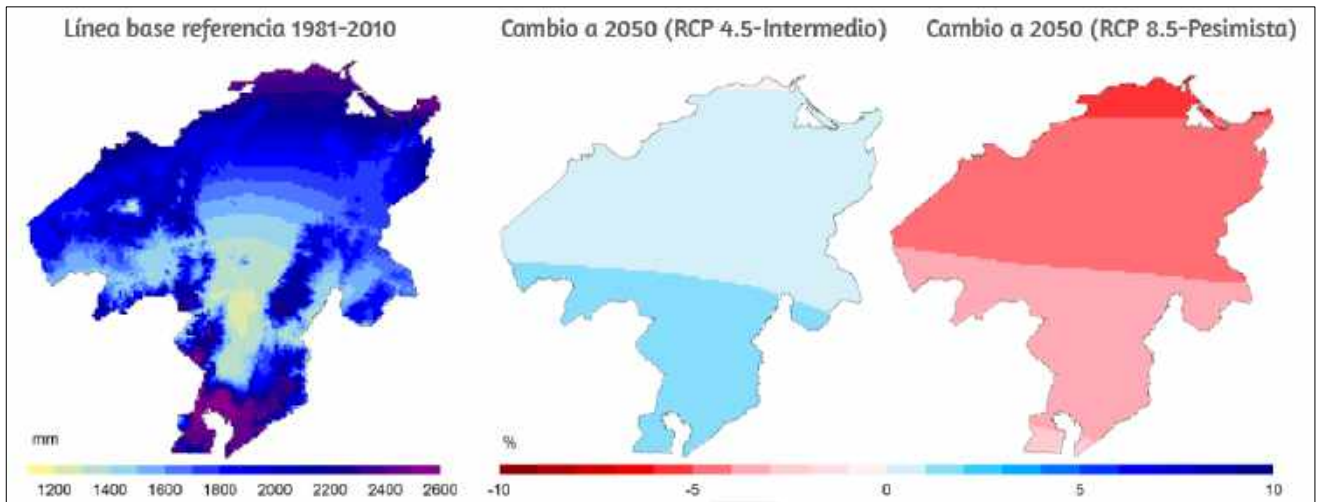
The livestock sector may be affected given the possible decrease in water resources. Similarly, milk and meat production could be directly affected by high temperatures that cause heat stress in animals. Coffee production, an important crop in the region, will be displaced from the lowlands to more mountainous areas, however, areas of greater future climatic suitability for coffee cultivation are declared protection areas. Likewise, the precipitation deficit could affect the sugarcane agroindustry, weakening its productivity (CIAT, SERNA, PNUD, 2018).

In the different scenarios, whether with an increase or decrease in rainfall combined with an increase in temperatures, Climate-Smart Agriculture (CSA) practices are beneficial for the adaptation, mitigation, and improvement of the productivity of agricultural systems in the region. Harvesting rainwater, adapted planting dates, use of improved crop varieties (beans, corn, coffee, forages, etc.), greenhouse production, and diversification are examples of CSA practices.

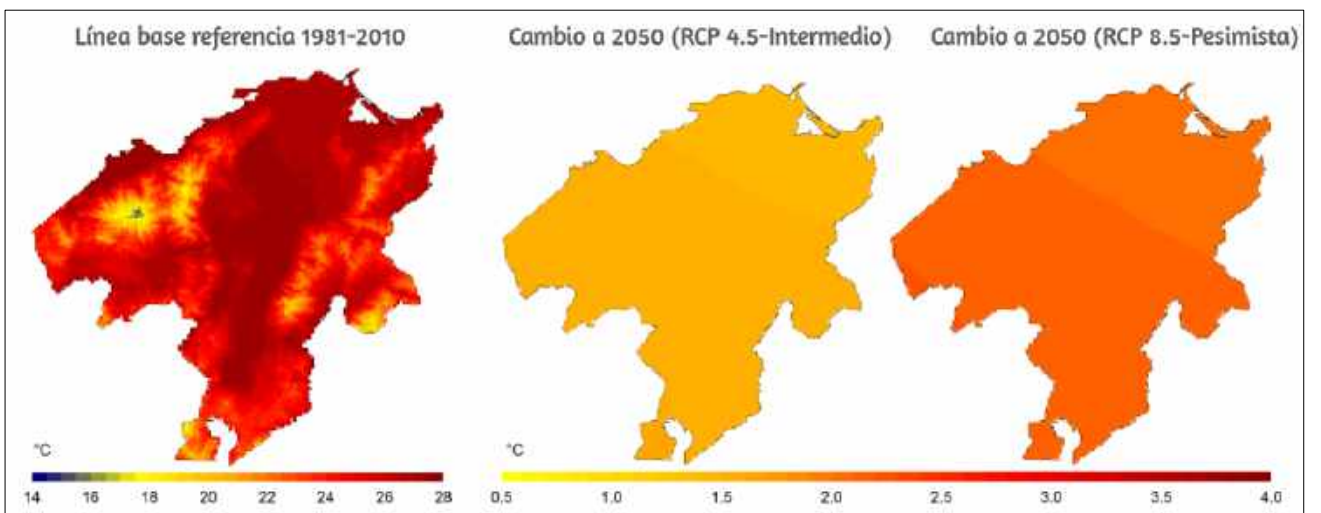
1. Yojoa Lake Sub watershed Area

The scenarios do not show representative changes in total precipitation in the region, however, slight increases are projected. The scenarios raise precipitation increases for the region up to 5% for 2050s and decreases of up to 12% by the end of the century. Decreases are projected in much of the rainy season (Jun-Sep) and increases ending this (Oct-Nov). The scenarios show annual average temperature increases of up to 2°C by 2050 and 3.5°C by the end of the century. The areas of greatest increase are concentrated in the south of the region, towards Lake Yojoa, where there is also the highest rainfall. Temperature change increases transversely to the southeast.

Map 1 Climate Scenarios of Total Precipitation



Map 2 Annual Average Temperature Climate Scenarios



Potential Impacts of Climate Change on Livelihoods

Large-scale family farming can be affected by temperature increases, mainly on coffee, banana and palm systems. Additionally, due to variations in rainfall patterns basic grains such as corn and beans, and other crops such as sugar cane and vegetables, would need adaptation strategies for sustainable production. Increasing temperature and precipitation, especially towards the end of the wet period and saturated soil, would increase evaporation, the intensity of short rainfall, and possibly the emergence and spread of pests and diseases in crops. Rainfall increases towards the end of the wet season (Sep-Oct) could increase the incidence of flooding, affecting the agro-industry of bananas, plantain, sugar cane and cocoa, especially in low-lying areas. In addition, the decrease in rainfall especially in July with higher temperatures could increase irrigation requirements.

The increases in temperature, especially in the months of greatest tourist influx (March-April and October), can generate a decrease in the fishing banks due to changes in metabolism, typical of water temperature increases, especially in Lake Yojoa and on the Atlantic coast.

In the area of hydroelectric production, temperature increases would negatively influence river flows, however, the projected increase in precipitation could positively impact the energy sector, especially in the long term.

(CIAT, SERNA, PNUD, 2018).

In different scenarios, whether increased or decreased rainfall and increased temperatures, Climate Smart Agriculture (CSA) practices are beneficial for adaptation, mitigation and improvement of the productivity of agricultural systems in the region. Rainwater harvests, modification of planting dates, use of improved crop varieties (beans, corn, coffee and pastures etc.) production in protected environments and diversification are examples of these practices.

Socioeconomic Aspects

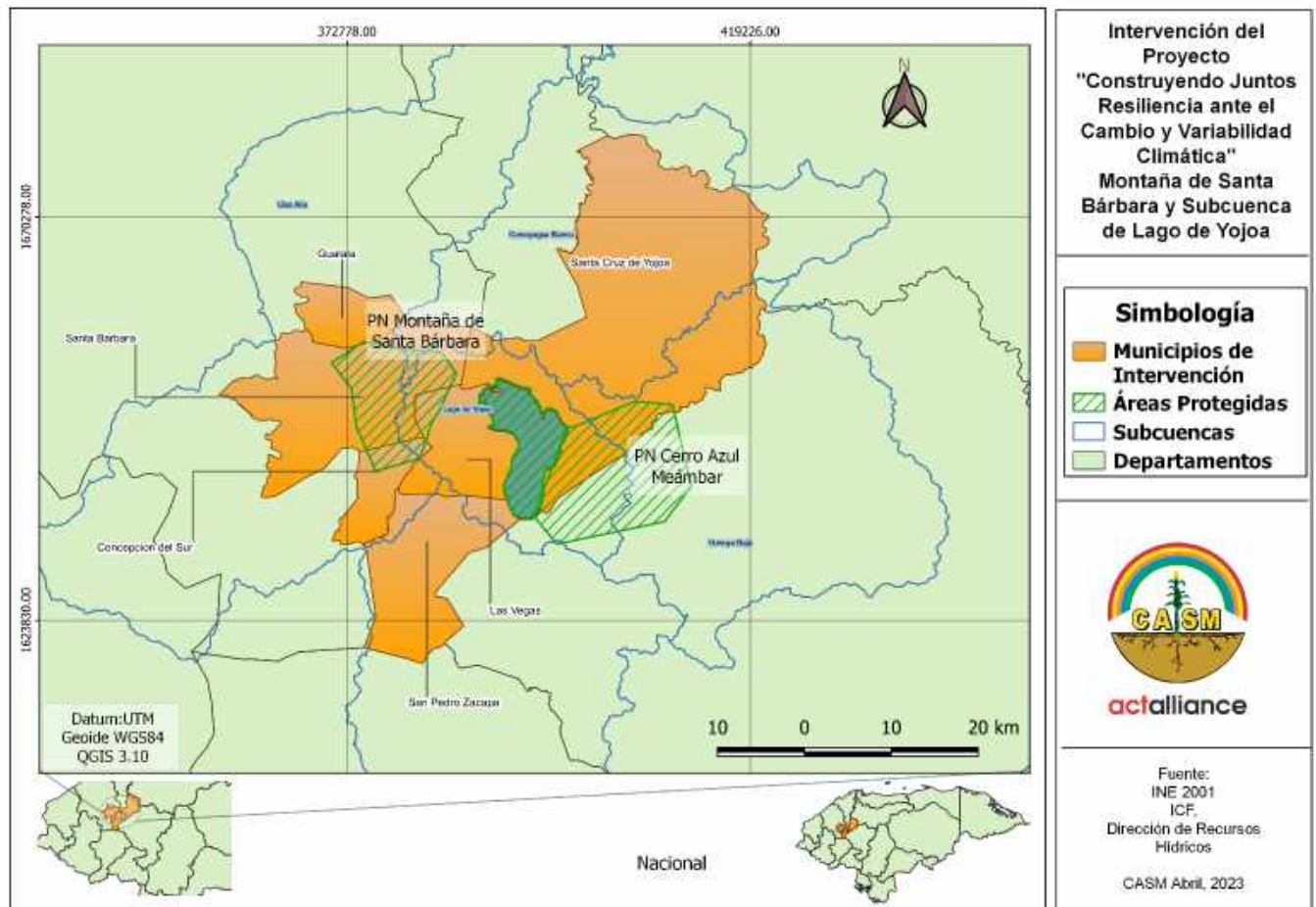
Climate change - when mixed with poverty, economic instability, violence, and weak governance – can convert into fuel, a multiplier of threats that could aggravate more vulnerabilities and leave people without any other option except migration. In a study about migration during the pandemic of households in Central America, in 19.3% of households in Honduras, at least one family has migrated during the pandemic, compared to 12% in Guatemala and 6% in El Salvador (Rios et al, 2022). In the project implementation area, the rates of migration were even higher, with 27.9% of households in Santa Barbara at least one family member who migrated during the pandemic. The lack of economic opportunities and the search for better living conditions are the principal reasons for these migration patterns. In Honduras, migration is also affected by challenges related to violence, which especially impacts Indigenous Peoples and environmental activists (UNHCR, 2017).

Honduras faces challenges related to violence. Among the groups most affected by violence are Indigenous Peoples environmental activists (UNHCR 2017). Over half of Honduras' population is rural, of which 70% live in conditions of poverty and whose livelihoods and primary income depends on rainfed agriculture. The precarious livelihoods of rural Hondurans drive migration from rural to urban Honduras and has caused growth in the urban populations, towards high-risk zones that lack water and waste management systems.

In Honduras, forest systems are under stress due to deforestation, degradation from mining, the collection of firewood and the conversion of forests to crops such as coffee. Since families primarily depend on agriculture, in a context of constant climatic variability, collective efforts are required to safeguard the economy and their livelihoods. Efforts are necessary that start from the farm level, community level and territory level to promote adaptation measures from the implementation of climate-smart agriculture practices on farms, promotion of adaptation-oriented public policies and the implementation of early warning systems (SATs) that help information-based decision making.

Beyond the elevated risks of storms, hurricanes, and floods, other consequences of climate change are landslides, which like droughts have provoked food insecurity, malnutrition, and mass migration in urban areas that are poorly prepared for these events (USAID, 2017).

Map 7: Areas of implementation and protected areas.



4. Description of the Problem that the project will address:

As previously stated, Honduras is a country with a high climate risk index, considered among the ten countries most vulnerable to climate change in the world. It was the second most impacted country by hurricanes in the last decade. As an example, during 2020, with only a two-week difference, tropical storm Eta and Hurricane Iota impacted Honduras, affecting several regions of the country, one of the most affected was Santa Barbara, the proposed intervention area for this project.

Faced with this high vulnerability in the proposed areas, the problem identified to address by the project is limited governance and weak capacities of the communities to adapt to the impact of climate change and climate variability. The project intends to address this problem through ownership of the project by the communities, local governments, and vulnerable sectors in access to climate information, decision-making and planning to deal with climate change and variability. Another aspect with which the problem will be addressed is to reinforce strategies for food security and livelihoods through agri-food systems adapted to the changing climate. Likewise, it is necessary to increase knowledge and improve the understanding of the population and relevant actors on the processes of adaptation to climate change and climate variability.

5. Project Objectives:

1. General objective: The mountain communities of Santa Bárbara Mountain region and Yojoa Lake subwatershed area increase their governance, adaptability and resilience to climate variability and change.

Specific objectives: The specific objectives aligned with each project component are the following:

1. Promote participatory processes of territorial planning and decision-making to cope with the impacts of climate change and climate variability.
2. Support, strengthen, and promote the adoption of diversified and Climate-Smart Agrifood Systems.
3. Increase understanding and knowledge about climate variability and adaptation processes; and

The relationship of these objectives to the Fund's results framework is shown in **Table 1**:

Table 1: Project objectives alignment with The Adaptation Fund's Results Framework		
Project objectives	Fund Results	Grant Amount (USD)
<p>General objective: The mountain communities of Santa Bárbara and Yojoa Lake subwatershed area increase their governance, adaptability and resilience to climate variability and change.</p>	<p>People, livelihoods, and ecosystems are adequately protected from the adverse impacts of climate change with their adaptive capacity enhanced, resilience strengthened and the vulnerability of people, livelihoods and ecosystems to climate-change reduced in the context of climate-resilient, sustainable development.</p>	\$3,400,000
<p>Objective 1 - Territorial planning - Promote participatory processes of territorial planning and decision-making to cope with the impacts of climate change and climate variability</p>	<p>-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</p>	\$805,600
<p>Objective 2. Climate-Smart Agricultural Practices and Systems: Support/strengthen/promote the adoption of diversified and Climate-Smart Agrifood Systems</p>	<p>Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas</p>	\$2,004,000
<p>Objective 3. Knowledge Management and Learning: Increase understanding and knowledge about climate variability and adaptation processes</p>	<p>Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level</p>	\$590,400

6. Project Components and Financing:

Table 2: Project components, outputs, expected outcomes, and budget			
Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
Territorial Planning in the Face of Climate Change and Variability	Institutionalise the creation of spaces for participatory technical and thematic dialogues with representation from civil society, the private and public sector and academia.	Fostered/reinforced the decision-making and planning processes and ownership of activities by local actors regarding policies/strategies to cope with climate variability and climate change	\$805,600
	Municipalities have climate change adaptation plans aligned with the National Plan and country goals on climate change adaptation.		
	Capacities generated in local actors for the implementation of early warning systems	Local and national actors have adequate information on threats, risks, and dangers in the territories of Montaña de Santa Barbara and Yojoa Lake subwatershed area to respond to the effects of climate change and climate variability.	
	Local and national actors use the information from the early warning systems for adaptation actions and risk reduction, and disseminate knowledge with the target population		
Climate-Smart Agricultural Practices and Systems	Community capacities are generated for the adoption of diversified and climate-smart agricultural production practices and systems	Strengthened strategies for food security and livelihoods of the communities of the Montaña de Santa Barbara and Yojoa Lake Subwatershed area through the adoption of diversified and Climate-Smart agri-food systems.	\$2,004,000
	Alternatives for financing climate-smart agriculture practices are promoted.		
Knowledge Management and Learning	Implemented training processes for communities and key leaders present in the intervention areas on adaptation to climate change and climate variability.	Increased knowledge among relevant stakeholders and improved understanding among the population of the Santa Barbara Mountain region and Yojoa Lake Subwatershed Area on the processes of adaptation to climate change and climate variability	\$590,400
	Spaces for knowledge management and learning are created at a local, national, and global level.		
Project Execution cost			\$320,000
Total Project Cost			\$3,400,000
Project Cycle Management Fee charged by the Implementing Entity (if applicable)			\$280,000
Amount of Financing Requested			\$4,000,000

Projected Calendar:

Table 3: Projected project calendar	
Milestones	Expected Dates
Start of Project Implementation	June 2024
Mid-term Review (if planned)	January 2026
Project Closing	September 2027
Terminal Evaluation	January 2028

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience.

The proposed project is directly linked to the objectives of the AF; whose global framework is to reduce vulnerabilities and increase the capacities of communities in terms of adaptation to climate change and climate variability. The project is based on the premise that, to obtain effective results in relation to climate change adaptation measures, a three-part approach must be adopted: a) participatory territorial planning; b) the promotion of climate-smart agricultural systems and c) knowledge management and learning. These components and their main activities are described below.

COMPONENT 1. Territorial planning in the face of climate change and variability.

The objective of this component is to generate conditions of greater governance and adaptive action in the territories of the intervention areas, using methods of inclusive territorial planning, the articulation of public, private, and civil society actors in a joint effort, and the development of an early warning system that generates reliable, effective, and sustained local information for decision-making. This planning implies knowing, understanding, and incorporating planning results into local (municipal) and subnational planning into the legislation on climate change at the national level. Honduras has three fundamental legal instruments on climate change that must be better known, adopted, and operationalized at the country level. These legal instruments are the Climate Change Law (Decree 297-2013), the National Climate Change Strategy, and the National Climate Change Adaptation Plan. Despite the existence of these legal instruments, the fragility and the dispersion of government institutions and social structures in Honduras means that these legal instruments need to be correctly applied. In addition, legal enforcement instruments and policies often need more financial resources and capacities to put them into practice. Therefore, without a minimum budget for effective governance, both from the perspective of local governments and social structures, it is likely that they will not materialize or have little sustainability over time.

The main activities (by expected and specific results) of this component are described below.

Expected result 1.1 - Fostered/reinforced ownership of local actors in decision-making and planning processes of policies and strategies to deal with climate variability and climate change

Concrete result 1.1.1 - Institutionalise the creation of spaces for participatory technical and thematic dialogues with representation from civil society, the private and public sector and academia.

ACTIVITIES

- Diagnostics of the operation of the participatory agroclimatic roundtables.
- Integration of actors into the participatory agroclimatic roundtables.
- Identification and adoption of mechanisms for the provision of climate services (early warning systems) to increase the capacities of participatory agroclimatic roundtables.
- Map key actors who work with issues of climate change and promote their active participation in the participatory agroclimatic roundtables.

Through this block of strategic activities, the aim is to strengthen the Participatory Agroclimatic Roundtables (MAP in Spanish). The MAPs are an innovative initiative that seeks to integrate actors from the agricultural sector at the regional

and local level with the objective of informing, especially small and medium-sized producers, about the expected changes in the climate of their region, how these changes can affect their crops and what they can do to reduce the negative impacts (CGIAR, 2017). The organizational structure of a Participatory Agroclimatic Roundtables is made up of representatives of all the key players in the regions: government, civil society, non-governmental organizations, international organizations, professional, business, farmer associations, academia, small, medium, and microenterprises, women's networks, youth networks, among others. The MAPs have a comprehensive and participatory vision; therefore, any interested actor can be part of this initiative.

The MAPs are an initiative that arises from the result of a cooperative agreement between the Honduran Secretary of Agriculture and Livestock and the International Center for Tropical Agriculture (CIAT), to exchange experiences from Colombia in the Central American context. Currently there are seven (7) MAPs established in the country, located in the regions of Comayagua, El Paraíso, Intibucá, Gulf of Fonseca Region, Western Region, Santa Bárbara, and Olancho, which were created under this cooperative agreement.

Through the MAPs established in the country, subnational bulletins have been generated for the productive cycles, which have specific recommendations for the main crops of each of the regions. The bulletin describes the area of influence, the behaviour of the El Niño/Nina phenomenon, the climatic conditions for the season and the agroclimatic recommendations. Following the recommendations, an estimated ten thousand farmers throughout the country have been able to make decisions and guarantee their production and food security in a context of climate variability.

MAPs are key platforms, especially in the provision of participatory climate services for decision-making in agriculture and territorial climate risk management, but they are also spaces through which other adaptation measures at the territorial level can also be promoted, such as the case of the promotion of the Municipal Plans for Adaptation to Climate Change and the monitoring of their compliance.

In the case of this project, of the existing MAPs, the Participatory Agroclimatic roundtables of the West and Santa Barbara will be promoted, which cover the departments of Lempira, Copan, and Santa Barbara; and there will be a commitment to the formation of two supporting territorial roundtables for each intervention department, that is, one in Santa Barbara and one in Cortes. From which, a more specific articulation of actors will be carried out for the provision of climate services and the revitalization of policies on adaptation to climate change in the identified areas.

Concrete result 1.1.2 - Municipal Development Plans have an axis of adaptation to climate change and are aligned with the National Plan and country goals in terms of adaptation to climate change.

ACTIVITIES

- Accompany the incorporation of the Climate Change Adaptation axis in the Municipal Development Plans in the intervention municipalities.
- Guiding document for the incorporation of the Adaptation to Climate Change axis in development plans, a tool designed by the SERNA Climate Change Directorate in coordination with the Ministry of the Interior
- Support for the design of the monitoring and evaluation system of the adaptation axis in the development plans.

Honduras has had a National Climate Change Adaptation Plan since 2015, created as part of the commitments made under the UNFCCC. However, this plan was created at the general national level, making necessary further territorial planning, including municipal level planning. In this sense, this set of activities is oriented towards the design of and/or updating, and accompaniment in the revitalization of Municipal Plans for Adaptation to Climate Change (PMACC). In this sense, this set of activities is aimed at incorporating the axis of adaptation to climate change in the Municipal Development Plans of (5) municipalities of Santa Barbara (Santa Bárbara, San Pedro de Zacapa, Concepción Sur, Gualala and Las Vegas) and one from the department of Cortes (Santa Cruz de Yojoa).

Both territories were selected through a technical analysis that includes the level of vulnerability, climate scenarios, and importance as related to biodiversity conservation.

The Municipal Plans for Adaptation to Climate Change are derived from the National Plan for Adaptation to Climate Change, which has as its general objective *to guide adaptation actions focused on the integration of sustainable development strategies to reduce the adverse impacts of climate change and the climate variability in the country.*

With the Municipal Development Plans incorporating the adaptation axis, it is sought to achieve the following specific objectives at the territorial level:

- Generate institutional (territorial) capacities for knowledge management for adaptation to climate change.
- Strengthen multisectoral coordination (interinstitutional and intersectoral) at the local level for the formulation and implementation of an adequate community and citizen-led adaptation to climate change.
- Promote adaptation actions and measures that contribute to compliance with the progressiveness and universality of human rights, the effective participation of communities, the Sustainable Development Goals and national policies for low-carbon and resilient development.
- Promote the protection, good management, and restoration of ecosystems as a fundamental axis for the adaptation of urban and rural communities, as well as the achievement of environmental and socioeconomic co-benefits.
- Promote the transfer and appropriation of adaptation technologies, considering synergies with climate change mitigation.

Important considerations in the incorporation of the adaptation axis in the Municipal Development Plans (PDM) will be:

- a) support the design of a guiding methodological guide that facilitates the incorporation of the Climate Change Adaptation axis in the PDM in any part of the national territory
- b) design a framework of indicators to monitor the progress of the PDMs in this axis in each territory and
- c) incorporate the PICSA methodology into this adaptation axis of the PDMs as an important tool for the provision of participatory climate services.

These actions will be carried out with the active leadership of the National Directorate of Climate Change, under the Project Execution Unit of SERNA.

Expected result 1.2 - Local and national actors have adequate information on threats and dangers in the territories of Santa Barbara Mountain region and Yojoa Lake watershed Area to respond to the effects of climate change and variability.

Concrete results 1.2.1 - Capacities generated in local actors for the implementation of early warning systems (EWS)

ACTIVITIES

- **Mapping/diagnosis of climate risks and impacts in the project areas**, for which it is necessary to develop the following:
 - ✓ Vulnerability and Capacity Assessment in Vulnerable Communities.
 - ✓ Climate risk assessment focused on land use, vegetation cover, resilient crops, expansive agriculture, water availability, agro-climatic technologies, among others that affecting communities prone to agriculture-related disasters in special-use areas of the micro-basins of Santa Barbara Mountain and Lake Yojoa.

These actions will be developed during the formulation of the complete proposal jointly with communities and specialized actors such as COPECO and Community and Municipal Emergency Committees.

- **Identification of the EWS to implement according to the climatic risks of the area**, where necessary
 - ✓ Diagnose the potential area for SAT installation and analyze the type of SAT technology equipment prioritized.
 - ✓ Prioritization of SAT equipment to be implemented.

These actions will be developed during the formulation of the complete proposal,

- **Training for local actors who implement the EWS according to climate risks**, this training process will be directed to leaders of CODEM, CODEL, Local Authorities (UMAS, OMM, Community Development) SINAGER (COPECO, Police, Military, Red Cross, Fire, NGO, Chamber of Commerce)

The central issues considered important in the training process are:

1. SINAGER legal framework and basic concepts.
2. Flood risk management.
3. SAT installation, management, and monitoring.
4. Flood alerts and alarms based on SAT data.

Acquire EWS equipment, the equipment of the warning systems shall be carried out in accordance with the identification and prioritization carried out at the stage of formulation of the complete proposal where the required equipment shall be established more specifically, However, it can be mentioned that the equipment that may be needed is:

- ✓ Equipment for weather stations such as electronic rain meters, millimeter scales to measure water height, Doppler weather station with the ability to measure precipitation, discharge time, evaporation, radiation, wind speed, ultraviolet rays.
- ✓ Drones with capacity (DJI-mavic 3 -pro) with capacity to perform analysis and dynamic maps, basin sections, impact reports, hazard, and risk zone documentation. (One unit)
- ✓ Portable communicator radio stations.
- ✓ Symmetrical internet service by Antennas.
- ✓ Materials and equipment bio engineering focused on hillside movement control, recent regenerative promotion to climate

- **Evaluation and validation of EWS information.**

- **Definition of EWS sustainability mechanisms.**

- **Creation of a EWS visibility campaign.**

Early Warning Systems (EWS) are a climate change adaptation measure that uses integrated communication systems to help communities prepare for climate-related hazards. A properly designed early warning system helps save lives, jobs, land, and infrastructure, and contributes to long-term sustainability. Early warning systems help public officials and administrators plan, save money in the long-term, and protect economies. (United Nations, 2022).

In Honduras, the implementation of EWS are necessary, which helps communities to be alert and take preventive measures to increase resilience and minimize the impacts of the hazards generated by extreme climate variations (droughts and extreme rainfall).

The set of activities that make up this component are aimed at identifying climate information needs in each of the municipalities to intervene according to the constant dangers that affect the communities because of climate variability. Likewise, the project will train public and civil society actors, and provide basic equipment for climate measurement and integrated communication for proper implementation and operation of the EWS. Mechanisms for the validation and evaluation of the information and its use in decision-making will be defined and applied, as well as mechanisms for the articulated participation of public actors and civil society in each of the links of the EWS, that is, in the organization of the EWS, training of participants, generation of information, data processing, socialization at the territorial level. These elements are expected to generate sustainability of the EWS after the project end.

The EWS will be integrated with existing climate monitoring stations in some municipalities and making use of climate information from the National Risk Management System (SINAGER in Spanish) in coordination with the Water Resources Department of the Secretary of Natural Resources and Environment.

Concrete result 1.2.2 - Local and national actors disseminate EWS information for decision-making and action for adaptation and risk reduction, and disseminate knowledge with the population

ACTIVITIES

- Creation of mechanisms for the dissemination of EWS information for use by the population focused on

counteracting the effects of climate variability (newsletters, maps, platforms).

- Preparation of guiding tools using EWS for prevention, preparation, and recovery in the intervention areas.
- Articulation of the information generated by the EWS at the local level to the national system for its dissemination and validation.

The information generated by the EWS is valuable for facilitating decision-making for adaptation to climate change at the local and national levels. The information generated by the EWS in each municipality of intervention will be disseminated through effective mechanisms which includes bulletins, radio and television spots, field days, open meetings, climate information units attached to the Municipal Emergency Committees. In this sense, it is necessary to promote an effective articulation of the information generated from the local level with the National Risk Management System.

COMPONENT 2. Climate-smart agricultural practices and systems.

This component will promote Climate-Smart Agriculture (CSA), as an approach aimed at generating resilient livelihoods to climate change and climate variability, especially productive agricultural livelihoods.

Climate change and climate variability currently make it more difficult for communities to develop and supply themselves with food. The intervention areas are constantly threatened by recurring extreme weather events, prolonged droughts, and erratic rainfall. Erratic rainfalls refer to rains that are more than the historical normal in a day or a specific time of the year causing significant damage to agricultural crops that are the basis of the economy and food for families, in this case coffee, basic grains and various horticultural crops.

In this context, an alternative is to promote climate-smart agriculture (CSA). CSA integrates the three dimensions of sustainable development (economic, social, and environmental), jointly addressing food security and climate challenges. It is based on three fundamental objectives:

- Sustainably increase agricultural productivity and income.
- Adapt and build resilience to climate change.
- Reduce and/or eliminate greenhouse gas emissions when possible.

In addition, CSA considers these three objectives at different scales (from farm to landscape), at different levels (from local to global) and in short and long timelines, considering local and national characteristics and priorities.

The innovation of CSA lies in an express consideration of climate risks that are occurring faster and with greater intensity than in the past. New climate risks require changes in agricultural technologies and methods to improve the lives of the food insecure and poor and to prevent the loss of previous advances. CSA methodologies imply a greater investment in:

- Managing climate risks.
- Knowledge and planning of the adaptive transitions that are necessary, for example new agricultural systems or livelihoods.
- Acting on opportunities to reduce or eliminate GHG emissions where feasible.

The project will promote the following activities based on the expected and concrete results:

Expected result 2.1 - Strengthened strategies for food security and livelihoods of the communities of the Santa Barbara Mountain region and Yojoa Lake Subwatershed Area through the adoption of diversified and Climate-Smart agri-food systems.

Concrete result 2.1.1 - Community capacities are generated for the adoption of diversified and climate-smart agricultural production practices and systems.

ACTIVITIES

- Development of four cycles of PICSA (integrated participatory climate services for agriculture) workshops
- Accompany the prioritization and implementation of climate-smart agriculture (CSA) practices in principal

agricultural products that are the basis of livelihoods in the area (coffee, basic grains and livestock).

The prioritization of the practices in conjunction with the communities will be done when the complete proposal is being formulated, a list of practices that can be adopted by the communities and that will be prioritized according to specific criteria are presented:

- ✓ Rainwater harvesting (using roof of dwellings)
 - ✓ Vegetable garden with a roof
 - ✓ Contour ditches or hillside ditches
 - ✓ Living barriers (madreado, cacao, pineapple, izote)
 - ✓ Craft water reservoir
 - ✓ Minimum tillage
 - ✓ Crop rotation Irrigation systems
 - ✓ Management of shade in coffee plantations
 - ✓ Terraces with living barriers improved seed varieties.
- Promote the incorporation of the CSA approaches in local planning (Municipal Development Plans, Municipal Adaptation Plans).
 - Carry out an analysis of the contribution of CSA practices in the adaptation and resilience of the intervention areas.
 - National Award for Best Practices in Adaptation to Climate Change

This set of activities will promote the Participatory Integrated Climate Services for Agriculture (PICSA) approach, which seeks to simplify informed decision processes for farmers, based on precise and specific climate and meteorological information by location; relevant crops according by location; alternatives of livestock species and subsistence activities all using participatory tools. Therefore, to make informed decisions it is essential to consider the options for agricultural and livestock production and subsistence activities within a climatic context.

CASM has promoted the PICSA methodology in the last four years through a partnership with the Bioersivity-CIAT alliance. This methodology improves the ability to analyse and interpret climate information and based on these analyses improve decision-making by farmers to limit the adverse effects of climate change. PICSA entails knowing, prioritizing, and finally electing to implement CSA practices/technologies to prevent and mitigate the effects of climate change. The implementation of CSA practices/technologies will be promoted with the producers who receive the PICSA training.

Developing a PICSA cycle requires training a group of producers prior to the spring productive seasons and second planting (postrera) through the following workshops:

Workshop 1: Current farmer practices, Is the climate changing?

Workshop 2: What are the opportunities and risks?, What options does the farmer have?, Options by context.

Workshop 3: Comparison of different options and planning, The farmer decides.

Workshop 4: The seasonal forecast, Identify and select possible responses to the forecast.

Workshop 5: Short-term forecast and alerts, Identification of potential responses to short-term forecasts and warnings.

Workshop 6: Learn from experience and improve the process.

In addition to the direct approach to farmers with the PICSA approach and promotion of CSA practices. These approaches will be promoted for implementation in public territorial planning: this is to include the approach within the Municipal Climate Change Adaptation Plans. To promote the scaling of CSA practices and their contribution to the resilience of the intervention areas, a study will be carried out on the contribution of CSA and the promotion of the National Award on Best Practices for Adaptation to Climate Change.

Concrete result 2.1.2 - Alternatives for financing climate-smart agriculture practices are promoted.

ACTIVITIES

- Promote a local savings and credit mechanism aimed at financing CSA practices.
- Stimulate the investment from the private and public financial system in the implementation of CSA practices.

- Leverage financing from the public and private sectors for innovative initiatives in climate-smart agriculture.

CSA practices have an important cost-benefit result. According to the CSA Practices Guide or Climate-Adapted Sustainable Agriculture (CASA) developed by CASM and the Bioversity-CIAT Alliance, by implementing a CASA practice a farmer can adapt to climate change, achieve greater productivity and economic benefits, in addition to social and environmental co-benefits. From this perspective, CSA practices must be financed at scale in the implementation areas.

As such, a local savings and credit mechanism aimed at financing CSA practices with farming families will be promoted at the territorial level. This mechanism may be a rural bank or a community managed savings group, depending on the priorities in each territory. This mechanism works with farmers, based on their own savings, to access the necessary resources to self-finance CSA practices and technologies that allow them to cope with the effects of climate variability and climate change.

In addition to promoting the community savings and credit mechanism, negotiation meetings will be held with officials from public and private financial entities present in the area, to draw their attention to financing based on experience and previous results of the successful implementation of CSA practices in the field, presenting a cost benefit and effectiveness analysis of these practices.

The project will allocate a fund aimed at leveraging the initial financing that private and/or public banks carry out. A management mechanism for this fund will be defined, which may be a trust fund with the interested financial entities and that involves the active participation of the Participatory Agroclimatic Roundtables and the Local Governments of the municipalities for their joint management.

COMPONENT 3. Knowledge Management and Learning

This component consists of improving the knowledge of communities, public actors and social organizations about climate hazards and effective adaptation measures. In a context of climate variability, it is necessary for public actors and the population to have knowledge, which translates into power for action and resilience. Thus, the project proposes the implementation of an educational program with a formal and non-formal approach, which includes the population, community leaders, public officials, and officials from civil society organizations. The activities to be carried out according to expected results and concrete results are described below.

Expected result 3.1 - Increased knowledge among relevant stakeholders and improved understanding among population of the Santa Barbara Mountain region and Yojoa Lake Subwatershed Area on the processes of adaptation to climate change and climate variability.

Concrete result 3.1.1 - Implemented training processes for communities and leading actors on adaptation to climate change and climate variability in the intervention areas.

ACTIVITIES

- Training processes with relevant stakeholders that are part of community leadership and TOT certification (training of trainers) on climate change and variability through academic institutions.
- Knowledge transfer process directed by municipal and community leaders trained and certified at different levels (local, municipal, and national) on climate change and climate variability.
- Development of public events on climate risks and resilience strategies.
- Define a training mechanism aimed at children and youth in the formal education sector, about adaptation to climate change and climate resilience.

This set of activities is aimed at transferring knowledge and learning about adaptation measures to climate change and climate variability, from a perspective of local knowledge and public policy management. The training of municipal trainers who can carry out learning transfer and scaling tasks at the community level will be promoted. Additionally, public events will be held at the municipal and subnational level, which include forums, roundtables, discussion panels and commemoration of emblematic dates on climate change (i.e., International Day Against Climate Change, World Water Day, among others). In a complementary way and as a measure of sustainability of learning, the design and implementation of a guidance document on climate change and resilience will be promoted to be incorporated into formal education in the intervention areas.

Concrete result 3.1.2 - Spaces for knowledge management and learning are created at a local, national, and global level.

ACTIVITIES

- Generation and dissemination of communication products on lessons learned and successful experiences.
- Systematization of experiences in EWS and implementation of CSA practices.
- Design a strategy for scaling up good practices generated from the project at the national level.

This set of activities seeks to generate and systemize information and knowledge about adaptation to climate change, climate variability and climate resilience based on previous successful experiences and experiences that are generated from this intervention. At least three (3) successful experiences in contexts of climate variability (droughts and extreme rainfall) will be identified and systematized, through which the design of a strategy can be scaled at the territorial level. Potential experiences for systematization are the implementation of climate-smart agriculture practices, the management of participatory agro-climatic roundtables, the use of climate information for decision-making, and the implementation of municipal climate change adaptation plans.

B. Describe how the project provides economic, social, and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The Project will be carried out in two areas of Honduras, Santa Barbara Mountain region and Yojoa Lake sub watershed Area, in the communities of 5 municipalities, 4 from the Santa Barbara Region: Concepción Sur, Las Vegas, Gualala and Santa Bárbara and 1 in Yojoa Lake: Santa Cruz de Yojoa located in the department of Cortes.

39 communities that are part of the special use area of Santa Barbara Mountain National Park (PANAMOSAB) and Yojoa Lake Basin will be served, which have been selected because part of the micro-basins that tax the most water to Lake Yojoa and the Ulua River are located there they also supply water to the selected municipalities, they also have a greater risk of landslide, greater exposure to expansive agriculture, affected by excessive logging and communities that have identified wildlife refuge areas such as the Quetzal refuge in the municipality of Las Vegas and the refuge of the Emerald Hummingbird only endemic to Honduras, in the municipality of Santa Barbara.

The total number of families in these communities is 18,000, which according to data from the municipalities, are made up of 20% of the child population (under 15 years old) and 30% are young people between 15 and 29 years old, what evidence that an inclusion work should be done with this population. These families have limited economic resources and their main activities are subsistence agriculture and small-scale livestock and forestry. These activities are primarily subsistence and carried out on small plots, because there is no equitable distribution of the land. Most of the land is held by large ranchers.

From this total of families, during the formulation of the complete proposal, 3500 families will be selected, which means a population of approximately 17,500 people, under the following criteria:

- Socio-economic status and violation of rights: Single farming mothers or fathers, socially vulnerable and extremely poor households belonging to indigenous groups, number of children and youth in the family.
- Productive Condition: Culture of planting vegetables, basic grains, or expansive agriculture, productive units with invasive agriculture near the micro-watersheds.
- Vulnerability condition: plot of land near the micro-basins, families that have been affected in homes, crops and soils by the impact of tropical storms in the last 5 years, families located in territories at risk of flooding, landslide, landslides, geological faults.
- Environmental conditions: Plot of land with agricultural vocation, agroforestry, Families located in areas of nature reserves protecting wildlife.

The groups identified who will benefit from the project for strengthening knowledge and capacities for planning and

decision-making for adaptation to the impacts of climate change and variability are the following:

- **Productive groups:** cooperatives and associations of producers, especially coffee, which is one of the most important crops produced in the areas.
- **Environmental management groups:** Santa Barbara Environmental Movement (MAS)
- **Risk Management Organizations:** Municipal Emergency Committees.
- **Community Groups:** Women's Networks, Youth Networks, and community committees;
- **Government organizations:** Municipal Governments, Municipal Women's Offices, Municipal Environment Units, representations in the areas of the Secretary of Agriculture, Secretary of the Environment, Forest Conservation Institute, COPECO (Office of Risk Management and National Contingencies), and the Secretary of Education.

All these groups participated in the consultation workshops that were carried out in the project territories. The groups demonstrated little knowledge about how to cope with the impacts of climate change. Between 82 and 100% stated that they had little or no knowledge for coping with the impacts of climate change; Likewise, regarding their participation in management or adaptation plans, between 59% and 83% stated that they had not participated or did not know if they exist. However, in the consultation they expressed their interest in participating in the project.

There are some non-governmental and academic organizations with whom the possibility of coordinating actions has been identified and can be included in the project execution. Some of these organizations have a presence in the area such as the Árbol de Misericordia Foundation, the Global Village Project, and the Christian Organization for the Integral Development of Honduras (OCDIH). Some academic institutions such as the Institute of Earth Sciences of the National Autonomous University of Honduras, which will be operating in cooperation with the Secretary of Environment, and the country's Climate Change observatory.

The Project will generate the following environmental and socioeconomic benefits:

Environmental benefits

There are central aspects of the project designed to directly benefit the environment through adaptation practices. The project will categorise the areas of intervention, prioritizing areas for the production and conservation of water, essential areas to maintain dynamic interactions within and between ecosystems with special biodiversity value, and degraded areas (soil and forest), to contribute significantly a healthy and sustainable environment in the project areas. By working with farmers in the use of the best practices of Climate Smart Agriculture, there will be environmental benefits from a lower use of agrochemicals and a greater use of organic products, using adapted technology for a more precise use of inputs, leading to reduced environmental contamination.

Through the strengthening of public and private institutions and community organizations, at the local-municipal and inter-municipal level, the project will lead to the implementation and ownership of environmental regulations and climate change adaptation plans.

The environmental benefits will be perceived at least by 4 municipalities in the Santa Barbara Mountain region and 1 in the Yojoa Lake sub watershed area.

The Santa Barbara Mountain region is the main source of water for Lake Yojoa, which is the basis for livelihoods for approximately 18,000 families through fishing, hospitality, and tourism services, which makes it key to environmental sustainability and people's quality of life.

Another important environmental benefit of the project beyond the direct intervention area is that 3 municipalities in the Santa Barbara Mountain region (Concepcion Sur, Gualala, and Santa Barbara) are part of the Ulúa River sub-basin, which is one river of great importance in the Sula Valley. Therefore, by improving agricultural practices with a CSA approach in the upper zone of these watersheds will contribute to the reduction of high flood damage in this area. The Sula Valley is an important economic and demographic region in Honduras so these reductions in floods provide important environmental benefits to a key region of the country.

ASAC practices and early warning systems generate greater climate resilience by enabling farmers to anticipate and adapt to extreme weather events, which can improve the resilience of their agricultural systems. This translates into increased capacity to cope with droughts, floods, storms, or other adverse weather events. By adopting these sustainable practices and using warning systems, farmers can optimize the use of resources such as water and nutrients, which in turn can increase crop productivity. Soil conservation, crop diversification and proper water

management can contribute to increased agricultural yields.

ASAC practices, such as soil conservation and conservation agriculture, have significant environmental benefits, can reduce soil erosion, improve water quality, promote biodiversity and reduce greenhouse gas emissions.

Socioeconomic Benefits, Introduction to Adaptive Capacities

As described in chapter one, the project will be developed in a context of high poverty with weak livelihoods, so the CSA and diversified agricultural systems component of the project will introduce improvements that will rapidly translate into higher incomes. By improving and introducing agroecological practices, productive diversification, improving water quality and resilience to climate change, significant improvements in diet and nutrition can be expected. These changes are also expected to generate income for families and improve their economic-social well-being.

One of the main purposes of the project is to improve the capacities of communities and local governments to participate in climate change adaptation initiatives and enable them to make better and informed decisions regarding their environment and, in turn, improve their quality of life. In this sense, this development of capacities increases their states of resilience, being a factor of enormous value to provide sustainability and viability to adaptation plans, and a better response to climatic phenomena.

Another project intervention is the implementation of early warning systems (EWS), which will benefit the population through risk reduction. A properly designed early warning system helps save lives, jobs, land, and infrastructure, and contributes to long-term sustainability in the region. Early warning systems help public officials and administrators plan, save money, and protect economies. Therefore, with the implementation of the EWS, both the local governments and the population of these municipalities, especially the most vulnerable, will benefit. The loss of many lives as well as their livelihoods will be avoided.

The effective relationship between governance, improved agroecological capacities, and knowledge management represents an integrating strategy of the basic and interdependent elements to achieve adaptive viability to climate change by communities and local governments. The integration of diverse knowledge and practices, both ancestral and new technologies, creates an optimal scenario to develop new bases for resilience.

Inclusion of the most vulnerable sectors

In the community and key actor consultations with vulnerable groups such as women, youth and indigenous groups, the project team identified differences in the impact of climate change and climate variability on these groups. It is perceived that women, girls and indigenous groups are the groups that are most impacted (highest impact) related to access to water, access to food and overload of work. Therefore, in accordance with the Environmental and Social Policy of the AF, these groups, especially women, will have a broad participation in the development of the project and in the execution of the activities.

To guarantee the inclusion of these vulnerable actors in the project actions, elements of approach will be included in a differentiated manner according to the differentiated barriers they have, to ensure that the obstacles to inclusion of these vulnerable groups will be reduced.

The ancestral knowledge of rural communities will be reinforced and strengthened, and at the same time will be of enormous value to the rest of the community to better understand and conserve the environment, restore environmentally friendly agricultural practices, and establish inclusive and culturally relevant decision-making processes.

Analysis of the Gender Situation and Project Measures to seek equity

According to data from the National Institute of Statistics (INE, 2022) the female population in the country represents 52% of the general population, of this percentage 43.8% is in rural areas. Women constitute 53.1% of the working aged population yet only 48.7% of women are employed and of this group, half are self-employed.

The estimated gross national income per capita in Honduras for women (constant 2017 prices) was US\$4,173 and for men was US\$6,446. Additionally, there is great inequality in the distribution of land: 15% of the landowners own 50% of the usable agricultural land and only 20% of the agricultural area is worked by small-scale farmers. Though women contribute individually or collectively to agricultural production, and as support for the agricultural work of their husband or partner, have much lower living conditions than men and their contribution to agricultural production is often invisible.

With the agrarian reform that began in 1962, women were only direct beneficiaries to land inheritance if they had a family to look after. Despite their work on the land, women were not considered farmers in the 1975 agrarian reform law. In 1992, the Law for the Modernization and Development of the Agrarian Sector recognized the possibility of granting land to peasant women who were married or in a common-law union with or without dependents. The law put an end to cooperative agrarian reform and created the land market thus creating individual private ownership. The individual private ownership replaced the traditional and collective forms of land ownership. Joint titling is only possible if the couple requests it, with which the decision came to depend on cultural or patriarchal norms leaving land titles primarily in the name of the male family members, which did not help gender equality. In 1996-1997, 43% of women, compared to 57% of men, benefited from land transfers.

The Law of Equal Opportunities for Women in 2000 declared family patrimony real estate, urban or rural, financed by the State, must be registered in the name of both spouses and of those who live in a de facto union registered in the Civil Registry. In 2004, the Property Law established new procedures for the acquisition, adjudication, regularization and transmission, registration, and administration of real estate.

Related to education, women's illiteracy is higher in the rural area with 19.2% compared to the urban area of 12.2%, as there are many challenges and barriers for girls' education, such as the long distances to travel to reach an educational centre that exposes them to situations of violence in their communities (Multiple Purpose Household Survey, INE, 2021).

One of the difficulties in addressing the situation of rural women in Honduras, and specifically in the project area, is the lack of up-to-date statistics on land tenure, access to credit, the relationship with natural resources and their participation in climate change adaptation actions. However, in CASM's experience in field work and through the interviews carried out with leaders in the areas, sexist and patriarchal culture has multiple expressions of machismo that prevent the full enjoyment of the rights of women and girls to the development of their autonomy and self-realization. Some of these expressions are the exclusion of women from decision-making spaces, economic and psychological dependence, sexual abuse, early pregnancy, and domestic violence. Adolescent pregnancy in rural areas is 28%, while in urban areas it is 16.5% (National Demographic and Health Survey, MICS, 2019).

Gender-based violence is high in Honduras, the second highest in Central America (data from CDM, 2019). During 2022, from January 1 to October 31, the National Emergency System 911 registered 19,552 complaints of domestic violence and 30,944 complaints of family abuse in the country (CDM Report 2022). In Honduras, an incident of sexual assault against women is registered every three hours (CDM Report 2022). The most serious manifestation of gender-based violence is femicides which, according to reports from women's organizations, is increasing in the country. Only between January and June 2022, according to the Public Ministry, 244 deaths of women were registered, 48% more than in the same period of 2021. According to the Violence Observatory of the National Autonomous University of Honduras, from the total 244 deaths reported, 70.9% are considered femicides, because they occurred with expressions of hatred and contempt due to gender. Of the total deaths of women, 40% take place in rural areas, among which Santa Barbara and Cortes are among the first 10 departments with the highest incidence.

The livelihoods of women depend to great extent on the availability of natural resources, especially due to their situations of poverty and low food productivity. These activities can cause a depletion of the natural resources, especially if sustainable practices are not used. Women are affected by the responsibility for the daily use and management of these resources, in their role of meeting the basic needs of their families through food processing, gathering wild products, carrying water, and gathering firewood. Vast and growing deforestation coupled with the depletion of water sources force women to travel ever longer distances. This requires women to spend more time and consume more energy to obtain these much-needed resources, increasing their workload and reducing the time available for other activities.

These challenges were identified during consultations with participating groups who identified a high level of impact of climate change and climate variability on women and girls, especially in access to water, access to food and increasing workloads. This was confirmed in the interviews with leaders in the area who raised the issue of the great burden of women's work due to domestic chores, but also their involvement in agriculture and community life, which is undervalued and often invisible.

In some of the municipalities of the project there are emergency and risk management plans, municipal development plans, and climate change adaptation plans, which do not have any analysis, or differentiated strategies by gender. The consultation and interviews with leaders reflect little participation and involvement of women in the construction of these plans. In relation to risk management and early warning systems, it was observed that there is no gender analysis

integrated to date. In an interview conducted during initial consultations, a municipal leader expressed, "There are no public policies according to differentiated needs, that is, in addition to suffering material damage, there are also emotional consequences, and the physical spaces of the shelters do not have safe conditions for this population. The damage assessment reports do not include an identification of differentiated needs" (Vice mayor of the municipality of Cabañas, initial gender consultation, CASM, December 2022).

In the country there is a regulation and institutional framework for gender equality in accordance with international instruments, one of which is the Gender Equality and Equity Plan 2010-2022. This plan has several axes which include access, sustainable use and the control of biodiversity, natural resources, and risk management. The challenge in this area is to adopt a gender equity approach in strategies related to climate change, protected areas, forest management areas, biodiversity, water, and risk management. This is a great challenge that must be addressed in the area because, as mentioned above, the local instruments on these issues do not identify problems differentiated by gender, therefore, they do not establish strategies to address these differences. Consequently, gender inequality and traditional systems which exclude women are perpetuated.

During the formulation of the complete proposal, a deeper analysis and diagnosis of gender will be developed, which will serve as a basis for developing a gender plan according to the FA Gender Policy. They present some minimum actions that should be developed in this phase of formulation of the complete proposal:

- a) Prepare a diagnosis to identify and collect data on gender differences related to the project problem, participation and impacts on gender in the threats posed by climate change and adaptation measures, as well as identify the limitations/obstacles that prevent the active participation of women and men.
- b) Identify what aspects should be raised in the axis of Adaptation to Climate Change of municipal development plans related to impacts and strategies differentiated by gender and vulnerable actors to facilitate inclusion.
- c) Map women's organizations and promote a gender equity approach in community organizations.
- d) Gender indicators will be established in each of the project objectives, within the Gender Action Plan that must be built for the project.
- e) Establish work strategies differentiated by gender to carry out the project's actions.
- f) The participation of women will be promoted and strengthened at all levels: consultative, decision-making, executive and operational in the structuring of local alliances.
- g) There will be reflections within environmental and community organizations on gender differences in leadership.
- h) Establish in the strategy of actions the establishment of affirmative measures that help to incorporate more women into their organizations and especially in the composition of boards of directors (minimum 30%), not only in traditional positions such as secretary; As well as the participatory methodology in the trainings should be used in such a way that the contributions of each and every one of the participants are shown.
- i) Inter-institutional coordination is proposed with local organizations (municipal women's offices, National Women's Institute, Women's Networks) and national organizations to develop gender awareness and training processes.

Avoid negative impacts

The following measures will be included in the project to avoid or reduce the possible negative impacts of the project.

1. Throughout the process of design, implementation, monitoring and evaluation, the "CASM Transparency and Conflict of Interest Policies" will be employed.
2. With the application of CASM's "Procedures for the Management of Complaints, Suggestions and Compliments" policy, the inputs provided by the key actors and stakeholders of the project, in particular community organizations and local governments, will be constantly monitored.
3. In relation to particularly vulnerable groups affected by the project, such as women, children, and the elderly, CASM will be guided by its "Protection Policy for Vulnerable Adults" and its "Child Protection Policy".
4. In addition to the application of CASM policies, all AF policies be followed, such as the Environmental and Social Policy and the Gender Policy, as well as all the guidelines established in relation to inclusion and benefits for the

different actors, especially the most vulnerable.

5. The objectives of the proposed project are directly aligned with the National Climate Change Adaptation Plan of Honduras", consequently, we will be in permanent contact and collaboration with state institutions to align efforts and resources and avoid possible obstacles and delays in development.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project.

The logical framework of the project describes an increase in communities' resilience, born from the implementation of actions to strengthen local capacities through governance, planning, knowledge management, and adoption of climate-smart agriculture practices (CSA). Elements identified for the sustainability of adaptation actions under the CSA framework are related to the CSA's three main objectives: sustainable adaptation, sustainability of production or income, and reduction of greenhouse gas emissions or mitigation. CSA practices have shown a critical cost-benefit result, according to the Guide to CSA practices or Climate Adapted Sustainable Agriculture (CASA) developed by CASM and the Bioiversity-CIAT alliance; The implementation of a CASA practices can have greater adaptation and productivity which results in economic gain, in addition to social and environmental co-benefits.

In the context of the project implementation territory, the IDB has developed a prioritization analysis of CSA practices that include the cost-benefit criteria, through an economic approach the practices to be promoted can produce less or more profit, as well as provide more or fewer externalities such as protection of biodiversity, reduction of air, water and soil pollution and employment. Actions such as water harvesting, irrigation systems, good agronomic practices, ditches, crop rotation, variety selection, pest control, and use of climate information, among others, can be prioritized based on location and production system and from the perspective of medium-scale producers and self-consumption focused farmers. CSA differs from 'business-as-usual' approaches by emphasizing the capacity to implement flexible, context-specific solutions, supported by innovative policy and financing actions (Lipper et al 2014).

The prioritization of CSA practices may be carried out with the community during the formulation of the full proposal, however, the following list presents examples of prioritized practices in initiatives developed in the territory of Honduras, which are part of the list of possible practices to prioritize in the project territories.

Tabla 3. List of CSA practices that can be prioritized in communities.		
CSA Practice	Feature	Cost USD
Organic and diversified vegetable garden (HO)	28 m2	411.7
Terraces with living barriers with organic fertilizers.	437m2	252.6
Improved variety of red beans "Honduras Nutritivo"	8 lbs	8.4
Bio-preparations insecticides/fungicides-(madrifol, sulfo-calcium, mountain microorganisms, honeywater).	20-15 litros	47.8
Harvesting rainwater roof rains.	1100 litros	138.2
Reservoir of water for irrigation	3600 litros	49.1
Reservoir for tilapia production and irrigation.	3600 litros 36 alevines	51.3

Management of shade in coffee plantations	0.5 mz	48.6
Living barriers (mother cocoa, maguey, pineapple, izote)	4 x 20 m	65.4
Crop rotation	0.25 mz	31.5
Diversified vegetable garden	6m2	85.9

Source: Lopez et al 2020.

According to (FAO 2013), in the publication "Climate Smart Agriculture Sourcebook", results of a cost-benefit analysis (CBA) in Central America showed that, although the implementation of most climate-smart agriculture practices imposes additional costs on producers, these costs are offset by a number of benefits associated with these practices. The main benefits include additional income generated by new products, greater resilience to negative economic impacts (for example, falling prices) and greater availability of food for the family. Many practices also generate environmental co-benefits, such as protecting biodiversity, reducing soil erosion, and increasing carbon dioxide capture. CBA results indicated that all climate-smart agriculture practices had a cost-benefit ratio greater than 1 (i.e., benefits exceeded costs).

Another CBA study conducted at CSA practices in Colombia in systems similar to those of the project area in coffee with shady under different scenarios, showed positive profitability indicators, the value of IRR% was 53% average and 49% minimum and 115% maximum including externalities, while 35% average, 16% minimum and 59% maximum without externalities (only private economic benefit). Social economic surpluses translate into an external benefit for the community and improve their quality of life, such as externalities, reduction of GHG emissions, prevention and control of soil erosion and water conservation. In Honduras, profitability analysis for fruit plantations using organic practices obtained a cost benefit ratio of 1.78 (Obando et al 2022).

Alternative options to increase the adaptive capacity of communities may include investments in response to disasters, construction of larger infrastructure works for water collection, communication routes, or a greater number of agricultural inputs for the intensification of production, however, conflicts are often created between water users and the environment. When adaptation is not implemented effectively or is not sufficient to cope with the severity of climate change, some of the costs may fall on the State, either directly through disaster relief funds and/or economic losses from extreme weather events. The current proposal, in its comprehensively articulated components, will implement adaptation actions at the local and sub-national level in an organized, cost-effective manner.

A very important aspect for the implementation of the CSAs is financing, which is why within the actions alternative financing, savings, and credit will be promoted by local mechanisms for the implementation of adaptation measures. This mechanism may be a rural bank or a community self-managed savings group, according to the prioritization of each territory; These mechanisms already exist in the territories, so their capacities will be used, and it is more effective to raise awareness and guide them to include CSA financing in their services than to organize other specific alternatives. Strengthening these local savings and credit mechanisms in the financing of sustainable agricultural practices adapted to the climate, will generate in the near future, that the families of these territories will be motivated to carry out the same since they will benefit from the financial services based on in savings and credit, which will improve access to the goods and assets necessary for climate-smart and sustainable production.

According to the IDB, among the most cost-effective measures for adaptation are knowledge management and early warning systems (IDB, 2014). Regarding knowledge management, the project proposes the implementation of an educational program with a formal and non-formal approach, which includes the population, community leaders, public officials, and officials from civil society organizations through the Training of Trainers (ToT) methodology with the use of virtual modalities when possible. The use of virtual modalities will help reduce costs. The benefits of increasing knowledge in the context of climate with public stakeholders and residents are many, as they have a fuller comprehension, which can bring them power in action and lead to increased resilience.

With respect to early warning systems (EWS), the project proposes the establishment of these systems in the territories according to the guidelines of the governing bodies in the country and with the participation and empowerment of different local actors, both government, communities, and vulnerable sectors. A properly designed early warning

system helps save lives, jobs, land, and infrastructure, and contributes to long-term sustainability.

D. Describe how the project is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The project proposed in this concept note at the international level is part of two instruments that have been ratified by the State of Honduras, the **Kyoto Protocol**, and the **Paris Agreement**. The Kyoto Protocol was signed on February 25, 1999 and ratified in July 2002. The Paris Agreement was ratified by the National Congress of Honduras on July 20, 2016, which establishes in article 2, literal b) "*relative to the commitment of the parties to increase the capacity to adapt to the adverse effects of climate change and promote climate resilience and development with low greenhouse gas emissions, in a way that does not compromise food production.*" The project is consistent with this international instrument that seeks to strengthen the capacities of adaptation to climate change in communities and diverse actors.

In line with the Paris Agreement, Honduras presented its Nationally Determined Contribution to Greenhouse Gas Emissions (NDC) where its priority is adaptation; Thus, Honduras has submitted 3 communications in which it announces the actions that have been carried out as a country related to climate change. The latest communication presented in 2019 presents national circumstances and how the effects of variability and climate change have an impact on the country and from there it is proposed how it has worked in institutional arrangements and public policies that allow it implement climate measures. Also presented is the inventory of Greenhouse Gases (INGEI) and also related to climate finance.

The third communication of the country establishes that the agriculture sector occupies the third place in the emission of GHG and in turn is one of the sectors most affected by the effects of climate variability and change in the face of this, the country has established that its mechanism of action should be governed by the approach of climate-smart agriculture (CSA). The project has as one of its main components the implementation of climate-smart practices (CSA) which is in line with what is established by the country. During the development of the complete proposal, indicators related to the contribution of these adaptation measures of the project with the reduction of GHG in the country will be established.

The project is nationally consistent with Honduras' 2022-2026 Government Plan, which proposes building a socialist and democratic state in Honduras, based on participatory democracy and popular power. To achieve an equitable distribution of social benefits through the implementation of social policies to create a supportive, inclusive and violence-free Honduras, where rights prevail over privileges and exclusions. The plan establishes an alternative economic model for Honduras that focuses on strengthening and increasing the role of the State in the economy, especially in strategic areas and public services. The objective is to diversify the productive matrix with higher value-added activities and increase productivity, promoting equity between genders, ethnicities, generations and territories in order to promote sustainable human development.

Within the different axes set out in the plan, the Environmental Protection and Agroforestry Development plan is proposed, which establishes the approach to the main problems such as: the loss of forest, the advance of mining and hydroelectric generation in the hands of large companies. Another fundamental aspect to be addressed is the constant problem of the impact of disasters, making it necessary to build resilience in the population. The plan also establishes the need for a Climate Change Adaptation and Mitigation Programme. In line with regional agreements, ensure a) solid material recycling strategies, b) reduction of pollution in air, water and soil c) monitoring the carbon footprint of our industry, and d) prohibition of importing toxic waste.

Another instrument in the national framework that gains importance in this project, due to the impact of Tropical Storms Eta/Iota in the area, is the **Reconstruction Plan for Sustainable Development (PRDS in Spanish)** that was presented during 2021 by the Government of Honduras and the United Nations System, in its volume 1 of Early Recovery whose main objective is to achieve social and productive recovery from the effects and impacts of storms Eta and Iota, seeking to strengthen institutional and social capacities for governance, sustainable development and resilience. The proposed project is consistent with this objective since it also aims to strengthen the resilience capacities of the diverse local actors.

The PRDS also has an Environment, Risk Management and Climate Change axis with studies and projects that guarantee the safety of the population and the development of productive activities, in the event of future natural disasters. In this axis, work will be done on the definition and implementation of effective climate change adaptation programs that are inclusive and participatory (inclusive of women and youth), especially at the local and regional level, which is also aligned with the project since it seeks to generate participatory actions with governments, local actors, civil society, academia, and the private sector to implement climate change adaptation measures and build resilience to climate events.

The National Climate Change Strategy of Honduras (ENCC in Spanish) is a national instrument which is part of Objective 3 of the National Plan of the Republic of Honduras, effective for the period 2010-2022, and is defined in coherence with guideline 7 referring to regional development, natural resources and the environment, and guidelines 11 and 12, on adaptation and mitigation of climate change, and on risk management and early recovery respectively. The ENCC proposes the incorporation of the approach to the issue of climate change in the different public policies, both socially, economically, and environmentally, and at the national, regional, sectoral, and municipal level.

Within the axes of this strategy there are two axes that are particularly aligned with the proposed project – (1) Agriculture, Soils and Food Security and (2) Risk Management. The Agriculture, Soils and Food security axis is linked to the guidelines for the adoption of Systems, technology and good practices for sustainable agriculture and linked to the project component on practices adapted to climate change and climate variable. The Risk Management axis focuses on the development of meteorological monitoring and early warning schemes in anticipation of hurricanes, tropical storms, and floods, which relates to the project proposed actions on the strengthening and implementation of Early Warning Systems in the intervention areas.

The proposed project is also linked to the **Vision and Mandate of the National Climate Change Adaptation Plan of Honduras:**

Vision: A Honduras resilient to climate change, productive and inclusive, generating decent jobs, taking advantage of the benefits and services of its natural resources in a sustainable manner, and reducing its vulnerability to climate change with a focus on the well-being of people.

Mission: Improve the national capacity to adapt to the effects of climate change, in communities and cities, in order to promote sustainable and low-carbon development by reducing socioeconomic vulnerabilities and environmental degradation.

The project proposal seeks to focus its efforts on strengthening the resilience of communities to climate change, increasing their productive capacity, reducing their vulnerability to provide sustainability and well-being to the beneficiaries, strengthening local capacities to adapt to climate change, through a reduction of their socioeconomic vulnerabilities. For this, it is essential to develop a solid institutional and local governance that for the creation and viability of adaptation plans, which the project addresses in component one. The project proposes the development of adaptation plans to climate change at the municipal level, which will be done according to the guidelines already established and in coordination with the National Directorate of Climate Change, the governing body of the National Plan.

The purpose of the National Strategy for Adaptation to Climate Change for the Agri-food Sector of Honduras is that the country is made up of a society, an economy, and a territory whose climate vulnerability is low, so that the negative impacts derived from climate change are also low; and to improve the adaptive capacity, particularly of the populations, sectors, and territories most exposed to climate threats. Additionally, the strategy seeks to build an agri-food sector with greater capacity to respond to climate variability and greater adaptive capacity to climate change, responding with policies, strategies, and appropriate measures that reduce vulnerability, in a multicultural environment, respectful of gender equity, supported by sustainable development. The project proposes the strengthening and involvement of local actors in the Participatory Agroclimatic Tables (MAPs in Spanish) that are derived from this strategy and that are led by the Secretary of Agriculture and Livestock and are an initiative that arises from the result of a cooperation agreement between this Secretary of Agriculture and the International Center for Tropical Agriculture (CIAT). Finally, the project proposes the adoption of agricultural practices adapted to climate variability and climate change.

E. Describe how the project meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The project is linked to and complies with the sustainable development strategies of actions/activities outlined in each of the norms, legislative policies, and national decrees of law established in the country. Honduras being a signatory country of the United Nations Framework Convention for Climate Change (UNFCCC) with its approval via the National Congress in 1995, has contributed to the fact that there is currently a robust legal and strategic framework regarding climate change.

- **NATIONAL CLIMATE CHANGE LAW**, approved in November 2014, with the goal of establishing the principles and regulations necessary to plan, prevent and respond in an adequate, coordinated, and sustainable manner to the impacts of climate change. The law establishes the creation of the Inter-Institutional Committee on Climate Change as a consultative and advisory body to formulate policies, monitoring, and social control to manage the impacts of climate change. Likewise, the creation of the National Directorate of Climate Change within the Secretary of State in the Office of Natural Resources and Environment as a technical entity specialized in the subject of adaptation and mitigation. The project will have a close relationship with these bodies set forth in the law, especially the National Directorate to implement various actions, especially the development of municipal adaptation plans with the guidelines established in this law.

- **GENERAL ENVIRONMENTAL LAW** (Decree No. 47-2010) establishes that the protection, conservation, restoration and sustainable management of the environment and natural resources are of public utility and social interest. The Central Government and the municipalities will promote the rational use and sustainable management of these resources, to allow their preservation and use. An important part is related to the environmental impact assessments and the establishment of a specific protocol in the law. The inhabitants of the local communities must participate directly in actions to defend and preserve the environment and the rational use of the country's natural resources. The participation of private organizations of any kind in the conservation of the environment and natural resources is of public interest. These organizations will be consulted for the elaboration of the plans and measures that are adopted in this matter. The declaration of the protected natural areas that include their buffer zones, will be made in consultation with the municipalities of the corresponding jurisdiction, prior to being made public.

The project will work and coordinate so that local governments and the inhabitants of the area strengthen their capacities to fulfil their responsibility for the sustainable management of natural resources with a focus on adaptation to climate change, as established by this law, especially with the responsibility of the municipalities with which the Project will work in a very coordinated manner.

- **REGULATION OF THE NATIONAL SYSTEM OF ENVIRONMENTAL IMPACT ASSESSMENT (SINEIA):** The objectives of the law are as follow:

- a) Organize, coordinate, and regulate the National System for Environmental Impact Assessment (SINEIA in Spanish), establishing links between the Ministry of the Environment, entities from the public, private and international sectors.
- b) Ensure that plans, policies, programs and projects, industrial facilities or any other public or private activity, likely to contaminate or degrade the environment, are subjected to an environmental impact assessment to avoid damage to the environment.
- c) Identify and develop the procedures and mechanisms through which the SINEIA and the other sectoral laws and regulations on environmental matters complement each other.
- d) Promote, manage, and coordinate the processes for the incorporation of the public, NGOs, banks and private companies and government, central and local institutions to SINEIA.
- e) Apply the policies, norms, procedures that update the SINEIA in accordance with the economic, political, social, legal, cultural, and environmental situation of the country, always seeking the compatibility of development and the environment.

The project takes this law into consideration since the diagnosis during the preparation phase of the complete proposal we will be define whether an environmental impact assessment is appropriate in accordance with these guidelines.

- **ENVIRONMENTAL CATEGORIZATION TABLE:** Ministerial Agreement-705-2021: Its main objective is the categorization of projects that are categorized by sector, subsector, and activity, works or projects subject to the Environmental Impact Assessment process, as well as classifying them according to their potential environmental impact. Likewise, it fulfils the function of serving as a technical base to establish the Environmental Risk Category of the activities, works or projects that are in operation, to guide the different authorities gathered in the National System

of Environmental Impact Assessment (SINEIA), regarding the actions of administrative procedures of an environmental nature related to permits, authorizations, and control tasks, in accordance with the principle of proportionality.

This table establishes agricultural activities that are developed in the communities of intervention, so it will serve as a basis to review if they are items that the project will support and do what corresponds in relation to environmental impact assessments according to law.

- **FORESTRY, PROTECTED AREAS AND WILDLIFE LAW** (DECREE No. 156-2007), establishes the legal regime to which the administration and management of Forest Resources, Protected Areas and Wildlife will be subject, including their protection, restoration, use, conservation, and promotion of sustainable development, in accordance with the social, economic, environmental, and cultural interest of the country. The project will take this law into consideration since the project intervention area includes three protected areas, in which we will work following this framework so as not to damage and having a focus on protection of these areas.
- **TERRITORIAL ORDERING LAW** (Decree No. 180-2003) promotes the integral, strategic, and efficient management of all the Nation's resources, human, natural and technical, through the application of effective policies, strategies and plans to ensure human development in done in a dynamic, homogeneous, equitable and sustainable manner. It also establishes the provisions for developing these policies, strategies, and plans. The project establishes an output that seeks, together with key stakeholders, to have municipal adaptation plans in the Santa Barbara Mountain region and Yojoa Lake sub watershed Area that are linked to the development processes of these municipalities, thus these actions will be coordinated with the different technical units established by law for its elaboration and development following each of the established norms.
- **THE SINAGER LAW**, aims to create the National Risk Management System, constituting the Honduran legal framework which aims to ensure that Honduras has and develops the capacity to prevent and reduce the risks of potential disasters, in addition to preparing, responding, and recovering from the actual damage caused by natural phenomena or by those generated by human activities. One of the principles of the system is decentralization, where it is established that the municipalities, within the scope of their respective competences, must assume and execute the specific tasks and actions in the territory to comply, in an adequate and timely manner, with their responsibility for risk prevention and reduction, to prevent and mitigate disasters, adapt to climate change, respond to emergencies, and rehabilitate and rebuild areas. The project proposes the strengthening/establishment of early warning systems, so it must follow the guidelines of the SINAGER Law for this work. The project will work directly with local governments helping them comply with these aspects of the law by following the steps for compliance with the risk management policy.

F. Describe if there is duplication of project with other funding sources, if any.

CASM has a policy that includes inter-institutional coordination and collaborative relationships with other organizations and institutions to establish programs in the areas of intervention, which is why it is essential to have knowledge of the programs and projects that are developed in the same area with government cooperation funds and other types of funds, to apply the lessons learned from projects related to the topics of interest to CASM and the communities served. CASM monitors other projects to ensure efforts are not duplicated. Some of the current projects identified in the area are:

- **IDB Program for the Restoration of Climate Resilient Forests and Forestry:** The objective is to contribute to improving the climate resilience of coniferous forests located in critical areas for water supply in the region. The specific objectives are to restore forest cover with resilient systems and strengthen governance and financial sustainability. This project's main theme is forest restoration, different from the proposed project, so there is no direct duplication. The proposed project will seek to discover the lessons learned from this project in building climate resilience.
- **Productive Investment Initiative for Adaptation to Climate Change (CAMBiO II) of BCIE:** the project objective is to increase the resilience to climate change of Micro, Small and Medium Enterprises (MSMEs) in Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, and the Dominican Republic, through access to financial and non-financial resources to adopt and apply the best adaptation measures to climate change. The proposed project will link to this program to learn from the lessons learned in relation to financing of adaptation measures to climate change, since the project has a specific output on financing alternatives and the possibility of articulating producer groups for this funding window with BCIE.

- **GEF Agroforestry landscapes and sustainable forest management that generate environmental and economic benefits at a global and local level CONECTA+:** The objective of the project is to strengthen the connectivity between protected areas and productive landscapes, in order to obtain social, environmental and economic benefits in the humid arid biological corridor of southwestern Honduras, specifically in the departments of Comayagua, Copán, Intibucá, La Paz, Lempira, Santa Bárbara, Cortés and Ocotepeque. The proposed project will seek to maintain a close relationship with this project that also covers the two areas of intervention of the proposed project. Though CONECTA+ works more specifically on the issue of restoration and reforestation, it also seeks to promote initiatives in productive value chains to increase income and other benefits for communities and farmers related to coffee, cocoa in agroforestry systems through an ecosystem approach.

For now, coordination with this project is identified in the component of Climate-Smart Agricultural Practices for the coffee production chain, which is the most important value chain in both areas of intervention; However, during the formulation stage of the complete proposal, it will be sought to have approaches to identify more specific aspects and guarantee coordination and non-duplication since there is coincidence of areas of intervention.

- **Binational project "Comprehensive Environmental Management of the Motagua River Basin" with financing from the World Environment Fund:** the project will improve the management of the Motagua River basin, reduce land-based sources of pollution and emissions of non-organic pollutants, to mitigate the impact on coastal marine ecosystems and the livelihoods of communities. This project is developed jointly between Guatemala and Honduras and consists of four components that range from the diagnostic analysis of surface and groundwater resources, a strategic action program between Guatemala and Honduras for the integral management of the Motagua basin, the development of innovative initiatives for the integral management of the river, generating knowledge and lessons learned to be replicated and expanded.

A relationship will be developed with this project, due to the overlap of activities in one of the proposed municipalities to coordinate efforts and avoid duplication. During the development of the complete proposal, meetings will be held with the project team to identify the specific aspects of lessons learned that can be taken up, especially in the establishment of Early Warning Systems.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

Following the guidelines and instructions for knowledge and learning management, the project encompasses a specific focus on knowledge management. The objectives to be achieved are oriented toward two results: (1) Certified training processes with relevant stakeholders and (2) Spaces for knowledge management and learning at a local, national, and global level.

The result of training processes is oriented towards the transfer of knowledge and learning about adaptation measures for climate change and climate variability, through a lens of both local understanding and public policy management. The project will promote the training of municipal trainers who can carry out learning transfer/scaling tasks at the community level. Likewise, public events will be held at the municipal and subnational level, which includes but is not limited to forums, roundtables, discussion panels and commemoration of symbolic dates about climate change (International Day Against Climate Change, World Water Day, among others). In a complementary way and as a measure of sustainability of the learning, the design and implementation of a guidance document on climate change and resilience will be promoted to be incorporated into basic formal education in the educational system in the intervention areas.

To develop these actions, it is necessary to design a knowledge management strategy and a communication strategy, based on the context and problem, identifying academic partners but also in conjunction with governing bodies such as SERNA's Climate Change Department. These strategies will include mapping knowledge, audiences, and messages, the development of learning objectives and indicators, with the channels and tools that are used by CASM, CIAT or other institutions in the country, such as the PICSA (Participatory Integrated Climate Services for Agriculture). Alliances will be made with academic institutions for the design and implementation of training processes for adaptation and gender.

The second objective seeks to generate information and comprehension of adaptation to climate change and climate variability and resilience from previous successful experiences and that are generated from this intervention. At least three (3) successful experiences in contexts of climate variability (droughts and extreme rainfall) will be recorded and

classified, which can then be scaled at the territorial level.

Experiences that are considered successful and that can be systematized and shared can be the following:

- Integrated participatory climate services for agriculture (PICSA) as it is a methodology that guides farmers to know the historical changes in climate patterns especially rainfall, temperature and relative humidity and how these changes affect agricultural production. These experiences could be shared through exchanges of experiences between communities that have already applied the methodology and communities of interest for scaling.
- The practices of Sustainable Agriculture Adapted to the Climate (ASAC), can be systematized due to the pillars that make up the fusion of the contribution to agriculture at the municipal and community level in relation to the three pillars a. Productivity and Food Security, b. Adaptation, c. Mitigation; it can also be scaled through the generation of positive outcomes by those who have already implemented it.

Experience generated through Early Warning Systems (EWS) can be systematized from the risk and adaptation approach; valuing the information they generate and the experience of farming families and the Municipal Emergency Committee in the use of climate information for decision-making in the context of climate variability and risks, this experience could be disseminated through exchanges between communities and organizations, case studies can also be developed that can be shared with different national and international organizations.

During the execution of the project, there will be a flow of information for families, community leaders, local organizations, municipal governments, academia, and the private sector as follows:

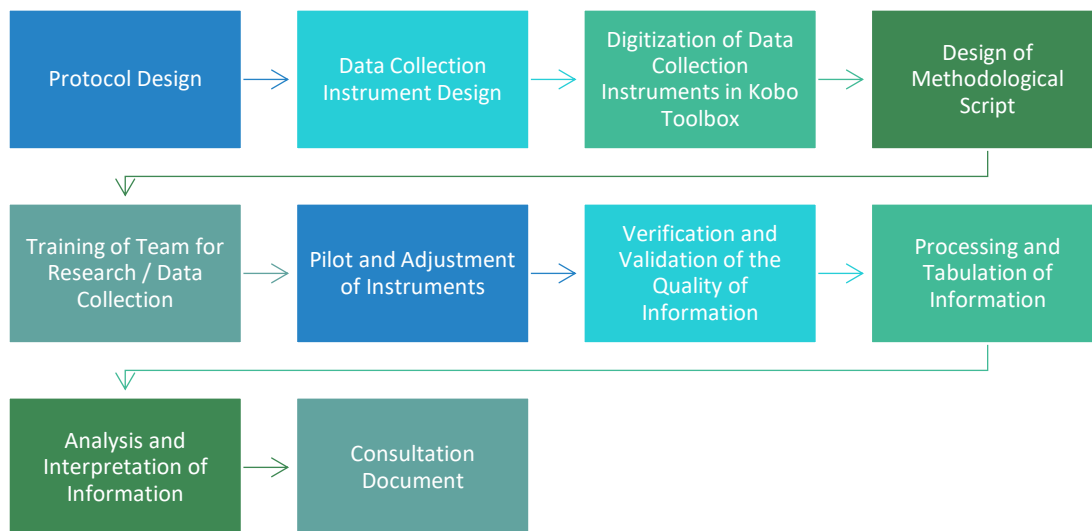
- Each quarter, meetings with project stakeholders will be held to discuss and analyse the results and information produced from each process.
- During all training events, there will be sections to raise awareness about climate effects.
- At the project team level, spaces for continuous and systematic analysis of the practices will be created to ensure the design of action plans that disseminate and enhance the processes and results generated.
- Each quarter, a newsletter will be created and shared, which will brief those involved in the project, as well as any other interested parties.
- The practices of other organizations and countries, especially those linked to climate change adaptation, that are implementing similar projects will be taken into consideration when carrying out the project
- Through institutional portals and social media (Facebook, Instagram, Twitter, websites, etc...), knowledge on climate adaptability, technological innovations, and sustainable practices, will be disseminated, an action already implemented in the program.
- Communication products will be established to disseminate information on best practices, sustainability and successful experiences carried out by the project, aimed at the population, and local, national, and international organizations, including AF spaces.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The consultation was carried out following a systematic process that allowed obtaining the most information, from the interested groups. The support of several CASM regional teams with extensive knowledge of the proposed intervention areas was necessary. Work was done in close coordination with the International Center for Tropical Agriculture (CIAT), an organization highly specialized in field research methodologies and climate change adaptation. Prior to the consultations, multiple meetings were held to ensure the process was carried out in an orderly fashion, which included the preparation of protocols to obtaining the consultation document.

The following image shows the entire process carried out (Figure 1):

Figure 1: Detailed process to design, implement, and create consultation. **Source:** CASM.



The process described above in Figure 1 is explained below:

A. Design of protocol

A protocol was designed to allow the consultation to be carried out in an orderly manner, this contained each of the steps to be followed for the consultation in Reserva Trifinio Fraternidad (R.T.F) and Parque Nacional Montaña de Santa Bárbara (M.S.B), with the intention of extracting from stakeholders, community, regional and national leaders, as well as local governments and organizations present in the municipalities, all the necessary information that served as a basis for the elaboration of the concept note. The protocol considered local customs and respect for the idiosyncrasies of the communities, being an important point to receive comments and opinions from stakeholders and respond to questions that arose during workshops and interviews.

Meetings were held with the management teams to publicize each of the aspects contained in the protocol and the need to follow each of the guidelines stipulated in an orderly manner.

The points considered in the protocol design were as follows:

- ✓ Selection of interested parties.
- ✓ Place of consultations.
- ✓ Preparation and convening.
- ✓ Definition and aspects of consultation.
- ✓ Methodology of the consultation.
- ✓ Dissemination of the results of the consultation.

B. Design of Collection Instruments.

For the consultation it was necessary to build information gathering tools and based on the design of questionnaires with a series of mostly closed questions, one aimed at community/local leadership and the other at key informants; the process of reviewing the content of the questions to be asked was also fundamental; the information to be obtained, the analysis of the validity of the variables to be analyzed, the availability of sources, the consensus of the criteria for consultation and the instruments of collection according to the necessary and important information to be obtained. These two questionnaires were uploaded to a kobo Toolbox platform and piloted with the equipment for understanding, detecting errors and subsequently adjusting and improving them.

C. Methodological script design and training

A methodological script for information collection was designed and teams were trained. The consultation was carried out through workshops one in the Trifinio Fraternity Reserve and the other in the Santa Barbara Mountain, where young people, indigenous population, women, senior citizens, public officials belonging to community structures participated, local organizations; key actors, representatives of regional and national organizations such as the ICF, COPECO, the Red Cross, the WMO, MNIGR, SAG etc. Some actors such as regional and national ones were asked specific questions about the degree of knowledge they have.

D. Quality of the information collection:

To ensure the validity of the information collected, triangulation was used as a mechanism to avoid possible biases and as a guarantee of achieving reliable results. The triangulations that were used were: the triangulation of persons interviewed with the information gathered at the consultation workshops and the annotations made by each of the teams that facilitated the process in the field; the information provided by the different actors was also accessed, in order to capture multiple perspectives of the proposed intervention; Interested groups were consulted in 10 municipalities belonging to the Trifinio Fraternity and Mountain Reserve of Santa Barbara. For the theoretical triangulation, use was made of the result framework on the themes of the intervention to be proposed, good practices identified, studies on the two proposed areas and general knowledge of the population about their interests and concerns and needs, etc; Two steps were followed to verify the quality of the information:

Stage I: Once the information was collected, the questionnaire was revised to ensure that all questions were answered, both from the workshops and from the individual interviews.

Stage II: All interviews were validated by reviewing all questionnaires.

E. Processing and tabulation of information

The consultation was conducted through a systematic process of gathering information through workshops and individual interviews; Once finished, the questionnaires were tabulated and then graphed to obtain the answers provided by the population in the two mountains, Santa Barbara, and Trifinio Fraternity.

F. Analysis and interpretation of information (quantitative and qualitative results)

With the data generated contained in the kobo Toolbox platform and an analysis and consensus meeting with the teams involved in the consultation, the analysis and interpretation were performed, subsequently in various working meetings the results were discussed and the outcome framework was adjusted according to the interests, priorities and concerns of the population.

This process rescued the ideas, interests, concerns, and alternatives of the interested groups with respect to the three components selected for the proposal (Territorial planning in the face of climate change, Climate-smart agricultural practices and systems, Knowledge management and learning) based on their own experiences in the prioritized territories. To present this proposal, two consultation workshops were held, one on the Santa Bárbara Mountain region and the other in the Trifinio Fraternidad Reserve where 10 intervention municipalities converge:

Two workshops were held on November 8 and 9, 2022, one in the Trifinio Fraternidad Reserve and the other in the Santa Bárbara Mountain where young people, women, older adults and the Maya Chortí, an Indigenous Community who have leadership in the region, participated. The development of the consultation workshops resulted in the analysis of the three proposed components and alternatives and definition of some proposed ideas were shared, the activities of the proposal were specified. The necessary information to make the pertinent adjustments according to the needs and priorities of the participating populations was collected.

The participants were selected according to the following criteria:

1. Recognized leadership in their communities.
2. Belonging to a community or municipal structure.
3. Who have worked on the topic of climate change or with knowledge on the subject.
4. Having knowledge of the study area.
5. Leadership of any dependency of the State of Honduras.

Selected findings from consultations

- The consultation workshops first shared the recurring or frequent risks that occur in the Trifinio Fraternidad Reserve and the Santa Bárbara Mountain areas, being landslides, followed by forest fires and floods, which affect the livelihoods of families living in these areas.
- To face these climatic risks, 71% of the population of the Santa Bárbara Mountain, including groups of women, youth, adults and leaders of community structures, stated that they have taken as the most viable measure to organize themselves into a prevention and emergency committee, and a 60% of the people consulted in the Trifinio Fraternidad Reserve, among them women, youth, leadership of community structures and indigenous Maya Chorti organizations, expressed using the same measure (organization of a prevention and emergency committee).
- The consulted population of the Trifinio Fraternidad Reserve and the Santa Bárbara Mountain areas expressed their concern about the factors that influence climatic risks, particularly extensive agriculture in the Santa Bárbara Mountain region, with a 38% and 27% in individual interviews of regional and national organizations. It is worth expressing the concern of the population regarding this key factor, since multiple studies have shown that extensive agriculture is a trigger that increases climate risks, generating or releasing significant amounts of methane and nitrous oxide, two powerful greenhouse gases, which in the long run are triggers for floods and desertification. Also, another factor that was evaluated with high percentages in the consultations and interviews was the extension of the urban/agricultural border. See Annex II, Consultation Document.
- Another highlight from the consultation was that the most critical impact from climate change that does not allow communities to advance and develop are the loss of crops, which was mentioned in 28% of interviews in the Trifinio Fraternidad Reserve and 25% in the Santa Barbara Mountain region.
- There was a lack of knowledge among the population about the existence of a management plan/master plan both in the Trifinio reserve and in the Santa Bárbara Mountain.
- An important finding is that of all population groups, climate risks affect women and girls more, mainly in three aspects – access to water, access to food, and increased workload. These elements are important to be able to work on gender considerations in the face of climate change and variability.

Some proposals expressed in the consultation workshops and interviews.

- It is important to implement water systems to avoid increased workloads for women and girls.
- Create awareness and train the population on climate risks and adaptation to the impacts of climate change.
- Educate more about climate change and climate variability, in this sense, one of the actions proposed in the project to work with the national educational system in the construction of guidelines to develop the climate change contents established in the Basic National Curriculum was valued.
- Develop comprehensive long-term strategies.
- Implementation of environmentally friendly agricultural practices.
- Implementation of informative and awareness-raising spaces.
- Implementation of management and contingency plans.
- Work jointly with national and international organizations regarding the financing of climate-smart agricultural practices.
- That a diagnosis and evaluation of the early warning systems that already exist in the areas be made so that project activities are based on work that already exists, strengthening existing work, and working in conjunction with the governing bodies on the topic.
- Retake aspects of work being done by the governing bodies on the evaluation of losses and damages.

Representatives of the different entities participated in these workshops:

- Representatives of the Municipal Women's Offices
- Representatives of the Municipal Environmental Units
- Representatives of the National Ancestral Coordinator of Maya Ch'orti 'Indigenous Rights of Honduras
- Youth network representatives
- Representatives of women's networks
- Women representatives of savings self-management groups
- Representatives of the Office of Risk Management and National Contingency Plans (COPECO in Spanish)
- The direction of the Western Regional Space (EROC in Spanish)
- Representatives of the Institute of Forest Conservation and Development

- Ahprocafe Representative (Coffee Production Group)
- Representatives of the different municipalities
- Representative of the Chorti Commonwealth

Several interviews were carried out with people from different institutions at the regional and national level, such as: representative of the Climate Change Unit of the Secretary of Agriculture, National Advocacy Table for Risk Management, Head of Early Warning at COPECO. Different meetings were held to obtain the commitment and support of the actions by the governing entities. A meeting was held on November 16, 2022, taking advantage of COP27 where the proposal was presented with its different components with the intention of acquiring the commitments from these representatives and to ensure well-coordinated interinstitutional work. In this meeting the following representatives participated:

- Deputy Minister for My Environment Malcolm Stufkens
- The Minister of COPECO Ramon Soto
- The representative of CEPREDENAC, Claudia Herrera
- The Executive Director of CASM, Nelson Garcia Lobo
- The Regional Manager of CASM Copan, Edy Mendez

A meeting was held on December 21 with the Minister of My Environment; the objective was to socialize the results of the consultation and the results framework of the project where the commitment to combine efforts to achieve the desired impacts was affirmed.

On December 27, 2022, a meeting of the CASM team with the Director of Climate Change of the Secretary of My Environment to review the concept note in which support for the proposal was ratified. The participants in this meeting were:

- The National Director of Climate Change, Eng. Wendy Rodriguez
- CASM Executive Director, Nelson Garcia Lobo
- CASM National Program Manager, Suyapa Ucles
- Planning, Monitoring and Evaluation Manager, CASM, Maria Amparo Peña Barahona

List of people in the Consultation workshop in the Trifinio Fraternidad Reserve, on November 8, 2022

Líderes comunitarios (jóvenes, mujeres, adultos mayores)				
Nombre	Institución / Organización	Cargo	Genero	
			M	F
Raúl Antonio Hernandez Sabillon	Grupo Scout Santa Barbara N.1	Rober	X	
Junior Jafeth Cantarero Jiménez	Grupo Scout N°1 SB	Rober	X	
Roberto Jiménez	Municipalidad de Gualala	Técnico UMA	X	
Angel Josue Sabillon	Grupo Scout Santa Barbara #1	Rober	X	
Carlos Mancia.	Municipalidad Santa Bárbara	Director UMA	X	
Edy Jessenia Sabillon	Oficina Municipal de la Mujer, Gualala	Coordinadora de OMM	X	
Lazaro Erazo	Asociacion de Juntas de Agua PANAMOSAB	Presidente	X	
Rosa Castellanos	Municipalidad de Ilima	Secretaria		X
Nelly Asusena Rodriguez Cruz	Oficina Municipal de la Mujer	Coordinadora		X
Jose Mario Orellana Leiva	Ambientalista	Ambientalista independiente	X	
Pifanio Gomez	Junta de Agua	Secretario	X	
Nodas Leiva	Patronato	Tesorero	X	
Jose Santos Bardales	Junta Administradora de Agua	Presidente	X	
David Rios Mejia	Junta de Agua	Presidente	X	
Elier Sarmiento	Patronato	Pro Secretario	X	
Jose Alberto Hernandez	Grupo Scout, Santa Barbara 1	Tropa	X	
Marta Reyes	Asociación de Desarrollo del área de Santa Bárbara, ADASBA	Técnica		X
Isidro Fernández	Junta de Agua	Directivo	X	
Josué David Padilla	Unidad Municipal Ambiental de Concepción Sur	Técnico UMA	X	
Rene Lorenzo	Municipalidad de Santa Bárbara	Técnico Desarrollo Local	X	
Gladis Sagastume	Patronato, Peña Blanca, Santa Cruz de Yojoa	Presidenta		X
Cesar Mejia	Comité de Emergencia Municipal, Concepción Sur	Representante	X	

List of people in the Consultation workshop in the Santa Bárbara Mountain, on November 9, 2022

Líderes comunitarios (jóvenes, mujeres, adultos mayores)				
Nombre	Institución / Organización	Cargo	Genero	
			M	F
Raúl Antonio Hernandez Sabillon	Grupo Scout Santa Barbara N.1	Rober	X	
Junior Jafeth Cantarero Jiménez	Grupo Scout N°1 SB	Rober	X	
Roberto Jiménez	Municipalidad de Gualala	Técnico UMA	X	
Angel Josue Sabillon	Grupo Scout Santa Barbara #1	Rober	X	
Carlos Mancía.	Municipalidad Santa Bárbara	Director UMA	X	
Edy Jessenia Sabillon	Oficina Municipal de la Mujer, Gualala	Coordinadora de OMM	X	
Lazaro Erazo	Asociación de Juntas de Agua PANAMOSAB	Presidente	X	
Rosa Castellanos	Municipalidad de llama	Secretaria		X
Nelly Asusena Rodriguez Cruz	Oficina Municipal de la Mujer	Coordinadora		X
Jose Mario Orellana Leiva	Ambientalista	Ambientalista independiente	X	
Pifanio Gomez	Junta de Agua	Secretario	X	
Nodas Leiva	Patronato	Tesorero	X	
Jose Santos Bardales	Junta Administradora de Agua	Presidente	X	
David Rios Mejia	Junta de Agua	Presidente	X	
Elier Sarmiento	Patronato	Pro Secretario	X	
Jose Alberto Hernandez	Grupo Scout, Santa Barbara 1	Tropa	X	
Marta Reyes	Asociación de Desarrollo del área de Santa Bárbara, ADASBA	Técnica		X
Isidro Fernández	Junta de Agua	Directivo	X	
Josué David Padilla	Unidad Municipal Ambiental de Concepción Sur	Técnico UMA	X	
Rene Lorenzo	Municipalidad de Santa Bárbara	Técnico Desarrollo Local	X	
Gladis Sagastume	Patronato, Peña Blanca, Santa Cruz de Yojoa	Presidenta		X
Cesar Mejia	Comité de Emergencia Municipal, Concepción Sur	Representante	X	

People consulted at the regional and national level

Actores claves (hombre y mujeres)				
Nombre	Institución / Organización	Cargo	Genero	
Jose Gregorio Rodriguez	Instituto de Conservación y Desarrollo Forestal (ICF)	Jefe de Operaciones Local	X	
Carlos Chinchilla	Espacio de EROC	Director del espacio	X	
Jose Alfredo Morales	AHPROCAFE	Presidente	X	
Ludin Mariela Ramos R	Comisión Permanente de Contingencias (COPECO PPH)	Técnico Auxiliar		X
Maria Roxana Valle Escobar	Comisión Permanente de Contingencias (COPECO PPH)	Técnico Auxiliar		X
Luis Enrique Amaya Garcia	Unidad Municipal Ambiental (UMA) de Florida Copan	Técnico UMA	X	
Rolando Mejia	Asociación de Desarrollo del área de Santa Bárbara (ADASBA)	Coordinador de base	X	
José Rodolfo Rivera Banegas	Municipalidad de Ilima	Jefe de Catastro	X	
Dorian Jeovany Rios Gomez	Cuerpo de Bomberos	Bombero	X	
Jorge Alberto Paz	Municipalidad de Ilima	Técnico Municipal	X	
Carlos Roberto Pineda	Equipo coordinado de montaña de Santa Barbara	Miembro	X	
Yeyson Hayaris Sagastume	Cruz Roja Hondureña	Director Departamental de socorrismo	X	
Jose Ramon Amaya Caballero	Equipo coordinador sector este Montaña Santa Barbara	Coordinador	X	
Ana mahory sagastume orellana	Cruz Roja	Logística		
Carol Rivera Rápalo	Instituto de Conservación y Desarrollo Forestal (ICF)	Jefa de Oficina Local		
Ulises Peña	Mesa Nacional de Incidencia para la Gestión de Riesgo (MNIGR)	Coordinador de la Unidad Técnica de la Mesa	X	
Varinia Trujillo	Mesa Nacional de Incidencia para la Gestión de Riesgo (MNIGR)	Oficial Humanitario		
Tirza Suyapa Espinosa	Secretaria de Agricultura y Ganadería	Coordinadora de la Unidad de Agro ambiente Cambio Climático		X
Malcolm Stufkens	Mi Ambiente	Viceministro	X	
Ramon Soto	Comisión Permanente de Contingencias (COPECO)	Ministro	X	
Claudia Herrera	Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (CEPREDENAC)	Secretaria ejecutiva del CEPREDENAC		X
Wendy Rodriguez	Mi Ambiente	Directora de Cambio Climático		X

Socialization meetings and consultations

1



MEETING AT COP 27

REPRESENTATIVES: MINISTER OF THE ENVIRONMENT, COPECO, EXECUTIVE SECRETARY OF CEPREDENAC AND REPRESENTATIVES OF CASM TO DISCLOSE THE PROPOSAL TO BE SUBMITTED TO THE ADAPTATION FUND



MEETING WITH THE DIRECTORATE OF CLIMATE CHANGE

PRESENTATION OF THE CONCEPT NOTE TO THE DIRECTOR OF CLIMATE CHANGE

2

3

CLIMATE CONSULTATION ON THE SANTA BARBARA MOUNTAIN AND TRIFINIO FRATERNITY

YOUNG PEOPLE FROM THE SANTA BARBARA MOUNTAIN AND THE TRIFINIO FRATERNITY PARTICIPATING IN THE CONSULTATION





Socialization meetings and consultations

4

CLIMATE CONSULTATION ON THE SANTA BARBARA MOUNTAIN AND TRIFINIO FRATERNITY



WOMEN FROM DIFFERENT MUNICIPALITIES PARTICIPATE IN THE CONSULTATION

5

CLIMATE CONSULTATION IN THE TRIFINIO MOUNTAIN



REPRESENTATIVE OF MAYA CHORTI ETHNIC ORGANIZATIONS, PARTICIPATING IN THE CONSULTATION

6

CLIMATE CONSULTATION ON THE SANTA BARBARA MOUNTAIN AND TRIFINIO FRATERNITY

OTHER ACTORS REPRESENTING DIFFERENT STRUCTURES AND LOCAL AND MUNICIPAL ORGANIZATIONS, PARTICIPATING IN THE CONSULTATION

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The financing requested from AF for the execution of the project will make it possible to fill a gap in the execution of the project in the proposed implementation area, since there are few current projects executed in the project region. There is a specific need for resources for the implementation of adaptation measures, productive activities, and supporting different organizations and local governments in generating useful climate information for decision-making in livelihoods and in reducing vulnerability to the effects of climate variability and climate change.

A very important aspect of the funding request is that the projects carried out in the proposed areas generally are weak in the inclusion of vulnerable groups, not only women but also children, youth, and the indigenous population which create positive impacts and avoid potential negative impacts from the project. It is very important to incorporate adaptation measures for livelihoods of this population, which are primarily agricultural activities, which is a central component of the project, and which is being prioritized in the allocation of funds for this project.

The Project has among its main actions adaptation measures, within these actions are CSA practices and early warning systems both generate greater climate resilience that can improve the resilience of their agricultural systems, much of the actions of the Project are aimed at the incorporation of climate-smart practices and the establishment and strengthening of Warning Systems, this comes to contribute to avoid many losses in crops and family livelihoods, it also helps improve productive yield, optimize the use of resources such as water and nutrients, which in turn can increase crop productivity. During the formulation of the complete proposal, the CSA practices to be implemented in each community will be identified in greater detail, as well as the location and details of how the Early Warning systems will work, this will help to identify more specific aspects of financial justification.

Knowledge management is very important since other projects are weak in the generation and multidisciplinary management of local and regional knowledge, as well as in technological innovation. The project will also invest part of its financial resources to ensure that the population and the different actors strengthen their capacity to generate knowledge and also to raise awareness about the impacts of climate change in their territory and the adaptation measures that can be built.

The co-financing of this project is not foreseen, but CASM will seek additional resources to continue with the activities initiated by this project after the financing of AF has concluded. Additionally, it is important to mention that CASM has an institutional presence with other projects in the areas of proposed intervention which will support the amplification of the impacts of this project.

J. Describe how the sustainability of the project outcomes has been considered when designing the project.

The project has been designed in such a way that it will allow the results to continue after the completion of the intervention, since the project and its design arises from the needs and interests expressed by the communities. Likewise, a multiplier effect of the proposed actions is projected to be generated and will be sustained over time with mechanisms and strategies deriving from the social actors involved. To guarantee the sustainability of the project's actions in the future, the following strategic elements were considered in its formulation:

- The project is aligned and complemented by the National Climate Change Strategy, the Sustainable Development Goals, and the National Plan.
- The project considers the institutionalization of spaces for dialogue, the social and economic organization of the populations of the Santa Bárbara Mountain region and Yojoa Lake Sub watershed Area based on the knowledge and experience of CASM as an implementing organization, It also prioritizes the sustainable use of natural resources and the adaptation of people's livelihoods to climate change in accordance with traditional and cultural practices, uses that benefit such management.
- The project prioritizes the sustainable use of natural resources and the adaptation of people's livelihoods to climate change in accordance with the practices, and traditional and cultural uses of natural resources that benefit their sustainable management.
- The equitable and equal participation of young people, women, men, and ethnic population is considered throughout the project cycle, including decision-making. In the project, women and young people are a priority group in all activities. Special emphasis will be placed on considering women as beneficiaries of growth processes, since they are the most affected by the effects of climate variability and climate change, according to the initial consultations.
- Since its formulation, the project considers the interchange and transfer of knowledge and appropriate technology for the environments of the project areas. Additionally, the proposed technologies and practices are easily usable and adaptable by the beneficiary population considering the cultural and economic context, so it is anticipated that they will continue to use them once the intervention has finished.
- The project is integrated into the institutional strategies of CASM in which the promotion of climate justice and environmental sustainability are some of the main axes of institutional work.
- As part of the sustainability process, the empowerment of actors in both territories is essential for their socio-organizational dimensions, livelihoods, and political dimension. This empowerment is accompanied by community volunteers' willingness to participate in and lead project activities and the ability of community organizations to replicate knowledge and experiences to a greater number of people.

Therefore, the project has a series of linking elements that start from social, economic, cultural, and environmental sustainability described in more detail in the following paragraphs.

[Social Sustainability:](#)

The project will establish the enabling conditions so different actors, including men and women, have an active and

inclusive participation in decision-making spaces through the knowledge acquired in the training processes in the project. The identification of relevant actors from civil society, the private sector, the public sector, and academia for participation in dialogue spaces oriented towards the acquisition of commitments and distribution of roles that allow structured responses to environmental problems and new climate scenarios in the proposed territories is key to the sustainability of these spaces.

The dialogue and decision-making processes will generate the bases for fluid communication with the interested parties located in Santa Bárbara Mountain and Yojoa Lake Sub watershed Area. An important element is a team of trainers for the Training of Trainers who will have the skills to continue replicating knowledge and training of more people on the effects of climate variability and climate change in the proposed implementation areas.

The processes of socialization and awareness about the effects of climate variability and climate change with the different actors in the two territories, will ensure the interest and ownership of the planned short-term activities, also in the medium and long-term follow-up of the same.

An activity that favours sustainability of the project is the investment in the training of new leaders, with a new conception of power based on knowledge, horizontal relationships, and citizen co-responsibility for follow up on actions that can have a positive impact.

Economic Sustainability

It is expected that the diversification of economic activities and agricultural practices adapted to the climate and the improvements in crop production will generate higher income for the participating families, so that they can maintain these productive practices beyond the duration of the project. In addition, after training the producing families in sustainable agriculture practices and in the management of projects that guarantee the exchange of knowledge on different topics the project ensures that Indigenous and non-Indigenous farmers initiate an open dialogue of sharing ideas and best practices among their peers, thus creating further income-generating opportunities for their families.

By encouraging the population to participate in the National Prize for Best Practices in Adaptation to Climate Change, the project will generate greater awareness and interest in continuing to develop innovative and adaptive practices after the end of the project.

Promoting local savings and credit mechanisms aimed at financing sustainable agricultural practices adapted to the climate, will generate short-term solutions for families in the project territories and motivate implementation of the practices since they will benefit from the financial services based on savings and credit, which will improve access to goods and assets necessary for climate-smart and sustainable production.

Agreements of understanding will be signed on the management of funds either in banking, local financial systems or the private sector, with the intention of encouraging producers to continue implementing ASAC practices, with financing available with established criteria and preferential loan rates. With financing and empowering producers to continue implementing them, it will have safe markets as ASAC practices and the implementation of early warning systems will provide farmers with access to differentiated markets and specific certifications; as consumers and markets increasingly demand sustainably produced agricultural products. By adopting environmentally friendly practices and demonstrating resilience to climate change, farmers can access premium markets and obtain more favourable prices for their products, making sure to mobilize more funding to leverage their products.

The adoption of asac practices and the implementation of early warning systems will provide added value to agricultural products. Consumers will be willing to pay more for products that are produced sustainably and grown with climate change in mind. By differentiating themselves in the market and offering products with sustainable attributes, farmers can obtain higher prices and improve their profitability.

Both ASAC practices and Early Warning Systems are designed to promote agricultural sustainability. These approaches focus on soil conservation, efficient water use, crop diversification, adoption of agro-ecological practices and use of information and communication technologies. By integrating these aspects, the long-term viability of agricultural systems will be ensured, minimizing environmental impacts, and increasing resilience to climate change.

Environmental sustainability.

The processes of raising awareness about the climate crisis and the implications of climate change at the national level will lead to the generation of greater articulation of decision-makers in the territories with the Secretary of the

Environment and others that work on these issues within country and government. This will establish coordinated actions for the benefit and protection of the Santa Barbara Mountain and Yojoa Lake areas.

The involvement and participation of interested parties in the design and updating of climate change adaptation plans will provide empowerment and commitment to give continuity to the actions contained therein. The empowerment of the Agroclimatic Roundtables and the establishment of mechanisms for the provision of services will allow them to continue their process even when the project has ended.

The establishment of early warning systems and the generation of information will allow the population to anticipate and minimize losses in agricultural production, infrastructure; therefore, mechanisms and agreements will be generated with local governments for the institutionalization and continued management of the early warning systems after project end.

Institutional Sustainability

The local appropriation and ownership of the results, to count on the involvement of the beneficiaries throughout the management process, is widely guaranteed, since communities, non-governmental organizations, regional and national actors have been involved in the design of this proposal. We are also aware that institutional sustainability is only consistent when working with local organizations, since they open the important dialogue between all the diverse but equally important groups in society, which is why local organizations are key to the consultation, design, and implementation strategy for the project.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

In accordance with the Fund's Environmental and Social Policy and Gender Policy, all proposed projects or programs must identify potential environmental and social impacts and risks.

This is a climate change adaptation project, and it will ensure that no action implemented causes collateral damage, so that this is effective, in every activity, microproject or process that is undertaken at the community level. During the formulation of the complete proposal, a participatory environmental risk assessment will be applied, under close consultation with the beneficiaries, including the most vulnerable groups and key actors, and will be carried out applying institutional methodologies but also the methodology of the AF for evaluation of its Environmental and Social policy.

Initially, with the preliminary analyses according to the table established by the AF for this purpose, the Project is classified as medium risk, category B, however in the formulation of the complete proposal a more detailed analysis will be developed with all the actors involved.

The preliminary analysis table is presented with the 15 environmental and social principles established in the environmental and social policy:

Table 4: Overview of project environmental and social risk assessment		
Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>		The project will act in strict adherence to the Honduran environmental and climate change legal framework, which implies that the actors involved will observe the laws described above and will carry out the rigorous consultations and the necessary technical and legal support will be requested.
<i>Access and Equity</i>		Although initially the project is evaluated as low risk, evaluations are necessary, because the project will be highly participatory in the community and should ensure that inequality and inequity do not deepen. On the contrary, equitable access to services will be facilitated, and that, for any historically marginalized group or group that has

Table 4: Overview of project environmental and social risk assessment		
Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		<p>historically experienced violence, this will be an opportunity to include and empower them.</p> <p>During the preparation of the complete proposal, the participation of the different vulnerable groups will be guaranteed and the joint analysis of how they will have greater equitable access to the services that the Project will provide will be deepened.</p>
<i>Marginalized and Vulnerable Groups</i>		<p>This risk is low or non-existent, since families that are part of marginalized groups, especially women, youth or older adults, have been consulted preliminarily and will be consulted in more detail in the formulation of the complete proposal, as well as will be involved in decision-making and participating as a priority in the services and all project activities to ensure that they will benefit from the implementation.. The marginalized or vulnerable groups that are present in the area are:</p> <ol style="list-style-type: none"> 1. Displaced people: The western area of Honduras has one of the highest rates of human mobility in the country, with high rates of internal migration and migration outside the country, as well as people who cannot reach their main destination to the US have been deported. No adverse effects of the project are foreseen with this group, on the contrary rather in the proposed areas there is a joint work with the municipalities to integrate deportees into productive work and improve their living conditions. 2. Women: more than 50% of the population are women, many of them incorporated into the productive sector since the area is principally small-scale production. Some women are dedicated to household work and others are dedicated to agriculture, In the development of the complete proposal and gender plan, CSA practices will be established which CSA practices are viable with women and their capacities to implement them will be strengthened. 3. Children/youth: The human rights of this group are frequently violated in this group and with the pandemic the group experienced greater exclusion from the educational system. There is a high percentage of young people who neither work nor study, therefore, the Project also prioritizes working with these young people, in the development of the complete proposal, alternatives of livelihoods and CSA practices possible with this group will be identified. 4. Older adults: there are many in this group in charge of their grandchildren due to migration, and they are the population who are most involved in agricultural activities. <p>CASM has institutional policies consistent with the AF Environmental and Social Policy that establish how to serve these groups and not deepen inequalities. These policies are Child Protection Policy, Gender Equity Policy, and Policy for the Protection of Vulnerable Adults. In addition, the project will work to sensitize the entire community about the need to serve these groups, to understand and analyse the challenges they experience in accessing specific services, such as climate information, financial products, supplies,</p>

Table 4: Overview of project environmental and social risk assessment		
Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		etc. The project will work through a combination of household surveys, focus group discussions and community consultations at general meetings to understand the needs of these groups.
<i>Human Rights</i>		This risk is low or null since an analysis has been carried out and it is preliminarily determined that this project does not violate any pillar of human rights under any circumstances and is consistent with the Universal Declaration of Human Rights and other international instruments. Honduras is a signatory to the Universal Declaration of Human Rights, and the most fundamental aspects are reiterated in the Constitution of the Republic, however, in the universal periodic reviews, broad recommendations are established to improve the application of the SDGs and other aspects of the system of human rights in the country. At the request of the Honduran State, there is an office of the United Nations High Commissioner for Human Rights. However, in the implementation process, the respective monitoring of human rights will be carried out to ensure compliance.
<i>Gender Equality and Women's Empowerment</i>		This risk is medium since the project will be implemented in a context where gender inequality prevails, in studies carried out in similar communities it can be observed that women have less participation in agricultural practices and especially in CSA, likewise although women receive similar climate information little participate in the use of that information and decision-making on climatic aspects and its influence on the media of life. During the formulation of the complete proposal, a more complete gender diagnosis and analysis will be carried out in the proposed communities, which will serve as a basis for developing a gender plan for the project according to the AF's gender policy, in which specific actions will be identified within the work components to guarantee greater empowerment of women and gender equity.
<i>Core Labour Rights</i>		This risk is low or null, since the project will guarantee that the executing organizations and those that coordinate with the project maintain respect for national labour laws and ILO international standards, for which permanent communication will be established with the Secretary of Labour and thus we will receive the needed support. The right/freedom of association/union will be fulfilled by the organizations that will execute and are in coordination with the project. The labour relations that are necessary for CASM and the executing organizations are guaranteed to be free of discrimination and forced labour. The project will not hire minors and will guarantee that none of the executing organizations and with which they coordinate, likewise in the communities we will seek to raise awareness about the worst forms of child labour.
<i>Indigenous Peoples</i>		This category is low risk, in the proposed areas of intervention there are Indigenous Peoples including the Lencas, by the participatory approach of the project the inclusion of these groups will be ensured and they have participated in the initial consultations and will continue to be

Table 4: Overview of project environmental and social risk assessment		
Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		involved in each process of the design and implementation of the project.
<i>Involuntary Resettlement</i>		The risk is null because the project will not lead to resettlement. On the contrary, the project will try to ensure that the families that are already settled in these communities learn new production techniques and that, combined with their ancestral knowledge will ensure resilient and adaptive mechanisms to stay in their territory despite the changing and variable climate.
<i>Protection of Natural Habitats</i>		Low risk. Through the implementation of activities for sustainable land use, conservation and restoration, and integrated water management, the project will ensure the protection of natural habitats, as established in the country's legal framework on National Parks since there are 3 in the proposed communities.
<i>Conservation of Biological Diversity</i>		This risk is low, since in its approach it is considered that the actions take a conservationist and adaptive methodological approach, so there is little or no possibility of introducing chemicals that would harm biodiversity in any of the activities and processes that will be undertaken.
<i>Climate Change</i>		This risk is low or none, as the project will not generate significant greenhouse gas emissions and will not contribute to climate change in any other way. All project components and activities contribute to increasing local capacities to deal sustainably with long-term climate change and short- and medium-term climate variability. The project will not introduce any agrochemicals for agricultural production, all inputs will be organic and, to the extent possible, locally produced.
<i>Pollution Prevention and Resource Efficiency</i>		In this principle there is no risk since the project will not release pollutants. Energy efficiency, minimizing the use of material resources, and minimizing waste production will be integrated into the project design. Additionally, the focus of agricultural management in the project will implemented so that the producers generate their own fertilizers under one hundred percent organic practices.
<i>Public Health</i>		This risk is low since a risk assessment tool – CEDRA – will be applied in the different community actions which will ensure the interventions do not cause harm to health, taking all the necessary precautionary measures to safeguard the physical and mental health of the families reached by the project.
<i>Physical and Cultural Heritage</i>		This risk is low or null since the project is highly participatory, in the consultations that are carried out and the commitments that are assumed, it will guarantee that any damage to the physical or cultural heritage that exists in the project is avoided; In the area is the Los Naranjo Archaeological Park, which is a declared National Heritage. The project does not contemplate infrastructure works, however, to avoid any negative impact of the project and activities, the project will coordinate with the Honduran Institute of Anthropology and History.

Table 4: Overview of project environmental and social risk assessment		
Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Lands and Soil Conservation</i>		This risk is low to zero. Adaptation actions implemented in the communities, especially for the generation of their livelihoods, could generate negative impact on soil conservation if improperly designed or if insufficiently informed. To address these challenges and to reduce this possibility, the project team will be aware at all times of this possibility and all precautions will be taken to minimise risks in the work plan. In addition, in the permanent monitoring these will be focus points to ensure pertinent corrections are made in case of finding any aspect that does not contribute to the achievement of the objectives set by the project.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Demonstrate how the project aligns with the Results Framework of the Adaptation Fund

This component of the application is not required for the type of application submitted, thus intentionally left blank.

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

A. Record of endorsement on behalf of the government²

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

<i>Mr. Lucky Halach Medina Estrada, Minister of Secretary of State of Energy, Natural Resources, Environment and Mines.</i>	<i>Date: (May 15, 2023)</i>
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B. Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address.

<p>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 – (- Instructions for preparing a project/program financing application - Guidance document for environmental and social policy - Gender orientation document for executing entities on compliance with the gender policy of the Adaptation Fund - Environmental and Social Policy of the Adaptation Fund - Gender Policy of the Adaptation Fund - Results Framework and Baseline Guidance) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.</p>	
<p>Name & Signature - Implementing Entity Coordinator Nelson Davidson Garcia Lobo</p>	
<p>Date: (June 2, 2023)</p>	<p>Tel. and email: +504 9995-0256, direccion@casm.hn</p>
<p>Project Contact Person: Suyapa Edith Ucles Salinas</p>	
<p>Tel. And Email: +504 9456-0623, programas@casm.hn</p>	

⁶ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entity

Oficio No.-DMA -0160-2023

Tegucigalpa, M.D.C., May 15th, 2023

Ref.: Endorsement for Building Resilience to Climate Change and Climate Variability in Western Honduras

The Adaptation Fund Board
Adaptation Fund Board Secretariat

Dear Sir/Madam


I am pleased to confirm the commitment of the State Secretariat of Natural Resources and Environment to endorse the **Building Resilience to Climate Change and Climate Variability in Western Honduras** project proposal with support from the Adaptation Fund.

In my capacity as designated authority for the Adaptation Fund in Honduras, 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 Honduras.

If approved, the project/programme will be implemented by Comision de Accion Social Menonita (CASM) and executed by the State Secretariat of Natural Resources and Environment of Honduras.

Sincerely,




Lucky Halach Medina Estrada
Secretary Natural Resources and Environment

CC;Archivo



Project Formulation Grant (PFG)

Submission Date: 06/07/2023

Adaptation Fund Project ID:
 Country/ies: Honduras, CA
 Title of Project/Programme: Constructing Resilience Together to Face Climate Change and Variability in Western Honduras
 Type of IE (NIE/MIE): NIE
 Implementing Entity: CASM
 Executing Entity/ies: ICTA (International Center for Tropical Agriculture)

A. Project Preparation Timeframe

Start date of PFG	November 2023
Completion date of PFG	January 2024

B. Proposed Project Preparation Activities (\$)

Describe the PFG activities and justifications:


List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount
Recruitment of specialized consultancy to lead consultation, diagnosis and gender plan	Gender Management Plan Prepared with the AF specifications	\$ 12,000
Consultation with different actors in the territory and at the national level on the gender situation in the intervention areas and also on the proposals for actions to follow		
Diagnosis of Gender at the territorial level, to identify gaps, roles, cultural patterns that are affecting and especially elements to consider so that the Gender policy of the AF and CASM is fulfilled in the project.		
Preparation of the Gender Plan according to the guidelines of the AF		
Recruitment of Consulting to lead the complete proposal	Complete proposal developed in a participatory manner in accordance with the	\$ 38,000
Territorial, socio-economic		

1060

and environmental diagnosis	guidelines of the AF	
Meetings-workshops to define indicators, agreements and implementation plan		
Preparation and writing of the complete proposal according to the specifications of the AF		
Total Project Formulation Grant		\$ 50,000

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Comision de Accion Social Menonita (CASM)		06/07/2023	Nelson Garcia Lobo	504 2552-9469	direccion@casm.hn
		06/07/2023	Suyapa Ucles Salinas	504 9456-0623	programas@casm.hn