ADAPTATION FUND

FULLY DEVELOPED PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category: **Enhanced Direct Access Regular Project**	
Country/:	**Perú**
Title of Project/Programme:	**Fund for Innovative Adaptation in vulnerable ecosystems in North of Perú. (Ancash, Cajamarca; Lambayeque& San Martin y Loreto)**
Type of Implementing Entity:	National Entity
Implementing Entity:	Profonanpe
Executing Entity/ies:	Profonanpe
Amount of Financing Requested:	USD 5 million (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes x No ☐

NOTE: The LOE 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:

x This proposal has been submitted before including at a different stage (concept, fully developed proposal)

☐ This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that fully developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.

Project / Programme Background and

Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

Peru has seven of the nine characteristics recognized by the United Nations Framework Convention on Climate Change (UNFCCC) to qualify countries as particularly vulnerable to climate change: (i) low-lying coastal areas; (ii) arid and semi-arid areas; (iii) areas exposed to floods, droughts and desertification; (iv) fragile mountain ecosystems; (v) disaster-prone areas; (vi) areas with high urban air pollution; and, (vii) areas that present an economy dependent on income generated by the production and use of fossil fuels.

Climatic condition for Peru´s in 2030 and 2050

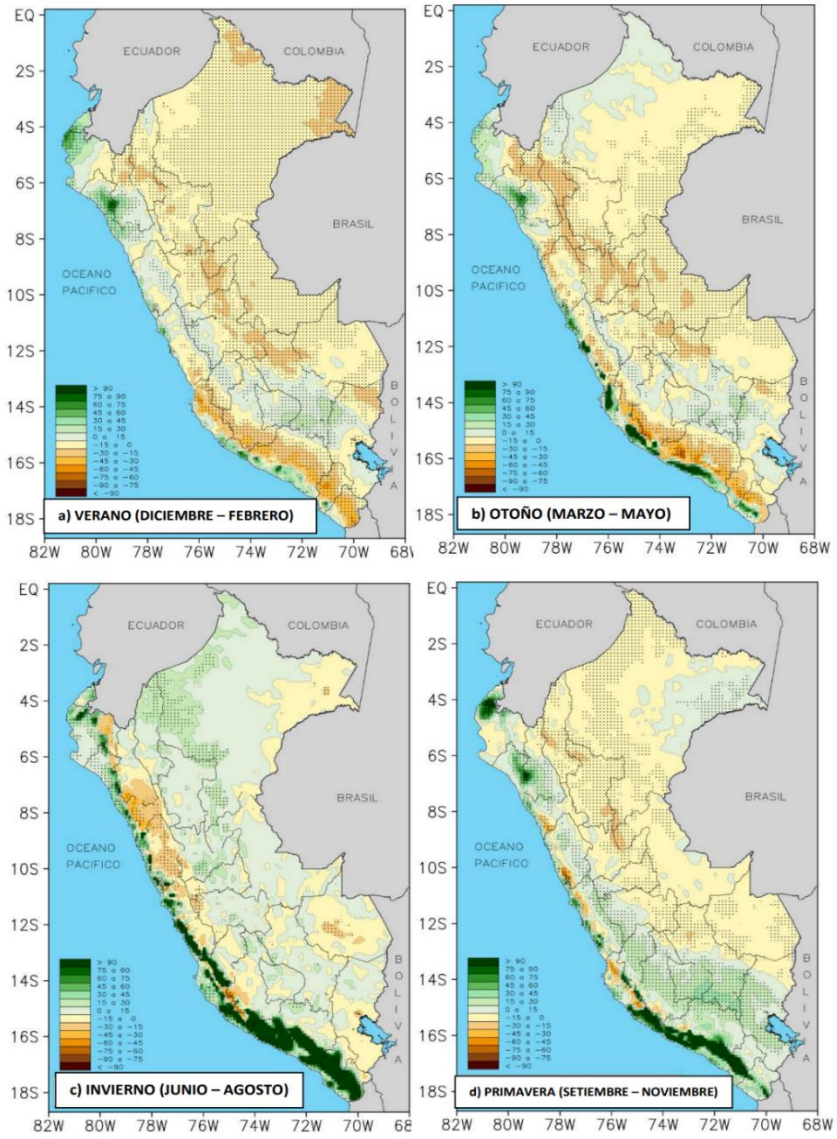
According to the information provided in the National Adaptation Plan (NAP), Peru has climatic conditions due to different factors such as the Peruvian or Humboldt Current, the Andes and the dynamics of cyclones and anticyclones, which determine the great variety of climates in the territory. According to Warren Thornthwaite's classification of climates, Peru has 38 different climates; this climatic diversity can be grouped into three main categories: coast, highlands, and amazon. The coast, between the coastline and the foothills of the Andes, is a dry region with little precipitation, except in the north during El Niño events.

Likewise, El Niño and La Niña events and phases of the phenomenon known as ENSO, have an influence on Peru's climate. El Niño is related to an anomalous warming of the Eastern Tropical Pacific Ocean (OPTO for its acronym in Spanish). Depending on where it occurs, a distinction can be made between canonical El Niño (warming occurs from the eastern to the central Pacific), Modoki (warming occurs in the central Pacific) and coastal El Niño (warming occurs only in the eastern Pacific); for its part, La Niña is related to an anomalous cooling. (MINAM, 2021).

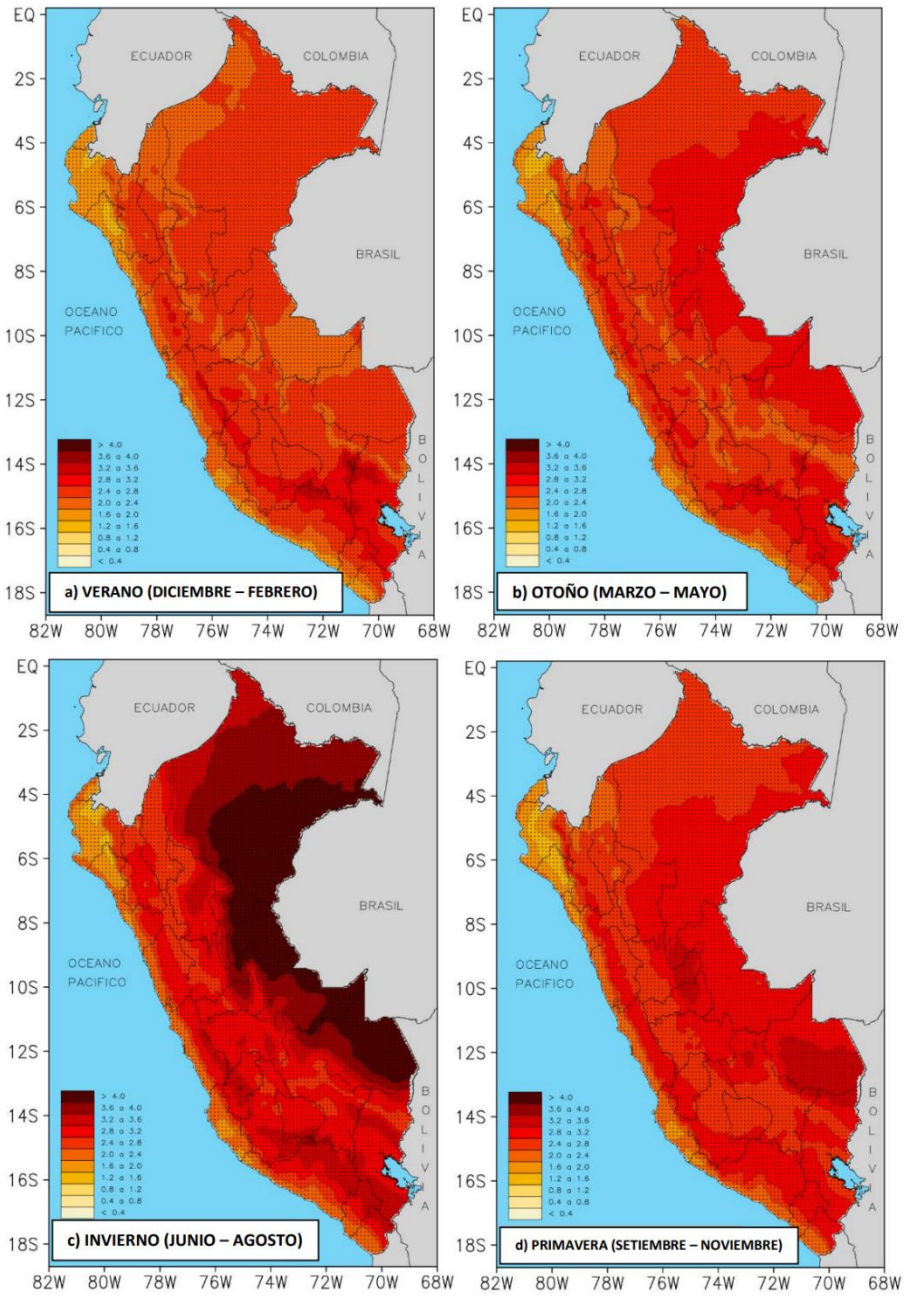
Historical records indicate that these past extraordinary events have directly affected productive sectors and natural and social infrastructure and have caused economic losses reaching more than 4.5% of Gross Domestic Product (GDP) (in the case of El Niño, between 1997 and 1998) (National Forest Service, SERFOR, 2018a). Continuing with extreme events, Peru is a country highly exposed to the occurrence of frosts, droughts, and floods, which affect the country economically and socially. In short, in Peru, between 1995 and 2008, an increase of more than six times in the occurrence of extreme events such as droughts, heavy rains, floods, frosts and hailstorms has been registered. (SERFOR, 2018a).

Projected temperatures for 2030 will increase between 1 and 2.5 °C in minimum temperature and between 0.5 and 2.5 °C in maximum temperature, with respect to the reference period (1981-2005). Increases in maximum temperature are higher in the Andes and the Amazon. On the other hand, the coast and northern Peru are more stable, due to the thermoregulatory effect of the sea. As for the minimum temperature, a greater increase is again observed in the highlands. On the other hand, moderate increases are observed in central Amazonia and the coastal zone.

Similarly, for 2050 is expected an increase in the minimum and maximum temperature with a spatial behavior relatively similar to that observed for the 2030 projection. When analyzing spatial variability within the national territory, both maximum and minimum temperatures show greater increases in the Andes and the Amazon, reaching values of up to 2 °C with respect to the reference period, while the coast shows moderate values of between 1.5 and 2.0 °C, with some hotspots in Loreto, north of Ucayali, the north and south of Cusco, and the highlands of Arequipa, Moquegua, Tacna y Puno, (National Service of Hydrology and Meteorology, SENAMHI, November, 2021)



Source: SENAMHI (2021). Changes in quarterly precipitation centered on 2050 [%], with respect to the 1981-2005 period. For a) Summer, b) Autumn, c) Winter and d) Spring. Dotted areas indicate changes at a significance level of α= 0.05.



Source: SENAMHI (2021). Changes in quarterly maximum temperature centered at 2050 [°C], with respect to the period 1981-2005. For a) Summer, b) Autumn, c) Winter and d) Spring. Dotted areas indicate changes at a significance level of α= 0.05.

According to the latest population estimates and projections of the National Institute of Statistics and Informatics (INEI for its acronym in Spanish) in 2021, the Peruvian population reached 33,035,300 inhabitants, of which 50.4% are women and 49.6% are men. In terms of age, the population between 0 and 14 years of age represents 24.5%, those between 15 and 59 years of age 62.5% and adults over 60 years of age represent 13% of the total. According to the 2017 Population and Housing Census, 55 indigenous peoples in the country, 51 of them Amazonian and 4 Andean were identified.

Poor populations are more vulnerable to the effects of climate change, have less capacity to recuperate and, therefore, a lower level of resilience to the adverse effects of climate change.

Poverty affects differently according to categories such as gender, age, ethnicity, disability, and others (MINAM, 2021). After seventeen years of progress in reducing poverty and extreme poverty, both increased again in 2020. Poverty affected 30.1% of the population, being 9.9 percentage points higher than in 2019 (20.2%). Extreme poverty rose from 2.9% to 5.1% (INEI, 2021).

In the context of the COVID-19 pandemic, the country's economic growth during the year 2020 was highly affected, which generated great social and health consequences for the population, increasing inequality, poverty and unemployment.

The main problem to be addressed is the high level of risk that exists in rural Andean and Amazonian communities in the face of climate variability in the areas of agriculture, food security, water and health and disaster risk management.

Climate Context and Problem Definition in selected sectors.

EDA Peru has selected three thematic areas related to water ecosystem services, agriculture and food security, and forest and forestry management in three selected watersheds.

Water ecosystem services.

The distribution of water resources in the country is in three large hydrographic regions (Pacific, Amazon, and Titicaca), which comprise 159 hydrographic units (river basins). There are significant contrasts between these three regions: the Pacific slope, which has an area of 21.76% of the territory and concentrates the most considerable population (65.98%), has an acute water shortage in its basins (2.2% of water); the Amazon slope, with an area of 74.58% and occupied by 30.76% of the total population, has large volumes of water (97.25%); and the Titicaca slope, with an area of 3.66% and a population of 3.26%, has 0.56% of the water (Water National Authority, ANA, 2013).

According to MINAM, the water supply is affected by climate variability and climate change. In recent decades, the increase in air temperature has triggered the retreat and loss of glaciers. As a result, Peru has lost 53.56% of its glacier surface in the last fifty years, altering the water behavior in basins such as the Santa River, which shows a negative trend of 30% in the glacier surface. Dangers of Glacial Lake Outburst Floods (GLOF) are likely to occur in the Peruvian Andes due to the formation of hanging ice masses and the weakening of permafrost. Other slow-onset hazards, such as changes in precipitation averages, will also impact activities associated with water ecosystem services provided by glaciers, lagoons, rivers, springs, and aquifers.

Agriculture and food security

According to the National Adaptation Plan, agriculture is the second largest economic sector and generates the most employment, contributing 5.5% of GDP. It employs a quarter of the country's total population, mainly for family farming, with less than five hectares of landholdings.

In case the trends and projections regarding the dangers associated with climate change continue, they will have devastating effects on agricultural production since the production of certain crops will decrease (corn, potatoes, barley, beans, bananas, carrots, grassland, and fodder, among others), affecting the livelihoods of rural communities and, consequently, the price of food in urban areas.

Seventy-two percent (72%) of agricultural emergencies are related to droughts, heavy rains, floods, and frosts, disrupting agricultural and livestock productivity, damage to irrigation canal systems, disruption of transportation services that limit the population's access to markets, loss of crops due to the appearance of pests, loss of vegetation cover due to desertification, alteration in the availability of water for agricultural use, among others.

In 2020 through the AICAA project, the International Research Center for the El Niño Phenomena (CIIFEN for its initials in Spanish) carried out several vulnerability studies to identify, characterize and estimate the level of risks associated with climate change, including climate change scenarios for 2036-2050 with the Peruvian Interpolation data of the SENAMHI's Climatological and hydrological Observations (PISCO). The following table shows the risk level for the Piura, Chicama, and Santa basins in the face of frosts, droughts, floods, and heavy rains that could potentially impact agricultural activities).

Source: Centro de Investigación International para el Fenómeno del Niño CIIFEN (2020).

The Amazonian Forest and forestry

56.9% of Peru´s territory is covered by forests, with the Amazonian forests occupying the most significant area. Forests contribute to climate change mitigation and adaptation by providing essential ecosystem goods and services at the local and national levels.

The historical relationship of women and men with forest resources reinforces socially constructed gender roles. In the forest value chain, men tend to focus on the commercialization of mainly timber products, while women are engaged in using and managing non-timber forest products for subsistence, food, and health activities (firewood, medicine, fodder, and natural fertilizer). This dynamic has generated women having a more specialized knowledge of forests and acquiring a better experience with conservation practices, according to a report by the Ministry of Women and Vulnerable Population (MIMP, 2015).

The Yunga forests protect the headwaters of the basin that provide water services to small cities in the Peruvian jungle and its home to the indigenous population who are dedicated to the cultivation of coffee, cocoa and live from fishing and hunting. The Amazonian Forest is also home to 51 indigenous people.

According to the National Adaptation Plan, it is vital to consider the impact of human activity on forests, especially concerning indigenous peoples and migrant populations. The lack of knowledge and access to resources can reduce conservation efforts and a shift towards activities such as livestock or agriculture which can have a detrimental effect on the livelihoods of indigenous peoples and the riparian population. It is crucial to ensure that all populations have equal access to power and decision-making to promote sustainable use and conservation of forest resources.

Climate Context and Problem Definition for EDA Perú focus areas.

The specific project interventions and locations are identified in the northern part of Peru, in three vulnerable watersheds and the project is focusing on a key theme and target adaptation challenge. The key adaptation challenge that this proposal seeks to address are the impacts on rural areas from climate variability and change from increasing extreme rainfall, reducing water availability, periodic drought, extreme temperature, glacier retreat and the effects on agriculture, health, forest, and livelihoods.

The project is focusing in three selected ecosystems in the northern of Perú.

1) The Chancay- Lambayeque Watershed (in the upper districts of Cajamarca Department)
2) The Ulta Basin in the Santa Watershed (Ancash Department)
3) The Lower Huallaga and Paranapura Rivers – home of the shawi ethnic group.

The following table provides a list of target ecosystems and their geographic location with specific vulnerabilities that will be address by the EDA Peru- Project.

Table Nº 1: Target Ecosystems and geographic location

Target Ecosystems and Geographic Location	Specific vulnerabilities
(1) Chancay – Lambayeque Watershed, department of Lambayeque and Cajamarca **North Zone High Andean relict forest and Humid Puna grassland.**	The watershed had a risk analysis by the Institute of Geophysics in Perú (IGP) in 2005. The districts in the upper part of the Chancay Lambayeque basin are mostly affected by climate variability, especially extreme changes in rainfall and temperatures. Consecutive days of heavy rains cause flooding, and consecutive days of summer cause periods of drought that increase soil degradation and desertification. In 2020 a study by the National Water Authority (ANA) reported that In 2017 and 2020, the area was affected by landslides and mudslides, which destroyed irrigation canals. During the dry season, frosts occur when the temperature drops near or below zero degrees, affecting crop yields and livestock. Health centers report increased bronchial diseases and flu in children and older adults. The frosts and powerful winds affect the highest area's rudimentary houses without protection. In 2005 and 2012, some frosts affected the potato crop. In 1997, 2003, 2004, and 2016, severe droughts affected the production and productivity of crops and pastures. Landslides and mudslides affect the infrastructure of irrigation canals, especially those that do not have any protection. The most vulnerable groups are farmers with less land and water access, older adults, and single-parent households. This basin is also highly vulnerable to the El Niño phenomenon (FEN) due to heavy rains and droughts in the upper part. Low temperatures most affect pastoral activity, reaching up to 30% of the animals. The watershed has implemented the Mechanism of Ecosystem Services Retribution (MERESE). According to the regional climate change strategy of Cajamarca, the selected districts that are located in the upper part of the Chancay Lambayeque basin are the most vulnerable to dangers associated with drought, with the agricultural front and the tourism sector being the most affected. In addition, the bay has a Water Resources Management Plan that is being updated to May 2023. It includes the climate risk scenarios for 2030, which includes 34 critical stakeholders in the upper part of the basin, especially irrigation commissions. It has a risk analysis carried out by the Institute of Geophysics in Perú (IGP) in 2005. In 2017 and 2020, the area had landslides and mudslides, which destroyed irrigation canals. During the dry season, frosts occur when the temperature drops near or below zero degrees, affecting crop yields and livestock. Health centers report increased bronchial diseases and flu in children and older adults. The frosts and powerful winds affect the highest area's rudimentary houses without protection. In 2005 and 2012, some frosts affected the potato crop. In 1997, 2003, 2004, and 2016, severe droughts affected the production and productivity of crops and pastures. Landslides and mudslides affect the infrastructure of irrigation canals, especially those that do not have any protection. The most vulnerable groups are farmers with less land and water access, older adults, and single-parent households.

Table Nº 1: Target Ecosystems and geographic location	
Target Ecosystems and Geographic Location	**Specific vulnerabilities**
(2) **The Ulta Basin in the Santa Watershed Department of Ancash** **North Zone:** **Ecosystem Periglacier and glacier, Ecosystem**	In the Santa Basin, the most significant dangers are found in the changes in temperature in the average levels of the atmosphere above 5,500 meters above sea level, which results in glacial retreat, whose effects are avalanches, the overflow of lagoons, and changes in water quality. Effects of climatic variability are also reported, expressed in changes in rainfall extremes and air temperatures. Heavy rains and changes in snowfall/frost that cause floods, overflows, and loss of soil quality together affect food production. In February 2022, a report on the risks of the National Biosphere of Huascaran funded by FAO, The main hazards identified by various institutions such as The Center of Disaster Prevention (CENEPRED), The National Institute for Research on Glaciers and Mountain Ecosystems (INAIGEM), The Local Water Authority (ALA) and The National Superintendence of Sanitation Services (SUNASS) were the following: in risk prevention plans (PPRDs) in over 20 districts and provinces connected to climate change, were: [1] [JR2] • Glacial Lake Outburst Floods (GLOF), which, even if the risk cannot be reduced via ecosystem management, capacity-building measures to develop early warning systems and even engineering measures to control lake outbursts are connected to improved ecosystem management of whole sub-basins. • Land mass movements and mudslides during heavy rains in multiple sites affecting communities, crops, livestock, roads, and hydraulic infrastructure. • Forest fires affecting grasslands and native forests increasingly affect communities impacting biodiversity and landscape values. This emerging hazard is perceived to be connected to climate change. • Frosts, occurring outside of the regular season, frequently increase, affecting farmers and food security. • Acid Rock Drainage (ARD) is dramatically increasing in the region, and it is connected to the recession of glaciers that expose mineralized rocks polluting waters downstream with metals. The climate risk study for the agricultural sector conducted by CIIFEN in 2020 found that nine districts with very high vulnerability to droughts, four districts with very high exposure to frost, five districts with very high susceptibility to intense rainfall; 4 districts have very high vulnerability to all three of the above hazards. The Santa Basin has a mechanism for retribution of water ecosystem services (MERESE). [3] The Ancash region also has a Regional Climate Change Strategy approved in 2016. CENEPRED has also prepared 22 risk prevention plans in over 20 districts and provinces connected to climate change. In February 2022, the FAO commissioned the Mountain Institute to study the risks in the biosphere of the Huascaran Natural Park. The study has consulted various institutions relevant to the risk study, such as INAIGEM, CENEPRED, and the Water Local Authority.

Table Nº 1: Target Ecosystems and geographic location	
Target Ecosystems and Geographic Location	**Specific vulnerabilities**
(3) **Lower Huallaga and Paranapura Basin** **San Martin & Loreto department.** **North Oriental Zone:** **Basimontane Yunga Forest Ecosystem.**	Effects of climatic variability are reported in this ecosystem, especially in changes in the extremes of rainfall and air temperatures. Heavy rains cause floods, landslides, and loss of soil quality. Changes in the extremes of air temperature cause changes in the intensity and frequency of heat waves that cause forest fires, "veranillos," and the presence of pests and vectors. According to INDECI, in the four selected districts in the Paranapura basin and for the period 2020 and 2022, 29 events related to forest fires, 18 events related to heavy rains, 14 hurricane-force winds, and 11 floods were reported, causing damage to homes, farmland, and the bridges and ports on the Paranapura river. The communities in Alto Paranapura state that the climate has significantly changed in the last few years. The rainy season lasts from January to May, usually ending in March or April. Community members remember the floods generated by the rising river flows, damaging many crops, such as bananas and cassava, planted along the riverbanks. Another noticeable change in recent years has been the increasingly strong hurricane-level winds that affect crops. Torrential rains can last several days or even weeks. Rivers swell and flood houses that do not have high stilts. The water becomes stagnant, which increases the number of mosquitoes. Recently there have been outbreaks of malaria that health center centers have controlled. The rains wash away soils and farmland. Hurricane-force winds can blow away bananas and cassava. During the consultation process, members of the Charapillo community reported that after two successive floods, they relocated to a higher altitude area. They lost their homes, school, and health center. They currently have no water or electricity services. In recent years, the summer has extended for long months, and heat waves become extreme. River flow drops, and fish migrate upstream. Navigation stops, and food becomes scarce or more expensive. During the last few years, there have been more continuous cold spells, up to 3 times a year, causing the population to sicken more frequently. There is noticeably more heat in the summer, lasting far longer than usual, with high temperatures maintained until the night. In the dry season, the population searches for meat in the forest, but as deforestation has increased, they must go further for hunting. There are no emergency committees or risk management committees. Communities and individuals need to be made aware of the causes and effects of climate change. More than 95% of the population in the Paranapura River belongs to the Shawi ethnic group.

Climate Change, Climate Variability and Social in the selected area.

According to the secondary information reviewed and the participatory consultation in the three basins, food production is the most significant climate change and climate variability risk in the selected area. In the Santa Basin, the most significant dangers are found in the changes in temperature in the average levels of the atmosphere above 5,500 meters above sea level, which results in glacial retreat, whose effects are avalanches, the overflow of lagoons, and changes in water quality. Effects of climatic variability are also reported in the upper districts of Chancay Lambayeque and the Paranapura River, which manifest in changes in the extremes of rainfall and air temperatures. The presence of heavy rains and changes that cause floods, landslides, and loss of soil quality. Changes in the extremes of air temperature cause changes in the intensity and frequency of heat waves that cause forest fires, "veranillos," and the presence of pests and vectors.

According to SENAMHI, the "friaje" (cold waves) is an extreme event associated with the sudden decrease in air temperature in the Amazon, related to the entry of a mass of cold air from the south of the continent, generating in its path increases in wind speed and rain but above all sudden decreases and significant air

temperature. On the other hand, “friajes” tend to occur more frequently between the months of May to October; however, isolated cases have been recorded during the summer.

The effects of climate change and climate variability directly affect food production in the three selected basins. The population living in the three selected watersheds are mostly family farmers or subsistence small farmers, with high poverty rates of 23.2%, 27.2%, and 34% in 2018. The percentage of households without potable water is 46% in the Paranapura watershed and 38.8% in the Chancay Lambayeque watershed. There are also households with only one head of household, 42% in Ancash and 33% in the Chancay - Lambayeque watershed.

Family farmers in these three watersheds need access to training and assistance. Only 8% say they received technical assistance in the Paranapura watershed, and only 2% in Santa and Chancay Lambayeque.

Also, only 1% to 3% report having other income besides farming. Less than 8% report using certified seeds, and only 3% have access to some credit. A high percentage of the population also speaks some indigenous language, 15,834 people speak Shawi at the Paranapura Watershed, and 28,079 speak Quechua in Santa Watershed.

Table Nº 2: Main indicators from selected watershed	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
Number of districts	42	28	5
Number of indigenous communities	**53**	**2**	**126**
Number of people who speak some indigenous language	**28,079**	**0**	**15,834**
Population 2022 (INEI)	635.827	257.478	141.447
Men	320.166	129.253	71.120
Women	315.661	128.225	70.327
% of women	50%	50%	50%
Number of young women between 21-35	71,641	25,910	14,053
Illiteracy level	9%	9%	9%
Men	4%	10%	5%
Women	13%	19%	13%
The average age of death years 2017-2021	64,4	67,2	48,4
Men	62,0	66,0	48,2
Women	68,0	69,6	46,0
Estimated media of mortality in children <5a x 1000 inhabitants	15,2	12,1	9,3
Total Years of Potential Life Lost - Year 2021 (YPLL)	137.327	19.888	25.614
% of Poverty (2018)	**23.2%**	**27,2%**	**34%**
Unmet Basic Needs (%):			
Number of households	243.627	68.024	26.729
% households in dwellings with inadequate physical characteristics	3,6%	3,4%	42%

Table Nº 2: Main indicators from selected watershed	Cuenca Santa Ancash	Cuenca Chancay Lambayeque	Cuenca Paranapura
% of households in overcrowded dwellings	5,9%	13,8%	23%
% of households in dwellings without access to drinking water	13,6%	38,8%	46%
% of households in dwellings without sewerage	4,0%	7,5%	21%
% of households with school-age children not attending school	1,4%	2,4%	6%
% of households with high economic burden or dependency	3,7%	5,6%	8%
% of households without electric lighting	7,5%	13,2%	21%
Years of Education	100%	100%	100%
Illiteracy	26%	16%	9,0%
Three years of formal education	33%	26%	35,9%
Complete elementary school (6 years of education)	17%	30%	31,6%
Nine years of formal education	8%	8%	12,3%
High school completed (11 years of education)	10%	15%	8,5%
Higher education complete/uncomplete	7%	5%	2,7%
9. Gender of head of household		100%	100%
Women	42%	33%	13%
Men	58%	67%	87%
10. Speak Indigenous language	84%	7%	18%
11. Sells products at the market	19%	26%	44%
12. Agroindustry	0%	0%	0,4%
13. Exports	0%	0%	0,1%
14. Livestock Breed	7%	13%	10%
15. Associativity	37%	13%	8%
16. Asked for credit	3%	3%	5%
17. Assets	3%	3%	3%
18. Training /Technical Assistance	2%	2%	8%
19. Use Certified Seed	5%	5%	8%
20. Have other source of income	1%	2%	3%

Fuente: Ministry of Health MINSA. Single National Repository for Health Information (REUNIS). Basic Indicators 2022

Fuente: Typification of Family Agriculture (GRADE-MINAGRI) Agrarian Census,2012.

Fuente: CEPLAN. https://www.ceplan.gob.pe/informacion-de-brechas-territoriales/
Fuente: Ministry of Culture. Data base for indigenous population. Consulted July 2023.

Climate Context and Problem Definition.

During the participatory consultation in June 2023, the interviewees, men, women, and young people of both sexes, could recognize the effects of climate change in their daily lives. However, they do not relate it to deeper causes or the global climate system. The young people state that they have received classes on climate change with their teachers, but even so, they do not project it as conditions that will last over time, therefore the planning of other copping strategies is short term.

The effects of climate change in the selected watersheds add to the already existing vulnerabilities. Climate variability affects these families in food production. During the participatory consultation the groups reported that there are transitional months when getting food becomes difficult. The men make the decision to migrate temporarily to work in nearby cities. Young women undertake handicraft activities, small-scale farming, and vegetable gardens as coping strategies.

No direct funding is available for medium-term coping strategies. In January 2023 new administrations have started in local governments and a new cycle of public investment has begun, therefore it is necessary to influence these new authorities to address in the medium term the existing vulnerabilities in relation to basic services.

The dry season is extended by one to two months, and this difference reduces water availability in irrigation systems that depend on rainfall, affecting food production. During the rainy season, rainfall floods croplands, increasing erosion and crop loss. Low temperatures and frost in winter affect crops and families' health, especially children and older adults.

Financing adaptation measures to climate change that favour vulnerable rural families is necessary for several important reasons:

Equity and Social Justice: Vulnerable rural families are often the hardest hit by the impacts of climate change, despite contributing the least to the causes of climate change. These families may lack the financial resources and capacity to cope with the changing climate, leading to increased poverty and inequality. Providing financial support for adaptation measures ensures a more equitable distribution of resources and helps address social justice issues related to climate change impacts.

Food Security: Many vulnerable rural families rely on agriculture for their livelihoods and food security. Climate change can disrupt weather patterns, increase the frequency and intensity of extreme events, and affect agricultural productivity. Financing adaptation measures, such as sustainable farming practices, water management systems, and drought-resistant crop varieties, can help ensure food security for these families, reducing the risk of hunger and malnutrition.

Economic Resilience: Rural communities often have limited economic diversification, making them highly dependent on climate-sensitive sectors like agriculture and forestry. Adapting to climate change can enhance the resilience of these communities by promoting alternative livelihood opportunities, supporting local businesses, and encouraging sustainable resource management practices.

Climate-Induced Migration: Without adequate adaptation measures, climate change impacts can force rural families to migrate to urban areas or other regions in search of better opportunities. This can lead to overcrowding, strained resources, and social tensions in destination areas. Investing in climate resilience for vulnerable rural communities can help prevent forced migration and ensure the stability of rural regions.

Environmental Conservation: Many vulnerable rural areas are rich in biodiversity and natural resources. Supporting climate adaptation measures can also promote conservation efforts and sustainable management of these ecosystems, contributing to global efforts to combat biodiversity loss and protect the environment.

Disaster Risk Reduction: Rural areas are often more exposed to climate-related hazards such as floods, droughts, and storms. Financing adaptation measures can help in building climate-resilient infrastructure and early warning systems, reducing the risks of disaster-related damages and loss of life.

Health and Well-being: Climate change can also impact the health of rural communities through changes in disease patterns, access to clean water, and extreme heat events. Financing adaptation measures can improve health outcomes by promoting climate-resilient health systems and infrastructure.

Therefore, financing climate change adaptation measures for vulnerable rural families is not only a matter of justice and social responsibility but also a strategic investment in building resilient communities, safeguarding ecosystems, and ensuring a sustainable future for all. It is a crucial step in addressing the disproportionate impacts of climate change on those who are least equipped to cope with its consequences.

EDA Perú project is designed considering the adaptation measures adopted in the National Adaptation Plan, especially those concerned with agriculture, forest, water, health, and artisanal fishing. (See Annex 3 to check on NDC adaptation measures).

The measures proposed in the EDA Peru have also been validated during a comprehensive and participatory consultation process carried out during the month of June 2023 with various organizations working in the selected watersheds.

In this regard, the adaptation initiatives are consistent with the social characteristics and cultural values of the communities concerned and based on local capacities and knowledge in the field of forest management, natural infrastructure, agroecological practices, biodiversity & indigenous knowledge, and disaster risk management.

Project / Programme Objectives

Project Final Objective

Increase the population's capacity to adapt to climate change through financing adaptation measures in the sectors of water regulation, agriculture and food security, and forest and forestry prioritized in the National Determined Contributions in selected vulnerable watersheds.

The project's expected impact is to increase resiliency at the community and sub-national level to climate variability and climate change in three selected ecosystems: the Santa Periglacial Watershed Ecosystem (Ancash), the Upper Waters of the Chancay Lambayeque Watershed (Cajamarca) and the Amazonian basin of the Huallaga and Paranapura rivers, home of the Shawi indigenous group in the Amazon region.

The project will provide grants to leading partners in the selected areas who, in turn, will provide technical assistance to local government and technical education centers and provide subgrants to producer associations, indigenous organizations, cooperatives, and women´s small businesses to implement adaptive solutions and increase the watershed's climate resilience.

The project will encourage collaboration among local governments, technical education centers, community-based organizations, and entrepreneurs to increase private and public investment in climate change adaptation measures throughout the selected watersheds.

Project / Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific set of well-defined interventions / projects.

Table Nº 3: Project´s components and budget			
Project Components	**Expected Concrete Outputs**	**Expected Outcomes**	**Amount (US$)**
1. Increased capacity to design, implement and evaluate robust and innovative climate change adaptation projects at sub-national level.	Output 1.1 Increased innovation in subnational entities through the implementation of EDA-Peru Facility.	Outcome 1: Increased national capacity to design, implement and evaluate robust climate change adaptation projects at sub-national level.	872,000
2. Reduced exposure to climate-related hazards and threats	Output 2.1 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis. Output 2.2 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses. Output 2.3 Targeted population groups covered by adequate risk reduction systems.	Outcome 2: Reduced exposure to climate-related hazards and threats	900,000
3. Increasing the resilience of selected ecosystems	Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability. Output 3.2 Natural infrastructure for water regulation, soil conservation and risk reduction from floods and extreme rains.	Outcome 3: Increased ecosystem resilience in response to climate change and variability-induced stress.	1.700,000
4. Supporting food security throughout diversified and strengthened livelihoods	Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD). Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or forestry activities and added value activities.	Outcome 4: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	1.068,200
5. Project/Programme Execution cost			68,095
6. Total Project/Programme Cost			4.608.295
7. Project/Programme Cycle Management Fee charged by the Implementing Entity			391,705
Amount of Financing Requested			5.000,000

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme.

Milestones	Expected Dates
Start of Project/Programme Implementation	March 2024
Mid-term Review	October 2026
Project/Programme Closing	March2029
Final Evaluation	June 2028

A. Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

The EDA Peru project comprises four components to be implemented in three selected watersheds. All components and activities are expected to complement each other synergistically to achieve its final objective to increase the population's capacity to adapt to climate change in each watershed.

Component 1 will stablish a Facility to provide strategic and technical advice to project activities and will select leading partners with working experience in the three selected watershed. The leading partners will in turn prepare subprojects with the support of Profonanpe to comply with the EDA guidelines. The designed subprojects will respond to a strategic combination of components 2, 3 and 4 according to the specific vulnerabilities of each basin. It is expected that the Leading partners have already developed working relationships with the grassroots organizations that the EDA Perú are willing to strengthen. Components 2, 3, and 4 are linked to 29 adaptation measures from agriculture (12), water (8), forest (5), health (3), and artisan fishing (1). See Annex 3 for a detailed description of the measures selected for the EDA Peru project.

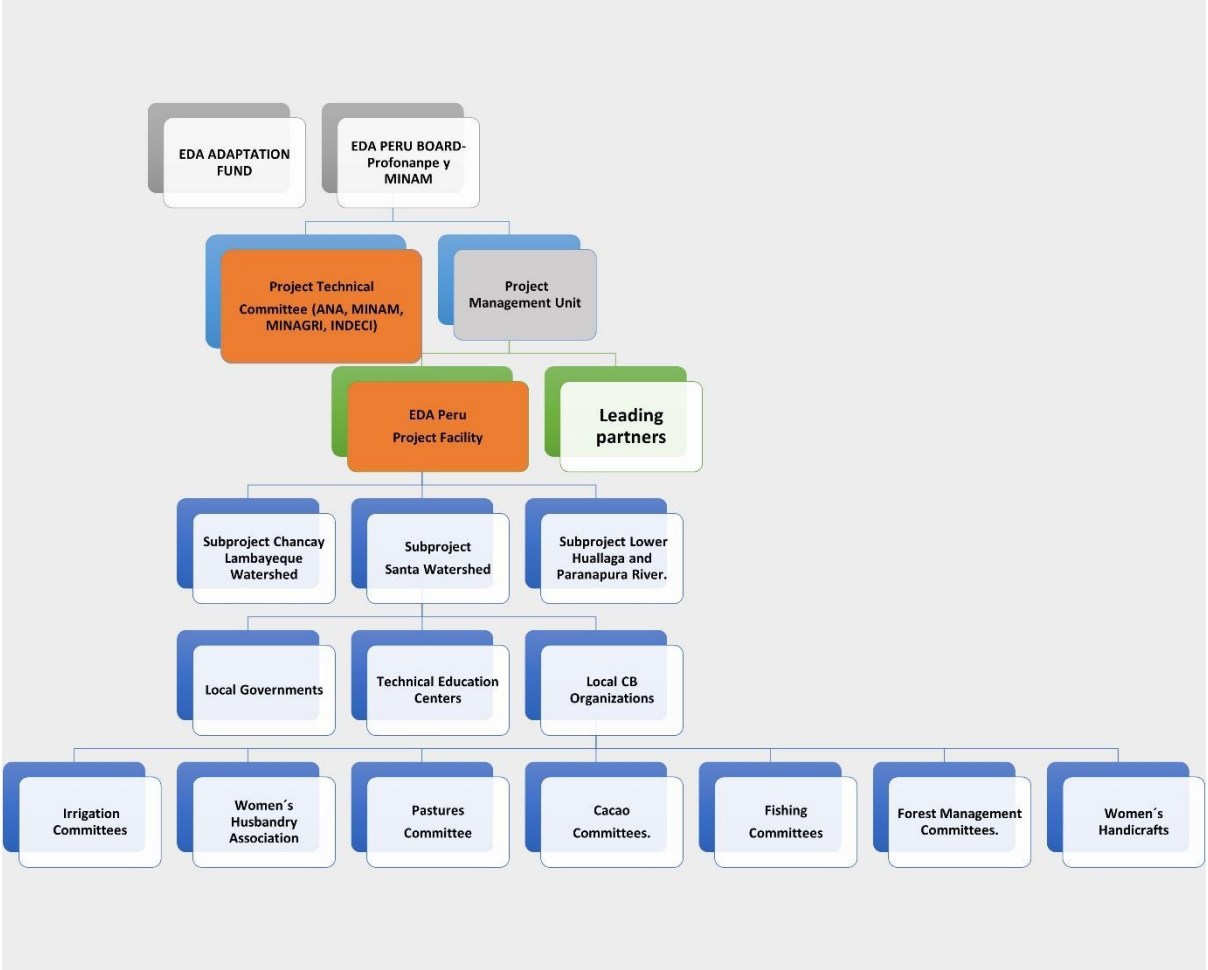
Component 1: Capacity building to design, implement and evaluate robust climate change adaptation projects at sub-national level.

Output 1.1 Increased innovation in subnational entities through the implementation of EDA-Peru Facility.

Profonanpe will establish the EDA facility that includes a Technical Committee (PTC) and a virtual platform. Through the facility, Profonanpe will strengthen capacities to the leading partners in the preparation of subprojects that respond to climate change adaptation vulnerabilities aligned with the NDCs, National Adaptation Plan, the Regionals Climate Change Strategies, and Local Climate Change Plans - or risk management plans - if any- available in the three-selected areas.

Profonanpe will ensure that the leading partners comply with the requirements of the AF in terms of environmental and social policies and gender equity. Profonanpe will also transfer the capacity to leading partners to manage the subgrants at watershed level based on experience with other mechanisms. The next figure shows the operational chart proposed for the implementation of EDA Peru project.

Figure 1: EDA Peru Operational chart.



1.1.1 Call for a selection of Leading partners and subprojects in selected watersheds.

Profonanpe will proceed to carry out the screening of the applicant organizations, in accordance with the requirements for the Due Diligence. Organizations that can apply may be non-governmental organizations, cooperatives, indigenous organizations, among others, that have project implementation experience. The call for leading partners will be done through direct invitation specially targeting the three selected areas through local government websites, MINAM's and Profonanpe's websites and social media accounts for each basin.

The EDA Perú project will target leading partners organizations that have demonstrated links and previous work within the three selected watersheds, allowing them to take full ownership of self-determined local adaptation. Potential leading partners were identified in the selected areas during the consultation process. They are the Northern Coast Institute for water irrigation (IMAR Costa Norte) in the Chancay Lambayeque; The Andean Mountain Institute in the Santa Watershed, and the Coordination of San Martin Indigenous People (CODEPISAM) and the Peruvian Confederation of Amazonic Nations (CONAP) in the Paranapura River (see Annex 10, 11, 12 and 13 for information about the four intended leading partners).

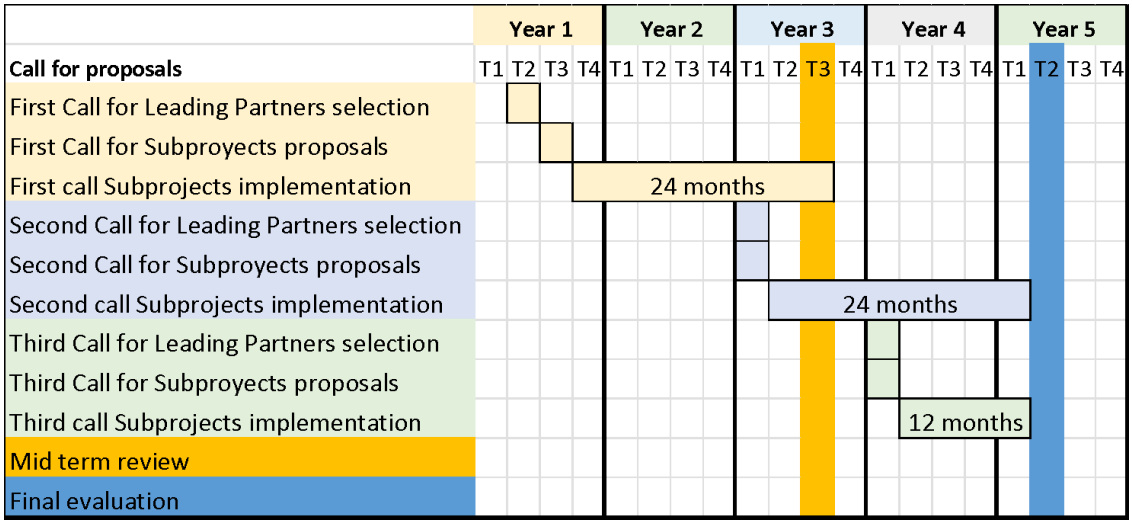
The selected leading partners will design each subproject in alignment with the selected 29 measures prioritize by EDA Perú Theory of Change (table 4); EDA Peru (Results Framework); the Environment and Social Mitigation Plan (Table 12); the EDA Perú Gender Action Plan (GAP) (Table 13) and the Knowledge Management and Communication Plan (KM&Com) (Table 7.1, 7.2, 7.3).

The selected leading partners will provide technical assistance to local governments and specialized education centers and will provide subgrants to local associations such as irrigation committees, entrepreneurs associations, among others- according to their capacities. Profonanpe will also transfer the capacity to leading partners to manage the subgrants based on experience with other mechanisms, such as Entrepreneurs for Nature (ExN),

which has successfully reached out to more than 55 entrepreneurs throughout the country and has supported small initiatives up to US$ 25,000 for a total amount of 400,000US$ over three editions. To this end, an EDA Operating Manual will be prepared that includes detailed procedures for AF and Profonanpe guidelines applied to project´s management.

EDA Perú will open up to three calls for subprojects during the project life cycle to allow a broader opportunity for diverse groups of beneficiaries to apply. The first call will be open during the first year, the second call at the beginning of the third year, and the third call will be open at the beginning of year 4. Subprojects must have a minimum duration of 18 months and a maximum of 24 months for the first and second call, the third call will allow activities up to 12 months. The leading partners selected during the first call will also be able to present subprojects for the second phase. However, the call may be opened to new leading partners if necessary. The following timetable shows the time allocated for the calls in relation to the midterm review and the final evaluation.

Figure 2. Schedule for for subproject's submission.



1.1.2 Technical Assistance and Training to selected leading partners.

Profonanpe will provide technical assistance to the leading partners through its different areas such as financial management, accountability, monitoring, and reporting during the project cycle through its Monitoring and Evaluation Unit, and the Research and Innovation and the Communication Department. It is anticipated that technical assistance at early stage during the subproject's preparation as well as the management and implementation will strengthen capacities on climate change adaptation at the subnational level.

1.1.3. Establishment of the EDA- Perú Project Technical Committee (PTC)

The Project Technical Committee (PTC) will provide sectorial technical advice to the subprojects. The PTC will comprise specialists in ecosystem-based adaptation and natural infrastructure from the Ministry of Agriculture and Irrigation (MINAGRI), The National Water Authority and its local offices (ALAs), the National Forest Service (SERFOR), and the National Civil Defence Institute (INDECI) responsible for the implementation of EWS. This committee's main objective is to constantly monitor the measures to make the necessary adjustments so that the measures reduce the risk of climate variability and avoid maladaptation.

PTC main objective is to constantly monitor the measures to make the necessary adjustments so that the measures reduce the risk of climate variability and avoid maladaptation. The glossary of the AR5-WGII report proposed to define maladaptation as: "Actions that may lead to increased risk of adverse climate related outcomes, increased vulnerability to climate change, or diminished welfare, now or in the future" (Field et al., 2014).

For practical reasons, the project will adopt maladaptation as a process that results in increased vulnerability to climate variability and change, directly or indirectly, and/or significantly undermines capacities or opportunities for present and future adaptation (Magnan, 2014).

Conformity/Non-conformity Report

All leading partners and subprojects that meet all FA and Profonanpe requirements for the implementation of the EDA will obtain a PTC conformity. Proponents that obtain conformity will then be proposed to Project Board to sign a grant agreement.

Minutes of the results of the due diligence process must be completed. The minutes shall contain the results of the document validation process, document content review, risk category and include the Institution's concurrence.

The Due Diligence procedure used by Profonanpe for the technical and financial evaluation of the potential leading partners will also be applied to mitigate the management risks described in part III.

Finally, the minimum stipulations and conditions will be established in the Grant Agreements that will be signed between Profonanpe and selected leading partners.

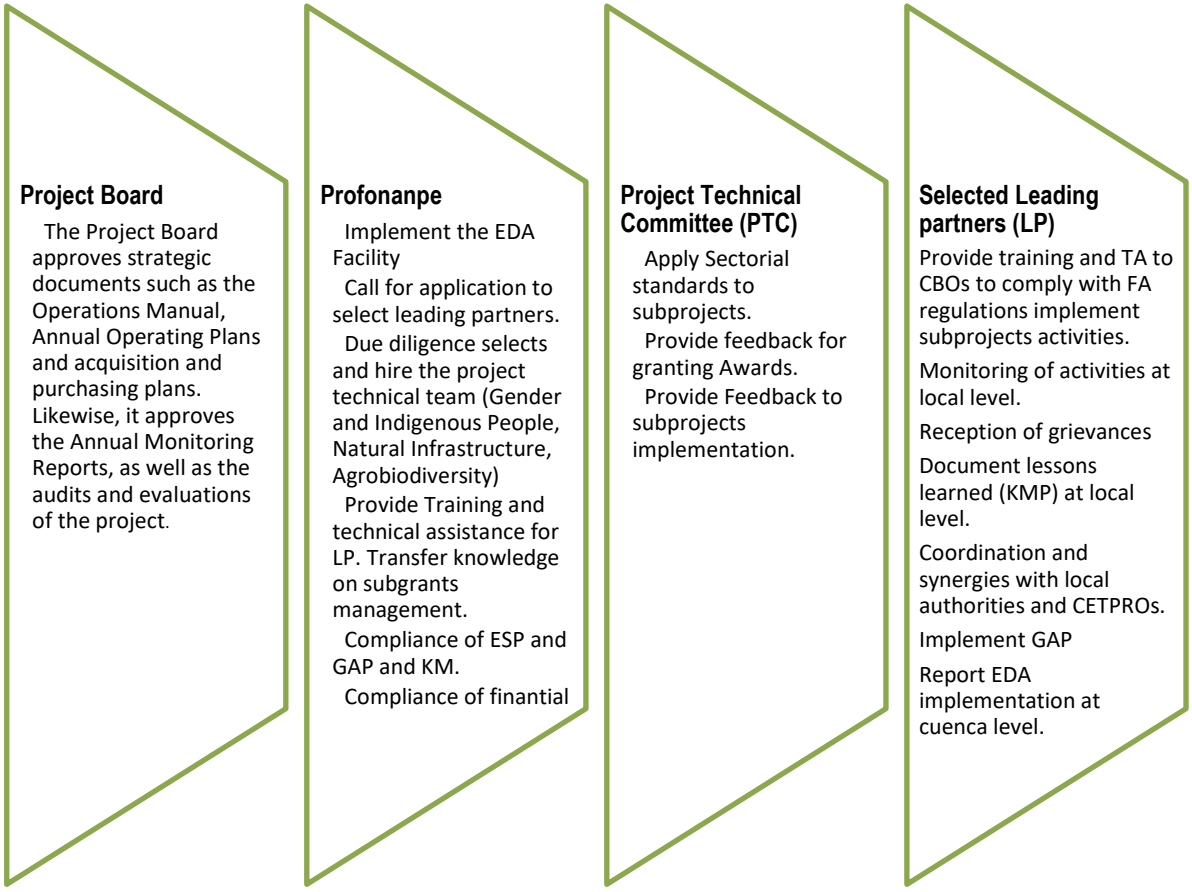
Roles and responsibilities of the leading partners.

Leading partners will provide technical assistance at the basin level, ensuring that activities are implemented as planned. Likewise, it will ensure coherence and coordination between actors, seeking synergies and collaborations. It will also be responsible for information and knowledge management at the basin level. It will request specialized technical assistance and activate the complaint mechanism when required.

1.1.4 Prepare and implement a communication plan focusing on lessons learned.

EDA Peru will prepare a knowledge management and communication plan (KM&Com) that will be implemented during the life of the project. The KM&Com plan includes a set of actions such context analysis, processing data and personal experiences, documenting and disseminating lessons learned from people, communities, and institutions. The EDA Peru KM have proposed a set of themes and questions to be addressed and validate with stakeholders in each basin and include a timeline and a budget (see tables 7.1, 7.2 and 7.3).

Figure 3 : Roles and responsibilities of EDA Perú partners.



The **Leading partners** will ensure compliance with the principles of the Environmental and Social Management Plan (ESMP) as part of their role in the project.

In the framework of the ESMP principles "Access and Equity" and "Marginalised and Vulnerable Groups", regular activities will be carried out to monitor the implementation of the project and the selection criteria of the participants for the implementation of the sub-projects. An internal communication strategy will be prepared to present the project objectives to a wide audience.

In addition, the project implementation foresees several activities providing material and non-material benefits, which should be distributed equitably among the participants, their families and critical stakeholders in the pilot sites that meet the project conditions. Therefore, the beneficiary identification process should include the establishment of concrete conditions, as detailed and explicit as possible, for the implementation of the project and the contribution to local adaptation.

EDA Perú's timeline and sequence of events.

Considering that EDA aim is to strengthen capacities at the local level, the first year is critical to select successful subprojects in the selected basins. Figure 4 shows the sequence of events from the establishment of the EDA facility, the selection of leading partners and the preparation of the subprojects in each basin, in such a way that they comply with the requirements of the EDA and respond to its adaptation objectives. Figure 5 shows the indicative timeline for the 5 years of project implementation.

Figure 4. EDA Perú start up schedule

Figura 5: EDA Perú indicative timeline.

Year 1- EDA Facility installation and first call for subprojects

Selection of leading partners.
Due Diligence.
EDA Facility instalation (technical team, PTC, platform, EDA handbook in spanish).
First Training and TA to leading partners.
First Call for Subprojects review and approval- first round (activities, goals, budgeting).
USP screening
Selection of associations, local governments, CETPROS .
Grants agreements

Year 2 Implementation of First Round Grants.

Implementation of first round subprojects.
Training & TA local level.
First report of ESMP and GAP.
Develop a KM&Comm Strategy.
First lessons learned documented (management level).
Annual Report on ESMP, GAP and RBM.
Review of Toc Assumptions

Year 3: Second Round Call including GAP and Innovation

Second call for subprojects and approval- (activities, goals, budgeting).
USP screening
Second lessons learned report documented (themes and issues).
First round subprojects closing.
Mid Term Evaluation
Annual Report on ESMP, GAP and RBM.
Review of Toc Assumptions

Year 4: Third Round Call including GAP and Innovation Learning & Sharing local level

Third call for subprojects and approval- (activities, goals, budgeting).
USP screening.
Third lessons learned documented at basin level.
Annual Report on ESMP, GAP and RBM.
Review of Toc Assumptions

Year 5: Closing and Learning & Sharing national level

Second and third round SubProjects closing
Mayor learning activities, virtual and presential in each basin and national level
Final lessons learned report EDA Perú.
Final evaluation
Closing activities

Component 2: Reduced exposure to climate-related hazards and threats and strengthening institutional capacity to respond.

This component aims to reduce exposure by expanding community early warning networks in the categories of a) disseminating information in a culturally appropriate manner and b) increasing the response capacity of grassroots organizations, be they indigenous organizations, women entrepreneurs, irrigation committees, and local governments, among others. Early warning systems comprise four critical components: **(1) risk knowledge, (2) monitoring and warning service, (3) dissemination and communication, and (4) response capability.** EDA Perú will only address the third and fourth component since they are close related to local adaptation and increased resilience of specific ecosystem.

Through this component, the project will provide support to expand the number of people receiving information from early warning systems (EWS) and increase the adaptive capacity of individuals and institutions to respond to threats in the three selected areas. The first activity of the subprojects is to make an initial list of the EWS that already exist in the selected basins. It will also support local governments to prepare their local climate change plans and prepare technical dossiers for public investment projects to reduce the exposure of selected watersheds in the medium term. The map risks for the selected watersheds includes snow avalanches and winter weather hazards (Santa Watershed); water contamination for glacier retreat (Santa Watershed): Cold waves, forest degradation (Lower Huallaga &Paranapura Watershed).

Through this component EDA Peru will provide resources to increase the leadership of women in adaptation actions therefore, a gender action plan has been prepared to guide the activities to be financed for this purpose.

Component 2 includes the following outputs and activities:

Output 2.1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis addressing specific gender and indigenous population needs and concerns.

2.1.1 Development of cultural friendly early warning systems for the most frequent risks related to climate variability and climate change in the three selected watersheds.

This activity aims to reduce exposure to climate hazards by strengthening early warning systems and making the information available to communities and individuals to make decisions about food production, irrigation management, forest deforestation, and their economic activities, including health care.

Each subproject will allow resources and technical assistance to communicate the risk analysis undertaken by the technical & scientific institution (CENEPRED, CIIFEN, SENAMHI, and IGP) to stakeholders, most of them producers' associations, non-governmental organizations, cooperatives, and indigenous organizations. Technical assistance will be provided during the first year of implementation to assist stakeholders in understanding the community-level impacts and adjusting the measures identified to the climate threats in the geographical area. Under this component, the streamlining of decision-making across multiple levels will be facilitated through the Project Technical committee.

Training workshops will be organized with institutions specialized in climate information for their respective analysis with a focus on the impact of hazards, answering the questions: What will happen? What will be damaged? It is expected that with this information, communities and institutions that provide technical assistance can identify adaptation measures and technological innovations to increase their resilience.

The subprojects will take specific provisions, such as translation to the local language (Quechua and Shawi, at least) spoken by the local population, to ensure that these technicalities do not create barriers to the participation of women and indigenous people.

The EWS will be muti-hazard and people-centred to empower individuals and communities threatened by hazards to act in sufficient time and in an appropriate manner to reduce the possibility of personal injury, loss of life, and damage to property and the environment.

The EWS will provide climate information directly related to the impacts of climate variability on the different

activities of the communities, be it fishing, agriculture, irrigation, or health, in addition to the dangers of floods, frosts, and landslides.

The subproject activities will develop a robust community-based approach that facilitates replication, such as low-cost water storage, stabilized landslide areas, more efficient water use, low-tech community early warning systems, and rainfall management schemes.

2.1.2. Development of an early warning system for monitoring and control of malnutrition and anemia and other cc-related diseases such as dengue, chikunkuya, sika, among others).

The subprojects will also be aligned with other early warning systems in operations in the health sector that warn of climate-related diseases such as dengue, chikungunya, sika, and malaria, as well as the monitoring of malnutrition and anemia indicators in the areas of intervention of the project. High levels of malnutrition and anemia in the selected watersheds increase people's susceptibility to climate-related diseases.

2.1.3 Development of an early warning system for deforestation in Amazonian communities.

Likewise, the high levels of deforestation found in the communities of Alto Paranapura contribute to increasing the ecosystem's sensitivity to providing services to the population. Deforestation reduces the forest's biodiversity, impoverishes the soils of the Amazon, and the people will not be able to cope with the effects of climate change in the medium term.

The subprojects will establish working agreements with the health centres in the intervention districts and with the National Forest Conservation Program to mitigate climate change while monitoring deforestation in the Amazon. For dissemination & communication purposes, the project will establish cooperative agreements with the telecommunication companies that provide services in the three selected watersheds.

Output 2.2 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.

2.2.1 Strengthening organizations capacities to respond to the effects of climate change, providing training on climate change culturally adapted in selected ecosystems.

EDA Peru project will train producer organizations, irrigator associations, women´s small business associations, cooperatives, and indigenous organizations on adaptation to climate change. During the field visits, it has been observed that people in the communities feel the impacts of climate in their daily lives but do not associate with the global changes in the climate system. Therefore, they cannot set medium- and long-term adaptation goals.

The project will also address the barriers that this organization encounters to access resources that can help in their efforts to adapt. During the field visits, organizations report difficulties coordinating with local authorities because their legal status still needs to be completed or formalized. In the case of indigenous organizations in the Amazon or associations of entrepreneurs cannot benefit from social programs due to this situation of informality. In this way, associations not registered with SUNARP are restricted from participating in FONCODES or Pro Compite projects to access credits and technical assistance for their small businesses. Similarly, citizens without ID cards are excluded from rural housing programs; senior citizens cannot access the pension program. To this end, the project will coordinate with RENIEC and other programs, such as TAMBOS and Amazonia, to reduce these individuals' participation barriers.

Likewise, citizens who do not have identity documents have barriers to participating in local emergency or risk management committees and are excluded from the benefits of municipal programs. This situation significantly affects women who only speak the local language and represent the most vulnerable social group. The leading partners who apply for EDA Peru grants will be encouraged to organize campaigns to address these gaps of formalization.

2.2 2 Include Disaster Risk Management & Adaptation to Climate Change in Indigenous Communities Life Plans

The Plan de Vida is a community planning instrument that originates from the indigenous peoples, which, if articulated with state planning tools, would contribute decisively to filling this gap in the country's development planning and facilitate the coordination with private and public institutions. A review of the life plans of the Shawi communities in the Paranapura River shows that those made before 2022 need to include information on the communities' risks and even less on the possible impacts of climate change.

2.2.3 Recovery of ancestral knowledge of Andean and Amazonian indigenous communities to increase resilience.

A group of activities within the subproject will be related to the recovery of the ancestral knowledge of the Amazonian and Andean indigenous communities. Many of the selected measures are based on the ancestral knowledge of the high Andean and Amazon communities. The recovery of climate resistant seeds, weaving activities, crafts, and knowledge of the medicinal properties of plants and trees will be strengthened by the EDA Peru project. This knowledge is found in the adult men and women of the communities to be served.

knowledge is a set of knowledge, wisdom, and practices of indigenous or native peoples that are collective and dynamic in its nature and are linked to their cultural and spiritual values and customary norms, transmitted from generation to generation and recognized by them as part of their culture, history, and identity (Ministry of Culture 2016).

According to UNESCO, indigenous knowledge is at risk due to climate change but also is a crucial element of resilience. Culture is a powerful resource for addressing climate change impacts. Intangible cultural heritage practices have proven to be highly effective tools for helping communities prepare for, respond to, and recover from climate change-related impacts and emergencies.

Indigenous knowledge can include the transmission of traditional food security strategies and knowledge about changing weather patterns, forest medicinal properties, and the use of natural infrastructure that can withstand natural disasters. Creativity is essential for finding new solutions to environmental challenges, and artists and creators would have a role to play working in climate action.

The subprojects will encourage knowledge exchange between wise-old people and the youth in different areas such as fishing, medicinal properties of plants, animal care, etc. It will publish the results to highlight the positive aspects of the culture for adaptation to climate change.

2.2.4 Preparation of Local Climate Change Plans in local governments.

The project will also support local governments in preparing their Local Climate Change Plans (PLCCs for its initials in Spanish). This activity will make possible the sustainability of the measures implemented by the EDA Peru and will allow greater coverage in all the basin, both in direct and indirect districts.

In October 2021, the Ministry of Environment approved the "Methodological Guidelines for the Formulation and Updating of Local Climate Change Plans," stating that its purpose is to provide methodological guidelines to local governments for the formulation and updating of PLCCs in a way that they are aligned to the Regional and National Climate Change Strategies, the National Contribution, following the Climate Change Framework Law and the Organic Law of Municipalities.

More Local Climate Change Plans will institutionalize adaptation measures to a more significant number of districts in the basin. Important to note is PLCCs include both adaptation and mitigation measures and requires coordination with the Regional Government and the advice of the Directorate of Adaptation of the Ministry of Environment (MINAM).

2.2.5 Support women innovation initiatives.

This output is compounded by a fund of U $180,000 to support women innovation in initiatives different from the outlined in the EDA Peru project. This fund will be allocated during the third year and will support women

organizations who excel in adaptation. It is expected to support 18 women's organizations with a grant of US$ 10,000 each.

EDA Perú project also has outlined a GAP to be adequately monitored by the project's coordinator and Profonanpe technical team. The results of the participatory consultation yield essential information on the gender and age differences of the people involved in climate change adaptation. Young and adult women present significant barriers to taking advantage of opportunities to improve their position and status in their communities.

The desired situation is that at the end of the project, young women will increase their leadership in climate change adaptation because social and economic barriers to their participation have been overcome, and their leadership capacities have increased. It is also expected that adult women will have improved their situation due to their access to risk reduction systems in their places of residence.

Expected Impact: Increased food security for differentiated gender, age and vulnerable groups by receiving direct technical assistance and support of risk reduction activities and increasing ecosystems resilience.

The EDA Perú project budget for activities aligned with the GAP (Table 13) is US$ 1.334,200 in components 2, 3 and 4.

2.2.6 Strengthen the technical training of young people by including courses on climate change adaptation in the technological institutes in Shawi and Quechua

Finally, this output includes activities to strengthen young people's technical training by incorporating climate change adaptation courses in the technological institutes around the project, especially in the Shawi and Quechua communities. Most rural youth who finish high school can enroll in the specialized training centers (CETPROs) near their communities, which offer technical careers related to agricultural production, forestry management, nursing, and pharmacy. The subprojects will work with these institutes and their teachers to adapt the technical courses to the challenges faced by the communities due to climate change.

Output 2.3 Targeted population groups covered by adequate risk reduction systems.

Through this output, the project will provide technical assistance and training to the local and regional governments to prepare technical dossiers to increase public investment projects in natural infrastructure to increase ecosystems resilience.

During the interviews with community leaders, some projects were named to be presented to the local government but required a technical dossier before approval.

However, these technical dossiers must comply with the approach of adaptation to climate change and management of current and future risks, for which the project will provide training to develop the capacity to design nature-based solutions that meet the objective of reducing climate risk. This activity could also include the updating of public investment technical sheets that are required to increase financial support and suggested by the sectors represented in the Project Technical Committee.

To this end, all subprojects must have at least the following:

1) Select technical files at the regional / district level that have already been formulated with the support of other adaptation projects and that already have studies climate risk forecasts.

2) Identify the climate threat of the socio-ecological system.

3) Determine the system's vulnerability, i.e., the adaptive capacity and susceptibility.

4) Determine the exposed elements (population, infrastructure, livelihoods, biological species, goods, and services) and:

5) To monitor and evaluate the measures in every step to avoid maladaptation

According to a report from the Intergovernmental Panel on Climate Change (IPCC), there are several simple recommendations to minimize the risk of maladaptation. First, it is important to adopt a system thinking and multidisciplinary approach when designing adaptive strategies to minimize the risk of unintended and unexpected

consequences.

Second, it is important to consider the potential for maladaptation in all stages of adaptation planning and implementation. Third, it is important to monitor and evaluate adaptation initiatives to identify potential maladaptation and adjust strategies accordingly. Finally, it is important to engage with stakeholders throughout the adaptation process to ensure that their needs and concerns are considered.

Component 3: Supporting the resilience of selected ecosystems.

Component 3 aims to increase ecosystems' resilience in selected watersheds to respond to climate change and climate variability.

Subprojects will provide subgrants for initiatives aimed at improving water availability through small-scale construction of natural infrastructure; micro-reservoirs for rainwater harvesting, and technified irrigation systems.

In the Amazonian communities along the Paranapura River, the project will support initiatives aimed at sustainable forest management, committees to control and monitor illegal logging, and promoting artisanal fishing.

These measures will be complemented by introducing improved agroecological production practices to improve the ecosystem, avoiding agrochemicals, improving irrigation practices, and improving pastures and livestock sustainable management.

The subprojects will also support bioremediation initiatives with technologies that are accessible to communities to address water acidification due to glacial retreat.

Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability.

3.1.1 Improving sustainable forest management.

Amazonian communities in the Paranapura Watershed can access permits for forest management, control and monitor their forests against illegal logging and promote sustainable artisanal fishing in rivers and lakes.

In communities with high percentages of deforestation, the subproject will provide grants to promote the restoration of these forests and reforesting riverbanks to protect them from erosion.

In communities that still have a large amount of forest, permits for the sustainable management of timber and non-timber products will be solicited and provided by the forestry authorities of the regional governments. An essential aspect of the use of permits is the technical assistance for its use to avoid the misuse by third parties that in the past have encouraged indiscriminate logging and the consequent fine that has fallen on the communities.

3.1.2 Promotion of sustainable artisanal fishing in rivers and lakes

Fishing in the indigenous communities of Paranapura is the primary source of protein in the diet, in addition to hunting. Fishing activities are concentrated around the Mijano - a phenomenon that occurs during the emptying or reduction of river flow (July to September) and is characterized by the extraordinary concentration of fish coinciding with the reproductive process and the beginning of migrations.

In recent years, generally associated with the La Niña phenomenon, the summer extends for long months, and heat waves become extreme. River flow drops, and fish migrate upstream. Navigation stops, and food becomes scarce or more expensive.

Different techniques are used, fishing with hooks in times of scarcity, nets, and using poison made with barbasco during the Milano season. Women, men, boys, and girls collaborate in fishing, placing the nets, watching, and collecting at the end of the afternoon. Fishing with barbasco is only practiced by men because it includes the collection and preparation of the mixture that is used to catch the fish.

However, communities need sustainable fishing practices that respond to changing river conditions. The project will support sustainable fishing initiatives through subgrants. These initiatives will try to discourage the use of barbasco because it affects small fish and other species in the river, and poisoning symptoms have already been reported in children after eating fish containing barbasco. There are already preliminary studies on the use of Huaca Huaca, another similar plant whose effects are not harmful to small fish or humans.

3.1.3 Formation, training and accreditation of forest monitoring and surveillance committees # of trustees trained and accredited.

The Community Forest Surveillance and Control Committee will be formed, trained, and accredited by the regional government's forestry authority based in Yurimaguas and Moyobamba.

These committees must request assistance and intervention from the Regional Authorities when they identify any affectation of the community forest caused by third parties and, in some circumstances, call for the immediate cessation of illegal activities until the intervention of the competent authorities. The committees also provide evidence to accredit unlawful lodging or actions in the community forest.

Subprojects will provide the logistics for training the forest stewards and instruments such as GPS and equipment such as flashlights, boots, and other kits for their surveillance work.

3.1.4. Protection and treatment of water sources through bioremediation & reforestation with native species.

In the Andean ecosystems of Santa and Chancay – Lambayeque watershed, EDA Peru project will promote natural infrastructure initiatives that includes water regulation, soil conservation and risk reduction. Reforestation initiatives with native forest species to retain water and control erosion. Likewise, water quality control will be carried out to implement bioremediation measures to reduce the pH presented in the waters due to the glacier retrieval.

The importance of reducing pH in aquatic systems lies in three aspects:

- ✓ Acidic waters produce several harmful effects on flora and fauna. Increased acidity of river and lake of rivers and lakes creates changes in aquatic life, impeding their reproduction (e.g., eggs hatching) and causing deformities in younger fish. Vegetation also suffers because of the consequences of soil deterioration and because many species cannot adapt to conditions, which may result in their extinction.
- ✓ Acidity gives rise to the conditions for metals to remain liquid in lakes and rivers, producing ecosystem alterations.
- ✓ High acidity in acidic aquatic systems prevents their use for human consumption.

3.1.5. Improvement of agroecological practices and sustainable pasture´s management.

Farming and livestock (Chancay Lambayeque and Santa) are critical for food security in the high Andean communities. The project will promote sustainable agroecological practices to use water more efficiently, increase the soil's productive capacity and reduce dependence on agrochemicals.

Complementary measures will be implemented for pasture and livestock management to reduce erosion and use water efficiently. These measures include creating exclusion areas to avoid overgrazing and revegetation in the most degraded areas.

The project will also encourage the coordination for the management and conservation of natural grasslands among various government bodies and programs such as the Sierra Azul Fund, Agrarian Rural Productive Development Program -AGRORURAL, and the National Institute of Agrarian Research – INIA, among others).

3.1.6 Capacity building for integrated water resources management.

In the selected basins, EDA Peru will work with the irrigation committees that are the base of the pyramid for the management of water resources in the basin. They represent a large number of stakeholders who generally do not receive the necessary technical assistance. The Water Law allows irrigation water rights and promotes the integrated management of water resources. Water management in Peru is regulated by local water authorities, who, in addition to charging for use rights, provide technical assistance in using norms for good water management. However, in remote communities, this technical assistance is minimal. Small irrigation organizations need to learn the rules related to water use; therefore, conflicts arise between users. Usually, the offices of the local water authorities are in the district capitals, far away from the communities. In a climate change scenario, water availability is expected to be reduced due to glacial retreat due to global warming. Therefore, adequate knowledge of water use rules can reduce water conflicts between water rights holders.

The subprojects will provide technical assistance and training to irrigation users and their organizations to strengthen irrigation management, especially applying water rules in a drought season when water sources have dried up due to lack of rainfall.

3.1.7 Establishment of an organizational mechanism for enhanced port and transportation management on the Paranapura River.

The Paranapura River and its port system are vital for emergency response in Amazonian communities. During field visits, the health centers indicated that there are no possibilities for the transfer of patients because the river still is littered with tree debris carried in during the rainy season. The ports have yet to be cleaned since the last river floods, and there is no competent authority to coordinate initiatives to improve river transportation between the communities and with Yurimaguas.

The EDA Peru project will support the creation of a coordination mechanism between the public and private sectors, including municipalities and indigenous organizations, to propose actions for cleaning river sediment and improving ports and river transport standards for passengers and goods.

Output 3.2 Natural infrastructure for water regulation, soil conservation, and risk reduction from floods and extreme rains.

This result includes the implementation of various measures related to natural infrastructure. Natural infrastructure is defined as the network of natural spaces that retain the values and functions of the selected ecosystems. In this result, subprojects will prioritize the services of water regulation, control of soil erosion, and reducing risks of floods and landslides will be prioritized.

3.2.1. Natural infrastructure for water regulation

In the high Andean communities, irrigation water is essential to food production.

More than 85% of the irrigation canals are artisanal in Santa and the headwaters of the Chancay-Lambayeque basin. The irrigation organizations clean the canals several times yearly as part of their cultural and festive activities. Activities under this output will intervene in areas degraded with actions in water, soil, and vegetation cover to contribute to restoring or maintaining the ecosystem's functionality. Reforestation or revegetation measures will be carried out with native species, being able to consider up to 10% of exotic species.

3.2.2. Installation of technified irrigation.

The project will also promote technified irrigation through water dispersers. Family farmers are using this technology in the Andean communities and have proven its replicability due to its low cost because once the pipes and hoses are installed, farmers can buy the sprinklers. They have also proven straightforward to operate, requiring no further technical assistance. The use of sprinklers is replacing flood irrigation, which is still very widely practiced.

3.2.3. Natural infrastructure for planting and harvesting water

The subprojects will also involve the construction of reservoirs to collect rainwater during the dry season. The reservoirs can be of different sizes, from 200 m3 to 7,000 m3, for a family, a group of families, or a community, depending on the hectares to be irrigated—the most vulnerable families with less than one hectare or older adults request small reservoirs.

The reservoirs are built taking advantage of the unevenness of the terrain and are protected with a geomembrane that prevents infiltration. The villagers know it as sowing and harvesting water. The construction is also simple and does not require the removal of large amounts of soil. During the fieldwork, it has been noted that some small farmer families have built small reservoirs, which can account for the benefits of having water available for more extended periods of the year when water sources dry up**.**

Component 4. Supporting food security in vulnerable communities

Component 4 aims to diversify income-generating activities that will compensate for production or ecosystem losses caused by climate change. It is also aimed at reducing economic losses due to climate effects.

Indicators to report under this component are:

Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)

The activities of the subprojects will include in-situ and ex-situ conservation of agrobiodiversity (ABD) to increase crop resilience to climate change. In the case of Santa, the tarwi crop has been selected for its high value in the market. In the Amazonian area, breadfruit, organic cotton, and certain tubers like “dale dale” are the primary candidates. In addition to food consumption, these crops are also used in handcrafting.

Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or forestry activities and added value activities.

4.2.1 Installation and commercialization of organic cocoa in deforested areas.

The project will promote the cultivation of cocoa, which is very popular in Lower Huallaga and Paranapura communities. The crop requires three years of maturation from planting to the first harvests. From the experiences of other projects, the crop requires technical assistance, so that the project will have community promoters trained under the trainers' modality.

Some families have already installed crops that serve as a model for other families, but technical assistance is required to fertilize and treat pests that increase due to humidity. Technical assistance is sporadic because of the distances involved, so the presence of technical promoters who cluster several communities simultaneously requires an extension model adapted to Amazonian conditions. Young people receive orientation on cocoa cultivation in schools so the project will offer more elaborate technical assistance.

Regarding commercialization, the indigenous organizations are establishing trade networks as far as the San Martin region; in this way, articulating with other cooperatives and other cocoa associations, they can achieve sustainability in the medium term.

4.2.2 Sustainable and culturally appropriate promotion of small animal husbandry.

Raising small animals is an activity carried out by women in the three selected watersheds. Raising guinea pigs, rabbits, and poultry, such as chickens and ducks, have the versatility of being used for food and for sale in local markets. The women interviewed indicate they can go down to the local market once a month when they need cash. Others, such as eggs and chickens, are bought at home by local restaurants.

However, they can also generate significant capital losses due to the presence of pests and diseases that completely wipe out the lot. The women interviewed say they do not have access to technical assistance and rely on local pharmacies to deal with animal diseases. Chickens are free-range, while rabbits and guinea pigs are raised in cages near the kitchen. In the case of hens and guinea pigs, the value of their excrement for soil fertilization is unknown; therefore, they are not used.

The women report success stories from other women in other places about raising these small animals, but they do not calculate the net profit from these ventures. Notably, it is an activity carried out 100% by women. In this regard, the project will provide technical assistance and training, as well as support in improving breeding, including sustainable feeding, treatment of diseases, and marketing of meat and excrement for fertilizer purposes.

4.2.3 Value added activities for local production.

In the Amazonian communities of Paranapura, the project will promote the processing of cassava and bananas to increase their market value. It will also offer training and technical assistance to preserve fish, bush meat, or meat from small animal husbandry.

4.2.4. Installation of Shawi artisanal weaving workshops.

The project will support the installation of artisan weaving workshops to promote the production of Shawi culture garments using native cotton and natural plant-based colors. Feathers and seeds from the forest are also used. They also weave headbands to carry loads and baskets to carry cassava and firewood. The women also make ceramic vessels to serve the Masato. Currently, only men and adult women know the techniques of weaving and how to collect inputs in the forest. The Shawi organizations promote the more frequent use of Shawi clothing to preserve the culture. Therefore, a tendency is being generated among young women to dedicate themselves to the recovery of handicrafts for commercial purposes.

4.2.5 Financial literacy for men and women entrepreneurs addressing gender and indigenous population needs and concerns.

Finally, the subprojects will promote financial literacy to the associations and workshops that allow the calculation of costs and profits of a small business, savings, and investment. This training will be adapted to the local culture and language.

4.2.6 Technical assistance for local tourism promotion

This activity is aimed at the Santa River basin, where the Huascaran National Park represents a tourist attraction area that can be used by the communities located in this ecosystem. Associations already exist to offer food services, transportation, mountain guides, and other services. The subprojects will support actions to improve these services and increase income complementary to agricultural and livestock activities.

Table Nº 4 summarizes the project's theory of change and how activities relate to outputs and outcomes.

Table Nº 4: EDA Peru- Theory of Change

INPUTS	OUTPUTS	EXPECTED OUTCOMES	IMPACT
US$ 5,000,000.00	Output 1.1 Increased innovation in subnational entities through the implementation of EDA-Peru Facility.	I1.2 Percentage of vulnerable population covered by adequate risk-reduction systems related to disaster risk management, improved irrigation system, water & soil management, drinking water & climate resilient housing.	Increased resiliency at the community and subnational level to climate variability and change in selected ecosystems. Percentage of targeted population with sustained climate-resilient livelihoods.
	Output 2.1 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis		
	Output 2.2 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses		
	Output 2.3 Targeted population groups covered by adequate risk reduction systems		
	Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability	Increased ecosystem resilience in response to climate change and variability-induced stress. I2.2. Area (ha) of native forests conserved and under management. Number of lagoons, wetlands and ponds conserved and under management. Number of rivers and water sources with quality monitoring system	Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas. Increase in family income.
	Output 3.2 Natural infrastructure for water regulation, soil conservation and risk reduction from floods and extreme rains.		
	Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)	Number of communities having more secure (increased) access to livelihood assets Number of households having more secure (increased) access to livelihood assets % women lead households and % under 35 years old	
	Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or forestry activities and added value activities		

Annual review of potential factors that may hinder the implementation of the project.

Assumptions:

- Communities accept the proposed measures because they recognize the benefits of a ecosystem based adaptation.
- Communities are willing to preserve the ecosystem in the long term when facing economic shortages by adopting other economic activities.
- Local climate change plans are prioritized for public funding that complement the measures taken at local level.
- The information issued by scientific institutions is given regularly and is culturally appropriate.
- Social cohesion and collaboration among governments bodies and private organizations are fully addressed.
- No conflicts are present in selected ecosystems.
- Local authorities prioritize actions to adapt to climate change.

B. Describe how the project/programme 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/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The EDA Perú project is explicitly designed to deliver a more equitable flow of adaptation finance to vulnerable communities in the selected area. The eligibility criteria for funding is limited (earmarked) for local organizations like indigenous organizations, small irrigators, small entrepreneurs and is targeted to vulnerable communities (rural). As such, these groups will benefit from the grant finance. All subprojects will work following the principles of gender responsivity and inclusivity during implementation. The subprojects will focus on adaptation priorities in the focus areas. These subprojects have positive environmental and social outcomes, as well as economic benefits, which are set out by the key focus areas below.

Economic benefits.

According with the Ministry of Agriculture and Irrigation (2018) the main benefit of the natural infrastructure (reservoirs, micro-reservoirs for agricultural purposes) consists of supplying the water resource in times of drought or prolonged drought, reducing the uncertainty concerning the delay or advance of the period of rainfall that serves as an input in agricultural production processes. It will also allow the storage of surface water runoff from heavy rains and melting glaciers, among other phenomena associated with climate change. Both cases will allow agricultural production to be sustainable and families to have food and economic security in the face of climate variability.

Other co-benefits are:

- ✓ economic savings generated by not having to opt for other technologies to access the water,
- ✓ reduced productivity losses in crops and breeding, and
- ✓ increased food security.
- ✓ It extends the period for agricultural production and recharge of aquifers that serve as a water reserve.

These interventions increase water availability for agricultural use in the dry season and improve water quality by acting as a natural filter. They produce better soil and ecosystem conservation, protecting it from erosion and reducing runoff by avoiding landslides or
landslides,

Forests are essential providers of ecosystem services at various scales spanning from the local (e.g., non-timber forest products, pollination, and scenic beauty) to the regional (e.g., hydrological services) and global (e.g., carbon sequestration).
Diversifying non-agricultural activities is critical to household food security in places where agriculture is climate dependent. Crop failure due to the effects of floods, frost, or pests puts poor rural families under significant economic stress. Small animal husbandry, tourism, home gardening, handicrafts, and weaving can alleviate these stresses.

Social benefits

Climate change poses a risk to the composition, health, and vitality of the ecosystems and the social systems linked to them. The decrease in ecosystem services, mainly regulating the water cycle, soil protection, and biodiversity conservation, can imply greater social vulnerability.
Many people in rural areas use ecosystems to meet their subsistence needs, including food, fuel, wood, medicine, and income. For many indigenous peoples, forests, and water (qochas and lakes) are also essential for cultural identity and spiritual beliefs.
Many urban areas also depend on ecosystem services such as water supply and recreation. Climate change will affect many of the services provided by forests, with impacts that can affect the increase in poverty and reduction in livelihoods.
By implementing natural infrastructure interventions, communities and local organizations can reduce the risks associated with climate variability and increase their resilience. Many technologies and ancestral knowledge can be improved and strengthened by community work.

Environmental benefits.

Developing best practices promoted by the financed subprojects will improve the ecosystem services of the area involved, in addition to working on landscape-level management. Practices that identify soil management solutions, erosion control, forest and cochas´ management, water conservation practices, restoration, water storage, and efficient water use will help reduce unsustainable water use and costs associated with water supply in rural communities.

Addressing vulnerable groups.

In the areas selected for implementing the EDA, Peru are Amazonian and Andean indigenous peoples with high poverty levels. In the Chancay – Lambayeque upper valley, subsistence farmers have only 25% of the irrigation area, only 13% are organized in some association, only 2% have access to technical assistance, and only 2% have another source of income different from agriculture activities (CEPLAN,2021).

During the comprehensive consultation process, specific activities carried out by women have been identified, such as raising small animals, tourism, handicrafts, and family gardens, among others. Component 4 already includes support for these activities through training and technical assistance.

a. Specific monitoring indicators have also been included to include quotas for women in training and technical assistance activities and for young men and women in income-generating activities under component 4.

b. It also includes an activity to support activities not contemplated in the project that promotes innovation in women's organizations (output 2.2.5). The fund of US$ 180,000 will support non-traditional activities such as the repair of solar energy systems, drone management, GPS, and other technologies that still need to be identified. Also, will include leadership & self-esteem training courses and to hold specific meetings to share lessons learned among women.

c. EDA Peru project also includes a US$ 1,272,600 a GAP for activities to reduce the gaps in vulnerable groups participation.

The subprojects will have access to technical assistance from Profonanpe's gender specialist and environmental specialists in the framework of compliance with the Environmental and Social Management Plan (ESMP).

The EDA Perú project has already included activities to reduce or avoid adverse effects on the most vulnerable groups, women, and indigenous peoples. The environmental and social risk management plan are presented in C part III.

EDA Peru seeks to generate direct and indirect benefits in the selected watersheds, through interventions in 75 rural districts, for 226 local organizations. Early warning systems could benefit 120,000 families. The following table shows the coverage of the services that EDA Peru will provide in the three selected watersheds. The GAP (table 13) and the measures included in the ESMP (table 12) ensure that the project will positively affect the most vulnerable populations.

Table Nº 5: EDA Peru Social and Economic Benefits							
Outputs	**Coverage of Effects and impacts**	**Indicators for Effects**	**Impacts**	**Coverage by watershed**			
				Total	**Santa**	**Paranapura**	**Chancay/ Lamba.**
				Target	**Target**	**Target**	**Target**
Component 1: Capacity building to design, implement and evaluate robust climate change adaptation projects at sub-national level.							
	Number of direct beneficiaries	Population with sustained climate-resilient livelihoods.		501,104	290,106	141,447	69,461

Table Nº 5: EDA Peru Social and Economic Benefits							
Outputs	**Coverage of Effects and impacts**	**Indicators for Effects**	**Impacts**	**Coverage by watershed**			
				Total	**Santa**	**Paranapura**	**Chancay/ Lamba.**
				Target	**Target**	**Target**	**Target**
	Number of indirect beneficiaries	Population covered by some type of EWS		533,738	345,721		188,017
	Number of total direct and indirect districts involved.			75	42	5	28
Output 1.1 Increased innovation in subnational entities through the implementation of EDA-Peru Facility.	Andean and Amazonian & Association community.			226	50	126	50
Component 2: Reduced exposure to climate-related hazards and threats							
Outcome 2: Reduced exposure to climate-related hazards and threats	Districts covered by EWS (direct beneficiaries)			44	20	5	19
	Families covered by the EWS.			120,369	72,213	26,729	21,427
	Population covered by EWS.			501,014	290,106	141,447	69,461
			Reduction in the number of affected families				
			Reduction of destroyed homes				
		Reduced number of cropping areas damaged.					
		Reduced number of irrigation canals damaged					
	Districts with Local Climate Change Plans (LCCP).			44	20	5	19
		Men trained in climate change adaptation measures		300	100	100	100
		Women trained in climate change adaptation measures		300	100	100	100

Table Nº 5: EDA Peru Social and Economic Benefits							
Outputs	**Coverage of Effects and impacts**	**Indicators for Effects**	**Impacts**	**Coverage by watershed**			
				Total	**Santa**	**Paranapura**	**Chancay/ Lamba.**
				Target	**Target**	**Target**	**Target**
		Indigenous women and leaders trained in Climate change Adaptation.		150	50	50	50
			Reduced number of life lost due to climate related events.	**500**		500	
Output 2.1 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	Health centers with EWS.			**44**	20	4	20
	Andean and Amazonian communites. & local Association.	Number of local organizations making decision based on climate information. including 15 indigenous communities' life plans.		**226**	50	126	50
Output 2.3 Targeted population groups covered by adequate risk reduction systems	Technical dossiers for public investment	New families with drinking water.		**27,994**	14,370	5,632	7,992
		Families with climate resilient dwellings.		**2,770**	880		1,890
		New families with sanitation services.		**11,663**	5,725	5,938	
		Irrigation users with permits		**7,000**	4,000		3,000
		New Families with access to renewable energy		**10,433**	8,543		1,890
Output 2.2 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.	Andean and Amazonian communites. & local Association trained in local adaptation			**226**	50	112	50
	Indigenous communities with livelihood plans that include DRM and climate change adaptation			**112**		112	

Table Nº 5: EDA Peru Social and Economic Benefits							
Outputs	**Coverage of Effects and impacts**	**Indicators for Effects**	**Impacts**	**Coverage by watershed**			
				Total	**Santa**	**Paranapura**	**Chancay/ Lamba.**
				Target	**Target**	**Target**	**Target**
	Communities recovering ancestral knowledge to increase their resilience.	Women benefitting from indigenous knowledge		122	10	112	0
	Number of Women involved in innovative initiatives related to climate change adaptation.			**100**	35	30	35
3.1.7 Establishment of an organizational mechanism for enhanced port and transportation management on the Paranapura River.	Number of Shawi communities covered			**112**		112	
		Improvement of river and port transportation on the Paranapura River.	Reduction of the gap in the average estimated mortality rate in children < 5a x 1000 inhabitants.				
			Reduction in the sum of Potential Years of Life Lost (with respect to the year 2021)				
Outcome 3 Increased ecosystem resilience in response to climate change and variability-induced stress.							
Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability.		Communites with Forest Management permits	(Increase in household income)	**112**		126	
			Hectares of district forest loss avoided (cumulative 10 years post project)	**15,763**		15,763	
Output 3.2. Natural infrastructure for water regulation, soil conservation and risk reduction from floods and extreme rains.		Average irrigated hectares per household	(Increase in household income)	**1.6**	1.2		2.1
		Hectares with technified irrigation		**4,044**	820		3,224

Table Nº 5: EDA Peru Social and Economic Benefits							
Outputs	**Coverage of Effects and impacts**	**Indicators for Effects**	**Impacts**	**Coverage by watershed**			
				Total	**Santa**	**Paranapura**	**Chancay/ Lamba.**
				Target	**Target**	**Target**	**Target**
	Number of irrigation committees			**60**	50		10
		Number of New families with technified irrigation		**2,500**	1,000		1,500
Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability.	Number of Families covered	Families benefited, reforestation, native species, bioremediation	(Increase in household income).	**1,500**	1,000		500
		Families with agro-ecological practices	(Increase in household income)	**7,500**	5,000	1,000	1,500
Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)	**Included in 3.1**	Families implementing agro-ecological and conservationist practices	(Increase in household income)	1,400	200		200
Outcome 4: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.							
Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)	Andean and Amazonian communites. & local Association increase resilience	Women benefitting from indigenous knowledge		132	10	112	10
		Shawi indigenous organization benefiting from indigenous knowledge			2	4	0
Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or forestry activities and added value activities.	Families with cocoa production	Families that improve their annual income by at least USD 350 per year		150		150	
		Women earning a minimum of US$350 per year		100		100	
		Families that increase their productive physical assets by a minimum of USD 1,000		250		250	
	women's organizations involved in the raising of small animals.	Families that improve their annual income by at least USD 350 per year.		700	300	100	300
		Families that increase their productive physical assets by a minimum of USD 1,000		1150	500	150	500

Table Nº 5: EDA Peru Social and Economic Benefits							
Outputs	**Coverage of Effects and impacts**	**Indicators for Effects**	**Impacts**	**Coverage by watershed**			
				Total	**Santa**	**Paranapura**	**Chancay/ Lamba.**
				Target	**Target**	**Target**	**Target**
	Families engaged in value-added activities.	Families that improve their annual income by at least USD 350 per year		450	150	150	150
		Women earning a minimum of US$350 per year		300	100	100	100
		Families that increase their productive physical assets by a minimum of USD 1,000		750	250	250	250
	Men and women engaged in tourism activities.	Families that improve their annual income by at least USD 350 per year		350	100	100	150
		Women earning a minimum of US$350 per year		225	75	50	100
		Families that increase their productive physical assets by a minimum of USD 1,000		500	175	150	175
		Entrepreneurial small producers:		2,650	925	800	925
		§ Men		950	300	300	325
		§ Women		1325	475	350	500
		§ Young women		200	75	75	50
		§ Young men		200	75	75	50

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

The cost-effectiveness analysis is based on the total project budget and its benefits, which will be mainly translated into the number of beneficiaries. In the areas selected for implementing the EDA, Peru are Amazonian and Andean indigenous peoples with high poverty levels. EDA Peru seeks to generate direct and indirect benefits in the selected watersheds, through interventions in 75 rural districts, for 226 local organizations. Early warning systems could benefit around 120,000 families.

The Accredited Entity, Profonanpe, and the leading partners intend to focus the adaptation project on directly benefiting an estimated of 501,104 . direct beneficiaries The estimated duration of the project is five years with an estimated total funding of USD 5 million requested from the AF.

EDA Peru aims to improve coordination between the government entities at different levels in the sectors of agriculture, water irrigation, health, and forest to address the limited technical and territorial coordination in the prevention of climatic risks. It includes components of training, improved policy implementation and government institution planning.

Component 1 will provide the communities with the financial and technical means to make sustainable use of natural ecosystems, limit deforestation and forest degradation, restore degraded ecosystems, improve their

livelihoods through the development of economic activities and a compliance with environmental, social standards and financial management. EDA Peru opens a learning opportunity for community-based organizations or indigenous organizations to apply to projects with high standards and safeguards.

Component 2 will address the development of EWS that are culturally adopted. Early warning systems adapted to the Shawi culture do not yet exist. **Components 3 and 4** will show how ecosystems and families respond to the adaptation measures. The project will identify and address in a participatory manner, the development and implementation of Peru's National Adaptation Plan creating an enabling environment for scaling up proposals and seeking further funding.

The budget requested for this project is US$ 5,000,000 to fund subprojects directed to three vital watersheds that will not yet be financed by public investment. The EDA funds will make it possible for these local associations and communities to access funds for more comprehensive projects that contribute to community resilience. Some considerations are taken to make synergies with prior conditions such as:

- To achieve outcome 2, 3 and 4 the project will be implemented in areas where multi-hazard risk analyses have already been carried out, therefore the project will promote to link them with the National Adaptation Plan at the community level. The measures selected for the EDA project are already approved in the National Adaptation Plan and those related to water, forest, food security and agriculture represent almost 60% of the country's adaptation measures.
- The EDA Peru Project will work with local governments, health centers, indigenous organizations, and associations of entrepreneurs (tourism, husbandry, handicraft, among others) to establish collaborative relationships to create a climate-resilient watershed. Local Climate Change Plans (LCCP) will give coherence to public and private investment in the medium and long term. Early warning systems will make it possible to make the population aware of the territory's specific risks and make decisions with the institutions to respond to the threats of climate risks.
- Working in areas with MERESE mechanisms are in place, will provide the means to develop robust and feasible adaptation and a long-term institutional sustainability of the adaptation process itself.
- To achieve outcome 4, the project will articulate to organic markets and networks, community tourism, value-added chains, small entrepreneurs' associations present in the selected watershed.
- Strengthen subnational associations such as indigenous organizations, irrigation committees, women´s husbandry organizations, tourism associations, local non-government organizations in climate change adaptation will enhance their autonomy in decision-making on climate change investments.

Costs and Outcomes

Costs	Effectiveness			
		Outcome Indicator	**Baseline**	**Final Value**
Global Input : 5,000,000	**Number of Beneficiaries Coverage**	**Direct beneficiaries supported by the project**		**501,014**
		- *Female*		249,251
		- *Youth*		251,763
		Indirect beneficiaries supported by the project		**533,738**
		- *Female*		264,962
		- *Youth*		268,776
	Adopted Early Warning Systems	Families covered by the EWS.	0	120,369
		- *Number of affected families (years 2020-2022)*	5,285	

282,000 (C1)		- *Destroyed homes (years 2020-2022)*	1,386	
		- *Number of cropping areas damaged Has (years 2020-2022)*	149	
		Number of municipalities	44	44
979,000 (C2) **1,825,800 (C3)**	**Assets Produced, Developed, Improved, or Strengthened**	**1) Health and Social Infrastructure**		
		- New *families* with drinking water.		27,994
		% of households without drinking water services	33.4% (40,164)	
		- *Families* with climate resilient dwellings.		2,770
		% households with inadequate physical conditions	11.6% (13,953)	
		- New *families* with sanitation services.		11,663
		% of households without sanitation services.	11.8% (14,153)	
		- New *Families* with access to renewable energy		10,433
		% of households without electricity	16.0% (19,285)	
		2) Physical asset		
		- *Families with agroecological practices*	0	7,500
		- *Number of New families with technified irrigation*	0	2,500
		- *Hectares with technified irrigation*	0	4,044
		- *Families benefited, reforestation, native species, bioremediation*	0	1,500
		- Families that *increase* their productive physical assets	0	2,650
	Natural Assets Protected or Rehabilitated	**Natural Asset or Ecosystem**		
		- *Expected annual deforestation rate.*		0.36%
		- *Annual deforestation rate 2001-2021*	0.68%	
		· Families benefited, reforestation, native species, bioremediation		1,500
		Change in state *Has*		
		· Hectares of district forest loss avoided		15,763
1.014.600,00 (C4)	**Increased income, or avoided decrease in income**	**Families with agro-ecological practices**		
		· Families with sources of income diversified	0	7,500
		Entrepreneurial small producers:		
		· Families that improve their annual income	0	2,650
		· Number of households	0	10,150

Fuente: Anexo 8.

EDA Perú Net present value.

NPV	**US$ 69,643,892**
IRR	**29%**
BENEFIT / COST	**4.25**

Discount rate: 10%.
The Net Present Value of US$69.6 million is the value of the wealth generated for society attributed to the project, presented in present value at the discount rate of 10%.
An Interest rate of return (IRR) of 29% for a climate change adaptation project is positive, especially when compared to the discount rate of 10%. As the IRR is higher than the discount rate (10% in this case), the project is profitable, as it exceeds the return that could be obtained by investing the money in another option with the same risk.
In this case, an IRR of 29% means that the project has the potential to generate a 29% annual return on invested capital. The IRR is a useful measure for evaluating the profitability of a project, as it indicates the rate at which the project's future cash flows equal the initial investment.
A Benefit /Cost of 4.25 means that for every monetary unit invested in the project, 4.25 monetary units of profit will be generated. In other words, the expected benefits of the project significantly exceed the investment costs, indicating that the project can generate a substantial return relative to the capital invested.

Annex 2 provide detailed EDA Perú Cost - Benefit Analysis and benefits matrix in selected areas.

EDA Perú- Benefits/Cost Flow												
Flow	VAN	T-0 Years of project	Years post project									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cost - Benefit Flow	US$ 68,739,893.18	-8,325,000	11,535,704	9,209,878	23,720,182	9,208,262	9,207,472	23,717,814	9,205,929	9,205,176	23,715,552	9,203,702
Costs	US$ 24,326,092.10	8,325,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Project Investment												
Component 1: Capacity building to design, implement and evaluate robust climate change adaptation projects at sub-national level.		872,000										
Component 2: Reduced exposure to climate-related hazards and threats		900,000										
Component 3: Supporting the resilience of selected ecosystems		1,700,000										
Component 4. Supporting Food security		1,068,200										
Operating costs / other		66,855										
Allied Contributions		1,000,000										
Beneficiary Contributions		2,325,000										
Maintenance Costs			3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Incremental benefits	$ 103,366,982.87		14,974,454	12,323,628	26,833,932	12,322,012	12,321,222	26,831,564	12,319,679	12,318,926	26,829,302	12,317,452
Families covered by the EWS:					14,511,119			14,511,119			14,511,119	
Hectares of district forest loss avoided			54,014	53,188	52,373	51,572	50,782	50,005	49,239	48,486	47,743	47,012

EDA Perú- Benefits/Cost Flow											
Flow	VAN	T-0 Years of project	Years post project								
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Marginal willingness to pay for the families with drinking water			92,940	92,940	92,940	92,940	92,940	92,940	92,940	92,940	92,940	92,940
Families implementing agro-ecological and conservationist practices			11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000
Families that improve their annual income			927,500	927,500	927,500	927,500	927,500	927,500	927,500	927,500	927,500	927,500
Families that increase their productive physical assets			2,650,000									

D. Describe how the project/programme 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 EDA-Perú project seeks to be a financial mechanism to boost the implementation of adaptation solutions in specific vulnerable watersheds through water, forests, forestry, agriculture, food security and disaster risk management interventions, aligned with the measures identified in the National Adaptation Plan approved in 2021. The latter has a territorial scope that covers all of Peru and is based on the five thematic areas prioritized: agriculture, water, forests, forestry, artisanal fishing, aquaculture, and health. The project is also aligned with:

The Framework Law on Climate Change - Law No. 30754 and its regulation, that were approved in 2018 and 2019 respectively. It aims to establish the principles, approaches and general provisions to coordinate, articulate, design, implement, report, monitor, evaluate and disseminate public policies for the comprehensive, participatory and transparent management of climate change adaptation and mitigation measures, in order to reduce the country's vulnerability to climate change.

The Nationally Determined Contributions (NDC) that were submitted to the UNFCCC in 2018, which were developed through a participatory and multisectoral process, being the Final Report of the Multisectoral Working Group (GTM for its initials in Spanish) of a temporary nature in charge with generating technical information to guide its implementation. The EDA Peru is aligned with the adaptation measures established in the country's National Contributions, specifically with 12 measures in the agriculture sector, 5 in the forestry sector, 1 in the fisheries sector, 8 in the water sector and 3 in the health sector. Annex 3 shows the EDA Peru outputs aligned to the NDC adaptation measures, their enabling conditions, and their respective indicators.

The National Climate Change Adaptation Plan towards 2050 approved in 2021 is an important input for updating the National Strategy on Climate Change and is composed of thirteen priority actions that are being implemented in a multisectoral, multilevel and multi-actor manner.
Some of these actions include developing conditions and capacities among vulnerable populations by strengthening prediction and knowledge capacity in a context of climate change, strengthening the sustainable use of forest resources through training for peasant communities, indigenous peoples and Afro-Peruvians in forest resource management, implementing good management, improvement and conservation practices through the agricultural population in agro-pastoral production systems, among others. This plan recognizes ecosystem-based adaptation for disaster reduction.

The National Agrarian Policy approved in 2016 by Supreme Decree No. 002-2016-MINAGRI, has as its general objective defined in Chapter 6: to achieve a sustained increase in the income and livelihoods of agricultural producers, prioritizing family farming, based on greater capacities and more productive assets, and with a sustainable use of agricultural resources in the framework of processes of growing social and economic inclusion of the rural population, contributing to food and nutritional security.

The following areas apply to the EDA Project:

- o Sustainable water and soil management
- o Forestry and wildlife development
- o Irrigation infrastructure and technification
- o Agricultural innovation and technification
- o Disaster risk management in the agricultural sector.
- o Capacity building.
- o Productive reconversion and diversification.
- o Market access.
- o Agricultural health and agri-food safety.

Law on Mechanisms for the Remuneration of Ecosystem Services (MERESE) Law No. 30215.

This law enacted in 2013, defines the role of the state in promoting investment in conservation, recovery and conservation of ecosystem services, also raises the exchange of information generated by the actors to determine the status of the sources and technological development for the conservation of these services.

Equal Opportunities for Men and Women Law No. 28983.

This policy instrument addresses all areas of personal development and provides mandates, guidelines and competencies to the three levels of government and autonomous institutions. In aspects related to vulnerability to climate change, this law provides guidelines to i) promote access to productive, financial, scientific-technological and credit resources for production and land titling, particularly for women living in poverty, taking into account ethnic-cultural, linguistic and geographical diversity and areas affected by political violence, and ii) promote the economic, social and political participation of rural, indigenous, Amazonian and Afro-Peruvian women and their integration in decision-making spaces of community organizations, production associations and others.

The National Environmental Policy (PNA) 2021.

This policy seeks to guide the efforts of the State and Civil Society over the next 10 years to provide citizens with a healthy environment in which they can develop not only as individuals but also so that economic activities can be carried out in a sustainable manner.

The National Environmental Policy establishes measures to reduce the fragility index of ecosystems and maintain the adequate state of biological diversity, as well as the goods and services that ecosystems provide.

The National Water Resources Plan.

It contains information specifically on policy 5: "Adaptation to Climate Change and extreme events", which includes a brief description of the following adaptation measures:

- ✓ Institutional development and adaptation to integrated climate change management.
- ✓ Strengthen integrated management of water resources to reduce their vulnerability,
- ✓ Reduce the vulnerability of fragile species and ecosystems to CC.

Gender and Climate Change Action Plan (PAGCCC-Peru, 2016).

Is a public management instrument that seeks to guide the actions of the different entities of the Peruvian State to achieve - within the framework of their competencies related to the management of greenhouse gas (GHG) emissions and adaptation to climate change - the reduction of gender inequalities in the country. It establishes water resources, forests, food security and disaster risk management as priority areas for action.

The project is also aligned with the procedures and orientations of scientific or technical institutions regarding climatic information such as the National Service of Meteorology and Hydrology (SENAMHI), the Glaciers and Mountain Ecosystem Research Institute (INAIGEM), and the Peruvian Institute of Geophysics (IGP).

The project is also aligned with policies related to the National Disaster Management System Law 2664 - 2021 that establishes the roles and functions of the Civil Defense Institute (INDECI) for early warning systems and the National Center for Disaster Prevention (CENEPRED) for risk reduction actions. This is a system created by the Peruvian government to identify and reduce risks associated with disasters, minimize their effects and address hazard situations through management guidelines.

At the level of the selected watersheds, the project considers the district local development plans and the Regional Climate Change Strategies of Ancash, Cajamarca and Loreto. Risk prevention and reduction plans (PPRD) prepared by CENEPRED within the framework of its competencies are also aligned. Currently, 30 district plans have been prepared in the Santa River basin.

E. Describe how the project/programme 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.

As part of the application process for grant awards by the project, potential leading partner in each basin will be expected to secure and produce all permits and regulatory approvals for the sub-project activities. Leading partners will be required to elaborate on the sub-project's adherence to national and international technical standards during the submission of proposals under EDA Peru Call for proposals. Based on the prioritized areas under each component, it is not expected that any of the proposed activities will have major or significant adverse impacts on the environmental or social sectors. Component 1-2 are not expected to have any activities that would impact any natural ecosystem. The creation and operation of Early Warning Systems for Risk Reduction (EWS) will follow the protocols and guidelines of the National Institute of Civil Defence (INDECI) and for the climate-related diseases, the subprojects will follow the protocols of the Ministry of Health (MINSA).

The project screening process and monitoring actions for activities included in components 3 and 4 will ensure its adherence to the national regulations and comply with sector specific requirements and standards. These includes Environmental Impact Assessment (EIA); Forestry and Wildlife Management in native communities; Water Irrigation Systems building code; Natural Infrastructure guidelines and Fishing Management of the Peruvian Amazon. In terms of safeguarding forests, water resources and water quality control, the project will ensure compliance with nationally established protocols established by the National Forestry Service (SERFOR), the Ministry of Agriculture and Irrigation and the Local Water Authority. Engineering and roadwork specifications from Ministry of Transportation will be applied during construction of irrigation infrastructure if necessary.

Technical standards will also be extended to the procurement of goods and services, ensuring that all equipment comply with environmental standards to control for pollution and energy efficiency. These procurement standards will ensure that value for money principles meet with environmental and sustainability benchmarks that will sustain the life of project inputs. Additionally, applicable technical standards will be applied to soil and land management adhering to the use of chemicals, protection of riverbanks, fire paths, construction waste disposal and product marketing and labelling of value-added products.

The subprojects would thus not require any environmental studies.

The subprojects will comply with unrestricted respect for the country's existing environmental, social, and labor regulations, as well as the specific rules related to their intervention activities. Likewise, they will respect human rights, with particular attention to the rights of children and adolescents.

None of the subprojects managed by the EDA can violate the environmental, social, labour, and human rights requirements or the regulations binding on the specificity of the activity.

Likewise, they will be selected according to established criteria to meet minimum environmental, technical, and social standards aligned with the Social and Environmental Safeguards Policy of Profonanpe and the Environmental and Social Policy of the Adaptation Fund.

Profonanpe will apply different instruments according to the capacity and experience of the proponents.

Profonanpe will guarantee that the subprojects carry out the following actions:

- ✓ Require to screening social and environmental risks.
- ✓ Establish a practical plan to manage identified environmental and social impacts and risks based on the initial assessment presented in table 12.
- ✓ Establish the responsibilities for managing, monitoring, and evaluating the activities' environmental and social impacts and risks.

- ✓ Guarantee that all communities and organizations have adequate access to information throughout the project implementation thorough an engagement plan.
- ✓ Guarantee that complaints and suggestions from the population affected by the activities are addressed through Profonanpe´s grievance mechanism.
- ✓ Ensure that the gender inequalities are addressed following the EDA Peru GAP (table 13).

Below are detailed activities to be carried out by the subprojects in line with the Environmental and Social Policy of the Adaptation Fund.

Process	Project´s activities
Screening of Environmental and Social Risks by the Implementing Entity	A screening of environmental and social risks will be developed for each of subprojects evaluated and approved under the EDA, according to the criteria and technical assessment implemented by Profonanpe.
Environmental and Social Assessment	An environmental and social assessment will be developed at EDA level considering the identification of any environmental or social risks, including any potential risks of the thematic areas prioritized for the EDA and its activities. At the sub projects level, each of them will develop an environmental and social assessment of its specific activities and will be evaluated under the technical assessment.
Environmental and Social Management Plan	In line with the environmental and social assessment, an environmental and social management plan will be developed for each project that will be evaluated. Profonanpe will provide guidance for the beneficiaries to develop its Plans according to the Fund's environmental and social principles.
Monitoring, Reporting, and Evaluation	The activities of monitoring, reporting and evaluation of the EDA will include the sub projects performance with respect to environmental and social risks. The project coordinator together with the environmental and social specialist will ensure that the reports and evaluations include the environmental and social measures.
Public Disclosure and Consultation	During the preparation of the full proposal, Profonanpe has conducted a comprehensive and participatory consultation in the three selected watersheds. Details of the consultation are presented in the Annexes 5,6 and 7. During the implementation subprojects will produce an engagement plan.
Grievance Mechanism (GM)	Profonanpe will review and align specific guidelines of the EDA grievance mechanism with Profonanpe's current GM (https://profonanpe.org.pe/en/quejas/). Please see chapter C page 64.

Other technical standards from specific sectors related to adaptation measures are detailed in Annex 4.

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

Currently, there is no duplication of the project as a Facility itself. However, there is a project under development to be presented to the GCF led by GIZ International, which aims to support MIDAGRI in promoting a paradigm shift in the management of Puna ecosystems (wetlands, peatlands, and grasslands) and productive practices to increase climate resilience of some of the most vulnerable groups in the country: rural farming and herding communities depending on these ecosystems for their livelihoods. However, the present proposal aims to support adaptation solutions in the water, forest, and agricultural

thematic areas, with pre-established measures prioritized in the National Contributions and the National Adaptation Plan.

The project will coordinate with other initiatives to create an environment friendly to adaptation. The project will conduct training on climate change adaptation in the three areas for a broad audience and share information on the measures it promotes to increase investment in climate change adaptation. In the area of intervention various initiatives are being implemented as presented in the following table and it finds there is no duplication in the short term.

Selected area	Current initiatives in the area	Lack of overlap	Complementarity and synergies
	1.1 The Technical Secretariat of the Water Resources Council of the Chancay-Lambayeque Basin is implementing the Water Resources Management Plan of the Chancay-Lambayeque Basin, therefore, has been promoting the creation of the "GREEN FUND," which is a platform that supports the creation of the fund to leverage projects for the conservation and protection of the basin's water sources.	1.1.The Chancay Lambayeque Basin Green Fund is in its initial stages. It is expected that at the end of 2023 its statutes and regulations approved by the regional government of Cajamarca will be ready. At present there are no project concepts notes in the pipeline	1.1 The Green Fund will be a complementary fund of the EDA since its final objective is to improve the water management of the headwaters of the Lambayeque River basin
(1) Chancay – Lambayeque Watershed, department of Lambayeque and Cajamarca.	1.2 Two public investment projects for irrigation water improvement in the district municipality of Catilluc are viable; they are waiting for funding to prepare the technical files.	1.2 Profonanpe will notify to the local government of Catilluc of the start of the EDA Peru project and will present the lead partner selected for the Lambayeque basin to coordinate the communities to be served by both projects in order to avoid duplication.	1.2 EDA Peru will focus on the most vulnerable population that has not been included in these projects because they have little farmland. Together, both projects could expand irrigation coverage in the district.
	1.3 Lutheran Relief Services (LRS) has been implementing social development projects in coordination of mining companies.	1.3 Currently LRS has withdrawn from the northern zone and moved its operations to the central zone of the country. (Interview with Gladys Soto, LRS finance manager).	
	1.4 The Institute for Support to Water Management of Northern Coast of Peru (IMARP) has been working in recent years on technical assistance for the modernization of irrigation canals in the middle basin. IMARP is currently interested in working in the highlands	1.4 Profonanpe will invite IMARP to participate as a possible leading partner.	
(2) The Ulta Basin in the Santa Watershed	2.1 The Mountain Institute has been conducting risk studies in the Santa Basin with support from FAO. In some districts of Canrey, the Mountain Institute has developed bioremediation	2.1 The FAO project has concluded with detailed risk studies and recommendations on adaptation measures in higher risk areas.	2.1 EDA Peru will build on the recommendations of the studies and prioritize the highest risk areas identified in the studies. Likewise, the EDA Peru will carry out greater dissemination of these

Selected area	Current initiatives in the area	Lack of overlap	Complementarity and synergies
Department of Ancash.	projects in water sources affected by rock acidification in coordination with INAIGEM.		recommendations in the Santa basin to feed the Local Adaptation Plans.
(3) Lower Huallaga and Paranapura Basin San Martin & Loreto department.	3.1 NORAID is implementing the Indigenous Governance and Economy project in some Shawi communities on the Paranapura River through Confederation of Peruvian Amazonian Nations (CONAP). The project will culminate in 2024 and supports cocoa and artisanal weaving initiatives in Shawi women and supports the communities in management plans for palm trees such as aguaje. The Joint Statement of Intent between the Peruvian government and the governments of Norway, Germany, UK and USA, better known in Spanish as the DCI, also supports cocoa and land titling initiatives through the Organization of Indigenous People of San Martin Department (CODEPISAM). The project has changed management and is expected to resume in late 2023.	3.1 This project is implemented at the national level, benefiting different ethnic groups and indigenous peoples at the national level. In the Shawi communities of Huallaga and Paranapura, only pilots are implemented in 4 communities that culminate at the beginning of 2024.	3.1 EDA Peru is going to expand and deepen these small experiences, especially by strengthening the value chain of cocoa, forest management and women`s crafts and fabrics.

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

Knowledge Management & Communication (KM&Com) within the project is defined as the set of activities and processes that strengthen the exchange of information and experiences among the actors involved, to improve the performance of local organizations and the results of the proposed projects. KM will include gathering data; analyzing processes, results, and personal experiences; creating and disseminating lessons learned to reach the largest number of beneficiaries. In this sense, knowledge needs to be captured, systematized and share, therefore will be integrated with a communication strategy.

The KM&Com plan is based on lessons learned from three important projects: the Perú GEF Small Grants Projects SPG 6; the GCF cross-cutting project with indigenous people in the Datem del Marañon province in Loreto and the AF Adaptation to the Impacts of Climate Change on Peru's Coastal Marine Ecosystem and Fisheries. A session dedicated to KM&Com implementation is required during the first training workshop with the selected leading partners. Additionally, these leading partners must fully understand their strategic role in the KM&Com Plan, integrating community learning with a scaling up vision at the basin or landscape level aiming to spread lessons learned for a broader audience.

The Peru GEF SGP lessons learned suggests that a second or third call for subgrants could offer an opportunity to introduce new complementary activities based on the lessons learned from the first-round subprojects grants. More calls for proposals could also provide the opportunity to include new partners and activities to complement the first-round subprojects after 18 to 24 months of implementation. Furthermore, it suggests including specific capacities, such as data analysis, in the selection criteria for leading partners for further capacity building. According to Peru GEF SGP experience, these capacities are scarcer at the subnational level, so they must be identified early, at the beginning of the project. It was also suggested that potential learning themes, gaps of information and stakeholders require validation during the first year at watershed level.

Lessons learned from the Datem del Marañon project include adapting biobusinesses to indigenous culture and supporting initiatives that integrate community economic activities with value chains at the

basin or landscape level. Recommendations regarding the articulation of value chains could be implemented during the second or third call for subgrants when the needs for strategic interventions are clear and more defined.

Important lessons regarding the Participative Monitoring Systems (SMAP for its name in Spanish) has been drawn by AF project on Adaptation on Peru's Coastal Marine Ecosystem and Fisheries. The system allows the user to recognize the causal relationship between climate data and the observed impacts on the ecosystem, therefore, communities can implement measures to avoid further damage to their livelihoods. It's expected that friendly EWS could play an important role in providing information that lead to preventive action.

Below we present the learning themes that can be derived from the implementation of the EDA Peru, integrating indigenous organizations, non-governmental organizations that propose subprojects, and the institutions of the sectors that are part of the project's technical committee.

Indigenous knowledge and resilience.

The role of indigenous knowledge in climate change adaptation is key in the EDA Peru project. Cultural aspects such as rituals, indigenous medicine, ancestral knowledge can be the basis of resilience. The project can provide many lessons learned because it also focuses on Andean and Amazonian ecosystems and on a population settled in these territories for many millennia. Also, they receive the impulse of new migrants that allows them an exchange of technologies that can be the basis of resilience.

Institutional development and capacity building for resilience.

Component 1 will address all the demands of knowledge on project management, compliance with environmental and social standards, financial management and reporting and monitoring.

EDA Peru opens a learning opportunity for community-based organizations or indigenous organizations to apply to projects with high standards and safeguards. Profonanpe will have the opportunity to test its instruments and procedures for approval, monitoring, and evaluation of these organizations. Therefore, learning in institutional development will be present during the implementation of the EDA Peru.

Adaptation based on ecosystems at watershed level.

Component 2 will address the development of LWS that are culturally adopted. Components 3 and 4 will show how ecosystems and families respond to the adaptation measures. It is expected that lessons learned will emerge from adaptation models in each ecosystem and the interaction and synergies among interventions that are key to supporting community resilience. The interventions and the report and monitoring systems are mainly knowledge generators.

Learning workshops will be held during the last year of the project, integrating the community monitors with the technical team. This is the main component of the project and is considered the axis for recording and disseminating knowledge in different forms and at different levels.

The lessons to be learned from the project are relevant beyond the national, sub-national and sector-specific levels, as the project will identify and address in a participatory manner, the development and implementation of Peru's National Adaptation Plan creating an enabling environment for scaling up proposals and seeking further funding.

Early Warning Systems culturally adapted.

Early warning systems adapted to the Shawi culture do not yet exist. For example, EDA Peru will have to learn from other systems installed in Quechua-speaking communities. Additional learning can also occur in the institutions that produce the information. What are the requirements of institutions that provide climate information for indigenous organizations?

Reporting on National Measures and EDA Perú contribution.

The adaptation measures approved in the National Contributions already contain indicators for reporting, and therefore, the EDA Peru can report the contribution of the subprojects. How are the indicators added, and how are they measured? What is the reporting timing? There are lessons that EDA Peru can address with the support of the Project Technical Committee.

Knowledge Management Communication (KM&Com) Plan.

Table Nº 7. 1 EDA Perú Knowledge Management& Communication Plan

Objective	Activities	Responsible	Timeline	Expected Results
Develop leading partners and PTC capacity on KM	A training session at the design workshop (4 hours).	Profonanpe	Year 1 (First Semester) Provision from first national workshop.	There is a shared vision of knowledge management and its importance to increase the impact of the project in each basin. Lessons learned from GCF cross cutting project Datem del Maranon and GEF SGP6 and AF project on Adaptation on Peru's Coastal Marine Ecosystem and Fisheries are shared among leading partners.
Identify knowledge gaps and develop learning questions with PTC and leading partners	A session in the project design workshop (4 hours)	Profonanpe		A matrix of revised questions both for the entire project and for each selected basin.
Analyze existing knowledge, data and communication products and media	Assess overall context in each basin, stakeholders. One event for sharing the report in each basin.	Leading Partners	Year 1 (Second Semester)	A report of the context in each basin, strategic allies, local agendas, and possible social networks
Develop a KM Strategy and a Communication Plan	Identify processes and activities as well as the reports and communication products to be produced for each of the identified themes (table 7) One event for sharing information with stakeholders within the basin.	Consultant & leading partners	Year 2 (First Semester)	A KM and communications plan with identified milestones at local level and the national level.
Analyze knowledge and produced by the project al basin level.	First round of Lessons Learned at local level.	Consultant & leading partners	Year 3 (First Semester together with the	Knowledge generated by project activities is collected and organized.

	One event (virtual) for sharing information among 3 selected basins.		Internal project review)	
Monitoring and first report of lessons learned selecting the important local development experiences that represent valuable. lessons for other projects.	Verify the quality of information, relevance, and synergies. One meeting to share quality standards within Leading Partners and Profonanpe.	Profonanpe & Consultant & leading partners	Year 3 (Second semester).	Knowledge generated by project activities is ready to disseminate. Set of information quality control criteria agreed between Leading partners and Profonanpe.
Sharing information and Lessons learned through local media.	Campaigns and events to disseminate. Stakeholders' broader engagement	Profonanpe & Consultant & leading partners	Year 4 (Second semester)	Knowledge products are publicly accessible and widely disseminated among stakeholders.
Monitoring and final report of lessons learned and sharing information at local and national level	Second round of Lessons Learned at local level. One event presential for sharing information with stakeholders within the basin.	Profonanpe & Consultant & leading partners	Year 5 (first semester together with the final evaluation)	Knowledge generated by project activities is collected and organized
Sharing information and Lessons learned through local and national media	Campaigns and events to disseminate. Stakeholders' broader engagement One event (presential l) for sharing information among 3 selected basins.		Year 5 Provision for final national workshop.	Knowledge products are publicly accessible and widely disseminated among stakeholders.

Table Nº 7.2: EDA Perú KM&Com themes and Indicators			
Strategic issues to include in the KM& Comm Plan	**Questions to lead the learning process**	**Indicators**	**Who needs to be involved in the production of knowledge**
Indigenous knowledge and resilience	What / Which indigenous knowledge contributes to climate change resilience? In what ways?	Modification in targeted population behavior (survey)	MINAM, INDECOPI Indigenous & community Organizations. Leading partners.
Institutional development/ Local capacities	What capacities are key to accessing climate change adaptation funding such as the EDA- AF	Profonanpe & Leading partners report to the local media their	Leading partners, local governments, local associations.

		contributions to the country's NDC	
Adaptation based on ecosystems at watershed level	What are the key elements to achieve greater impact at the watershed level?	No. and type of risk reduction actions or strategies introduced at local level	MINAM, Local Governments; MERESE initiatives. Leading partners.
Early Warning Systems culturally adapted.	What is the response of grassroots organizations to early warning systems? What are the key elements for information to be converted into concrete response decisions?	Percentage of targeted population aware of predicted adverse impacts of climate. change, and of appropriate responses	MINAM, Regional and Local governments, INDECI, SENAMHI, IGP. Leading partners.
Reporting on National Measures and EDA Perú contribution	What are the institutional arrangements required to aggregate and report on the project's contribution to NDCs in adaptation?	Profonanpe & Leading partners report to the local media their contributions to the country's NDC	Project Technical Committee. Leading Partners.

Table Nº 7.3: EDA Perú Knowledge Management Budget							
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Consultants /Comunication, Learning & Innovation	15 months	9.600	9.600	9.600	9.600	9.600	48.000
Communications materials, audiovisuals, etc.	Global	0	15.000	15.000	10.000	20.000	60.000
Workshops National Level	Global	20.000				20.000	40.000
KM & Communication products Componente 2	100%			9.800			9.800
KM & Communication products Componente 3	100%			9.200			9.200
KM & Communication products Componente 4	100%			13.850			13.850
KM activities local level Component 2	100%					19.600	19.600
KM activities local level Component 3	100%					18.400	18.400
KM activities local level Component 4	100%					27.700	27.700
Total							246.550

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 comprehensive participatory consultation was carried out in the three watershed areas during June 2023.

Approach: The consultation has been carried out with an Intersectionality approach.
It refers to how gender combines with other sociocultural factors, such as race, ethnicity, immigration status, religion or belief, health, age status, class, caste, sexual orientation, gender identity, and inclusion and exclusion.

Intersectionality is fundamental to understanding the complexity and, above all, the ways in which inequalities manifest themselves in the lives of women and girls, men and boys. Intersectionality [as an applied analytical concept]: refers to how different aspects of experience interact to produce different effects of climate change.

Interviews and focus group consultation require at least four types of participants: adult men; adult women; women; and young men.

The consultation attempted only a few analytical categories related to factors influencing vulnerability, such as disaster risk management, access to water; time allocation; health, and barriers to economic opportunities. This approach widened the perspective and reflected upon what additional factors besides gender may be relevant to increase resilience.

Methodology:

a. A 3-hour workshop to train facilitators on the objectives of the consultation, the methodology and the expected results. Facilitators were suggested by the organizations interested in the EDA Perú project.
b. The visit is coordinated with the community leaders or promoters.
c. The interest of designing a climate change adaptation project is explained. Questions are answered. Comments are noted.

d. **Activity 1. Seasonal calendar** (groups differentiated by age and gender).
Objective: To establish how climate change variability in precipitation affects the main livelihood systems in the area.
Expected products:
Knowledge of climate risks and how they differentially affect men, women, girls, boys, older adults, and adolescents.

e. Activity 2. Recovery of climate change experiences (groups differentiated by age and gender).

Objective: This activity aims to ensure that all participants have a common understanding of what is meant by climate change, with young and older women and men from all four groups talking about their lived experiences of short-term climate variability.
Expected output: List of hazards and adaptation measures and coping strategies, levels of impact, responses, ancestral knowledge, response of authorities, leadership, recovery time.

f. Activity 3. Gender analysis of access to and control of resources (groups differentiated by age and gender).

Objective: Identify differences in access and control over natural and capital resources (livestock, money, savings, loans, land, forests, and water) including property rights and their implications for strengthening resilience.
Expected result: Identification of activities for the GAP.

g. Activity 4. Exploring Resilience Pathways (age and gender differentiated groups).
Objective: Identifies and articulates possible solutions at the intersection of agriculture and food security, water, health, forestry and forest management, and disaster risk management.
Expected result: A proposal of key factors of the theory of change**.**

h. **Activity 5. Stakeholders map.**
Objective: Identify the actors involved in decision making, their role, capabilities and degree of influence.
Expected products: Identify project partners.

i. **Semi-structured interviews with relevant stakeholders at the district and regional levels.**
Interviews were conducted with authorities and leaders in the district capitals that are carrying out planning or implementation of adaptation measures in the project area. It inquired about their capacities, approaches and methodologies.

j. **A briefing meeting with the proponent organizations in each of the three watersheds.**

The purpose of the meeting was to inform the participating organizations about the characteristics of the

EDA-FA, Profonanpe's requirements, and those of the FA to finance the projects. In addition, it addresses the findings of the consultation and shares information about local costs, project requirements, and other information to define an adequate budget.

Stakeholders' participation in the consultation.

<table>
<tr><th colspan="2">Identification: Santa Watershed. Basin of Ulta, Shilla district.</th></tr>
<tr><td>Dates</td><td>June 26- 29, 2023</td></tr>
<tr><td>Name of facilitators</td><td>Vidal Rondan (Climate Change specialist Andean Mountain Institute). Quechua translator.
Kiara Aguirre (Climate Change specialist Andean Mountain Institute).
Leysi Huayanca (Geographer, Andean Mountain Institute), and
Josefa Rojas (Gender and Climate Change Specialist (Profonanpe)</td></tr>
<tr><td>Number of people consulted by gender</td><td>
<table>
<tr><th>Location</th><th>No.</th><th>M</th><th>F</th></tr>
<tr><td>Shilla Municipality</td><td>5</td><td>4</td><td>1</td></tr>
<tr><td>C.P. Shilla</td><td>2</td><td>0</td><td>2</td></tr>
<tr><td>Group of Young at Chilla</td><td>8</td><td>6</td><td>2</td></tr>
<tr><td>Medical Post</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>Huaypan Farmers Committee of producer</td><td>5</td><td>4</td><td>1</td></tr>
<tr><td>Huaypan Tourism Committee</td><td>12</td><td>10</td><td>2</td></tr>
<tr><td>Women´s groups involved in small animal husbandry.</td><td></td><td>0</td><td>6</td></tr>
<tr><td>Total participants</td><td>39</td><td>25</td><td>14</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Identification</th><th>Chancay - Lambayeque Watershed – Catilluc</th></tr>
<tr><td>Dates</td><td>Tuesday, June 6 to Friday, June 9, 2023</td></tr>
<tr><td>Name of facilitators</td><td>Josefa Rojas Pérez (Gender & Climate Change Adaptation Specialist);
Cathy Quiroz (Communicator of the Technical Secretariat of the Chancay - Lambayeque Watershed), and
Giuliana Aguirre (Sociologist, Gender specialist Institute of Support to Irrigation of Northern Coast).</td></tr>
<tr><td>Number of participants by gender and age</td><td>
<table>
<tr><th>Location</th><th>No.</th><th>M</th><th>F</th></tr>
<tr><td>El Empalme</td><td>15</td><td>10</td><td>5</td></tr>
<tr><td>Irrigation committee at Cachorgos, Surupata, El Milagro, La Totora, Choro Blanco, Quilcate</td><td>6</td><td>2</td><td>4</td></tr>
</table>
</td></tr>
</table>

	La Union and Los Ángeles	5	4	1
	Catilluc- Women's Group	30	0	30
	Meeting of Catilluc Municipality officials	8	6	2
	Catilluc - Youth Group	13	10	3
	CP. La Selva	11	8	3
	San Mateo	3	3	0
	Total participants	**91**	**43**	**48**

Identification	***Lower Huallaga and Paranapura Basin***
Consultation dates	Monday, June 19 to Friday, June 23, 2023
Districts	Papaplaya, Caynarachi, San Roque de Cumbaza, Balsapuerto and Yurimaguas
Province	Lamas, Alto Amazonas
Region	San Martin and Loreto
Consultation dates	Monday, June 19 to Friday, June 23, 2023
Name of facilitators	Josefa Rojas Pérez (Gender & Climate Change Adaptation Specialist - Profonanpe).
	Alex Escudero (CONAP- technical team)
	Eusebio Huayunga (President FERISHAM- shawi translator).
	Marco Lezcano (advisor CODEPISAM)
	Javier Angulo (advisor CODEPISAM)
	Frankling Cueva Cartagena (Forest specialist)

Number of participants by gender and age

Location	Part no.	M	F
Panan Native Community	8	4	4
Moyobambillo Native Community	13	13	0
Moyobambillo Women´s Group	7	0	7
Charapillo Native Community	25	18	7
Panan Health Center	2	1	1
Regional Government - Forestry Management	1	1	0
Total participants	**56**	**27**	**19**

A complete report for each of the three watersheds is provided in annexes 5, 6 and 7.

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

EDA funding is key to financing natural infrastructure to reduce climate risks and increase the resilience of ecosystems that provide food security services at community level.

The budget requested for this project is US$ 5,000,000 to fund subprojects directed to three vital watersheds that will not yet be financed by public investment. Between 2023 to 2026, new local and regional governments had started a new administration period so there is no public investment portfolio ready to finance.

According to a study carried by Forest Trend in 2021, public financing of natural infrastructure for water security by regional governments and ministries in Peru take an average of 4.5 years to go from a viable project profile to physical execution and they are restricted to a district or province jurisdiction.

Although there is an exponential growth of financing in natural infrastructure, there is a gap between what was planned and what was executed. This gap closed somewhat in 2020, the year in which 91% of the planned financing was executed, but it could be because the amount total planned for that year was lower compared to previous years (Forest Trend, 2021).

Regarding interventions related to harvesting water and Cochas & Lakes management, communities are excluded from applying for funding to the Sierra Azul Government Program since its conditions required the existence of a large irrigation infrastructure.

The EDA funds will make it possible for these local associations and communities to access funds for more comprehensive projects that contribute to community resilience. Some considerations are taken to make synergies with prior conditions such as:

✓ To achieve outcome 2, 3 and 4 the project will be implemented in areas where multi-hazard risk analyses have already been carried out, therefore the project will promote to link them with the National Adaptation Plan at the community level. The measures selected for the EDA project are already approved in the National Adaptation Plan and those related to water, forest, food security and agriculture represent almost 60% of the country's adaptation measures.

✓ The EDA Peru Project will work with local governments, health centers, indigenous organizations, and associations of entrepreneurs (tourism, husbandry, handicraft, among others) to establish collaborative relationships to create a climate-resilient watershed. Local Climate Change Plans (LCCP) will give coherence to public and private investment in the medium and long term. Early warning systems will make it possible to make the population aware of the territory's specific risks and make decisions with the institutions to respond to the threats of climate risks.

✓ Working in areas with MERESE mechanisms are in place, will provide the means to develop robust and feasible adaptation and a long-term institutional sustainability of the adaptation process itself. EDA project outcomes are closely related to MERESE´s objective to provide ecosystem services to those communities.

✓ To achieve outcome 4, the project will articulate to organic markets and networks, community tourism, value-added chains, small entrepreneurs' associations present in the selected watershed.

✓ Strengthen subnational associations such as indigenous organizations, irrigation committees, women´s husbandry organizations, tourism associations, local non-government organizations in climate change adaptation will enhance their autonomy in decision-making on climate change investments.

✓ Generate baseline information for 29 prioritized adaptation measures that will allow adequate monitoring of their implementation in the medium and long term by other local organizations.

✓ EDA resources seek to leverage public resources for National Contribution as well as to promote and attract private investment through the MERESE mechanism.

✓ Implement a facility model and private financial mechanism for adaptation in the country, involving the participation of Profonanpe as Peru's Environmental Fund.

Without EDA support adaptation measures would take time to be implemented in the selected area. There is not a private mechanism accessible for the subnational level to finance these measures.

J. Describe how the sustainability of the project/programmed outcomes has been taken into account when designing the project/programme.

Environmental sustainability

The measures proposed in the EDA Peru are based on a nature-based solution to increase ecosystems resilience to the effects of climate change. The improvement of irrigation systems and the training of irrigation users in sustainable water management are benefits that will be long-lasting in these communities. Bioremediation of water will allow access to water sources that now have restricted use for human and animal consumption.

Water harvesting reservoirs will contribute to capturing rainwater for drought periods. The water harvesting systems maintenance is ensured through the Irrigation Water User Boards (Comite de Usuarios de Agua de Riego (CUAR in Spanish). CUARs under the Water Management Regulation can implement the following actions: 1) control and surveillance of the infrastructure; 2) fundraising for the acquisition of spare parts and materials for maintenance and reconstruction of the system; 3) Cleaning, grass weed extraction and others maintenance activities through community work. If the CUAR does not exist, the project will promote their organization and provide technical support to obtain their respective license and other management tools such as the statutes to obtain their legal status and subsequently use their water rights under the Local Water Authority jurisdiction.

Granting permits for sustainable forest management will allow communities to use forest resources rationally. The creation of forest control and surveillance committees will prevent illegal logging on community lands. Permits for sustainable forest management in communities (DEMAs in Spanish) are granted for the local authorities for one year as minimum and 3 years as a maximum. Surveillance committees are trained and formalized for the local forest authorities and their license last for 2 years. CCV became part of the national system administered by SERFOR and local forest authorities. CCV also received support from the Forest control Office (OSINFOR) and Indigenous Organization support autonomous CCV (veedurias in Spanish) with international cooperation funds or own funds.

The recovery of native climate-resilient seeds and fruits that are now extinct will contribute to maintaining the biodiversity of ecosystems and to ensure the food security of families.

Reforestation with native species in water sources will prevent evapotranspiration and infiltration of water into the soil, improving its capacity and preventing acidification. Through small investments the beneficial effects will remain for a long time in the ecosystem.

Socio-economic sustainability

The project supports initiatives already started in the communities as survival strategies. The project will help with technical assistance, seed capital, and training in the economic activities already implemented

by the families as coping strategies. Therefore, they will be sustainable over time. The women have undertaken economic activities in small animal husbandry, which are still very vulnerable. The project will develop capacities for these activities to become sustainable and resilient to climate change.

The young Shawi women have begun to value their weavings, handicrafts, and ceramics based on the ancestral knowledge of their grandmothers and mothers. The project will support these activities to develop a local and national market for these activities. Since these economic activities are based on their culture, they will be sustainable over time, making the indigenous economy resilient.

The natural infrastructure to be developed with the project will support food and pasture production, increase soil capacity, and improve irrigation water management by using the reservoirs to store water during the rainy season and use it during the dry season of the year. Technical assistance in integrated pest management and organic fertilization will contribute to greater stability in food production and therefore greater economic stability for the participating families in the selected watersheds.

Institutional and financial sustainability.

The EDA Peru Project will work with district municipalities, health centers, indigenous organizations, and associations of entrepreneurs (tourism, husbandry, handicraft, among others) to establish collaborative relationships to create a climate-resilient watershed. Local climate change plans will give coherence to public and private investment in the medium and long term. Early warning systems will make it possible to make the population aware of the territory's specific risks and make decisions with the institutions to respond to the threats of climate risks.

The project will also support local governments in preparing their Local Climate Change Plans (PLCCs for its initials in Spanish). This activity will make possible the sustainability of the measures implemented by the EDA Peru and will allow greater coverage in all the basin, both in direct and indirect districts. The Local Adaptation Plans (PLCC in Spanish) has been included in EDA Perú project by request from the Climate Change Directorate of the Ministry of Environment in the aiming to strengthen local governments capacity to act in accordance with the Framework Law on Climate Change and its regulations. The PLCC will allow adaptation measures to scale up to other planning and budgeting instruments as a pathway for longer term financial sustainability. The project will facilitate technical assistance for the preparation of the PLCC and the participation of communities and organizations in their preparation. The project sees it as an opportunity to scale up the lessons learned from the project.

The EDA Peru project includes activities to strengthen young people's technical training by incorporating climate change adaptation courses in the technological institutes around the area, especially in the Shawi and Quechua communities. Most rural youth who finish high school can enroll in the specialized training centres (CETPROs) near their communities, which offer technical careers related to agricultural production, forestry management, nursing, and pharmacy. The subprojects will work with these institutes and their teachers to adapt the technical courses to the challenges faced by the communities due to climate change.

Most important institutional sustainability is guaranteed with the participation of the MERESE funds in the selected basin. It is expected that this mechanism of payment for environmental services (PSA) can maintain and expand the project's interventions in the long run.

According to this law, Payment for Environmental Services (PSA), while is defined as: “Schemes, tools, instruments and incentives to generate, channel, transfer and invest economic, financial and non-financial resources, where an agreement is established between “contribuyentes” those who take care of ecosystems, especially in the upper part of the basins and the “retribuyentes” those who benefit and are ready to pay for the ecosystem service, aimed at the conservation, recovery and sustainable use of the sources of ecosystem services”.(Article 3c. Law No. 30215)

The **overall sustainability** of the project outcomes is seen not only in the way the project intervention is built through a participatory process, but also that participatory and inclusive processes are a included in the identification, design and implementation of climate adaptation and resilience of the proposed solutions. The combination of roles of government, communities, vulnerable populations, youth, and women will be initiated in the subproject preparation phase, as a participatory process will be put in place that will continuously increase during the implementation phases of the project and its outputs, thus increasing the sustainability of the project outcomes.

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

The risk category of the project is B because the sub projects can have potential limited adverse environmental or social risks and/or impacts that are few, generally site-specific, largely reversible, and readily addressed through a Social and Environment Management plans.

Table Nº 8: EDA Peru Overview of E&S Risks

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		**Low Risk.** Profonanpe will ensure compliance with all relevant national legislation and international laws. However, the project requires to apply national sectoral standards and regulation related to climate adaptation measures, environmental standars and other related to the FA Environment and Social Policies. Annex 4 presents the sectoral technical standards that apply to the different adaptation measures proposed in the EDA Peru project.
Access and Equity		**Low Risk.** The financed subprojects will maintain the communities' access to essential health, drinking water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. However, due to diverse barriers to participation such as physical access, age, gender, language and other circumstances, vulnerable groups could be excluded from project benefits.
Marginalized and Vulnerable Groups		**Low risk** The proposed subprojects are expected to improve the ability of all, including marginalized and vulnerable groups, to adapt to the adverse effects of climate change. However due to diverse barriers to participation such as physical access, age, gender, language and other circumstances, vulnerable groups could be excluded from its benefits. Proponents to the subgrants will be require providing the criteria and the means to identify project beneficiaries by close coordination with local social services, social programs, municipalities and other sources to address the participation gaps. In addition, subprojects are required to design and implement a communication plan that includes workshops and the use of local media to present the project objectives to a large audience that engage the stakeholders.

Table Nº 8: EDA Peru Overview of E&S Risks		
Checklist of environmental and social principles	**No further assessment required for compliance**	**Potential impacts and risks – further assessment and management required for compliance**
Human Rights	X	All proposed subprojects will respect and adhere to national legislation and international conventions on human rights, including access to basic needs such as water and electricity.
Gender Equality and Women's Empowerment		**Low risk** In the three selected areas, the indicators of women's participation are very low and the gaps are still broad; in this sense, the project will have a gender action plan so that women can have more opportunities to benefit from the project, seeking to reduce barriers (language, means of participation, leadership skills, among others) and be effectively involved. Through targeted consultation, project design and implementation will ensure that gender considerations are integrated into every activity. The project implementation strategy will also promote women's leadership and decision-making. To ensure gender equality is addressed in the EDA Peru project, a GAP is outlined to increase women's participation in adaptation activities. All subprojects will be required to prepare a gender assessment and plan at the project concept level (See gender action plan in this proposal). Profonanpe will also ensure Gender-sensitive indicators are incorporated where applicable at the subproject level and are monitored and tracked as part of M&E.
Core Labour Rights	X	The proposed project will adhere to core labor laws and the rights of all parties.
Indigenous Peoples		**Low risk** In the Santa and Bajo Huallaga and Paranapura basins, indigenous communities are the majority, so this policy is activated in these two basins. The design of all the components and the proposed subprojects will ensure that the local communities and indigenous peoples are consulted and benefit from the interventions according to their needs. All project activities will be coordinated with indigenous organizations in the intervention area. During project implementation, the AF on indigenous people will be followed, if not complemented with Profonanpe´s indigenous people´s policy.
Involuntary Resettlement	X	The components for the proposed project do not include involuntary resettlement.
Protection of Natural Habitats		**Low risk** The subprojects are not expected to have a negative impact on natural habitats, including those that are legally protected or recognized as protected natural areas. However, considering that some communities are located in the buffer zone of the Huascaran National Park and Cordillera Escalera Regional Conservation Area, some activities will be

Table Nº 8: EDA Peru Overview of E&S Risks		
Checklist of environmental and social principles	**No further assessment required for compliance**	**Potential impacts and risks – further assessment and management required for compliance**
		planned in the Environment and Social Management Plan to avoid there being no effect on the natural habitats.
Conservation of Biological Diversity		**Low risk** The interventions of the subprojects will promote the conservation of biological diversity and natural habitats, through the restoration and protection of the forest, therefore it does not imply any risk. However, the ToC has added an assumption regarding the overuse of the ecosystems during economics shocks and including a monitoring activity in this regard.
Climate Change	X	The proposed project will contribute to climate change adaptation actions provide in the NDCs , promoting natural infrastructure and agroecological practices based on ecosystems biodiversity. Furthermore, the proposed project is in no way intended to increase greenhouse gas emissions or contribute to drivers of climate change.
Pollution Prevention and Resource Efficiency		**Low risk** The subprojects will be implemented in remote areas of the high mountains and the Amazon; in this case, it is expected to use motorbikes, cars, and small motorized boats to reach communities. The proposed subprojects will ensure that the efficient use of energy is maximized; it will also avoid any potential pollution and direct production of design materials. However, there is the possibility that certain contaminating particles inherent to the scheduled activities will be produced.
Public Health	X	No risks are anticipated in terms of public health concerns, rather it is intended to improve livelihoods through climate-resilient practices and alternative income-generating activities.
Physical and Cultural Heritage	X	The proposed subprojects will not harm the physical and cultural heritage in the intervention areas.
Lands and Soil Conservation	X	The proposed subprojects are intended to conserve natural lands and soil through the protection of key ecosystems that are threatened by unsustainable practices.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project/programme implementation.

Profonanpe has extensive experience in managing grant agreements with both public and private beneficiaries at the national level that comply with its administrative guidelines as well as donor requirements. In its 30 years of work, Profonanpe has experience in the development of Calls for Proposals, and has an online platform specially designed for this purpose.

Profonanpe will ensure that the proposals submitted within the framework of EDA are feasible and meet the Fund's requirements, which will shorten the time required for their review and approval. Likewise, the experience and lessons learned from this process will be documented and shared.

Profonanpe pre-and due diligence procedures

The procedure includes required information guidelines and checklists. These documents have been generated as part of the due diligence and each of them is oriented to mitigate each of the following risks:

Legal Risk: Probability of losses occurring as a result of the Institution's activities not complying with current legislation and regulations, or because the Institution does not have the legal authority to carry out transactions related to the object of the commissioned Project.

Financial Risk: Probability of having a negative and unexpected result due to poor cash flow management.

Operational Risk: Probability that losses may occur due to human error, technological errors, faulty or failed internal processes, or as a result of external events (fraud, accidents, disasters, etc.).

Reputational Risk: Risk associated with changes in the perception of the Institution by stakeholders (customers, suppliers, shareholders, employees, etc.).

Profonanpe Criteria for assessing the application of the Due Diligence Procedure to an Institution.

Table Nº 9: Profonanpe criteria prior due Diligence Procedure

Nº	Criteria	Scoring:
1	Has the likely strategic partner had any ethical problems that have been public in the last five years? 1: If the strategic partner does not file complaints in the pages of the Public Ministry and/or The National Institute for the Defence of Competition and the Protection of Intellectual Property (INDECOPI). 0: If the partner presents complaints in the pages of the Public Ministry and/or The National Institute for the Defence of Competition and the Protection of Intellectual Property (INDECOPI). Check the following web pages: -Public Prosecutor's Office: https://portal.mpfn.gob.pe/seguimiento-de-denuncias/ -INDECOPI: https://enlinea.indecopi.gob.pe/miraaquienlecompras/#/busqueda-simple.	
2	Has the Institution in the last 5 years caused any environmental problems made public in the area where it is located or in any other area where it operates? Scoring: 1: If the Institution does not file complaints in the Interactive Portal of Environmental Control. 0: If the Institution submits complaints in the Interactive Environmental Oversight Portal. Check the following web page: Interactive Environmental Oversight Portal: https://publico.oefa.gob.pe/Portalpifa/infractoresAmbientales.do.	

Table Nº 9: Profonanpe criteria prior due Diligence Procedure		
Nº	**Criteria**	**Scoring:**
3	Has the institution worked in the environmental field and has a good reputation in that regard? Score: 1: Yes 0: No	
4	Does the Institution have a good reputation at the national / international level? Score: 1: Yes 0: No	
5	Does the institution's vision include aspects related to Profonanpe's vision? Score: 1: Yes 0: No	
6	Does the Institution have an area in charge of promoting a culture of ethics and integrity? Score: 1: Yes 0: No	
7	Does the initiative proposed as a whole contribute to the achievement of Profonanpe's short- and long-term objectives? Score: 1: Yes 0: No	
8	Does the institution have social and/or environmental responsibility programs? Score: 1: Yes 0: No	
Institutions with a score greater than or equal to six (6) may undergo a Due Diligence process.		

Table Nº 10: Profonanpe Due Diligence Checklist according to risk type				
Information required	**Risk type**			
	Legal	**Financial**	**Operational**	**Reputational**
Due diligence to the Institution.	**X**			**X**
Due diligence to the Legal Representative	**X**			**X**
Due Diligence to Senior Management	**X**			**X**

Project Management and Success Stories.			X	X
Human Resources Management			X	X
Financial Safeguard		X		X
Safeguarding Environmental and Social Issues			X	X

Management of EDA grants

Profonanpe, as Implementing Entity, will receive the funds from Adaptation Fund and will oversee the project administration, monitor the project implementation, and ensure project compliance with PROFONANPE's own policies and Adaptation Fund´s policies. Profonanpe will deliver the funds to the leading partners in each watershed.

Profonanpe will be responsible for the monitoring and technical and financial backstopping to leading partners in each selected area, in accordance with Profonanpe procedures. This will also include the ESMP and the GAP.

For the adequate compliance of grant management by the grantees, Profonanpe will develop training courses in the first month after signing the grant agreement.

Profonanpe will be responsible for preparing the financial statements annually and they will be audited by an external auditor.

In addition to the pre-Award survey that Profonanpe undertakes, an additional level of due diligence and safeguarding will be undertaken, to ensure compliance of proposals with Adaptation Fund Fiduciary Risk Standards, Environmental and Social Policy (ESP) and Gender Policy. This will align to the guidance given in:

✓ OPG ANNEX 2: Fiduciary Risk Management Standards to Be Met by Implementing Entities.

✓ OPG ANNEX 3: Environmental and Social Policy.

✓ Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy.

✓ Guidance document for Implementing Entities on compliance with the Adaptation Fund Gender Policy.

EDA Perú´s Monitoring and Evaluation

The Result framework (table Nº15) will be used throughout the entire project duration; at the time of grant signing, leading partners and grants beneficiaries are required to align with one or more of the outputs and indicators outlined in EDA- Peru project.

Profonanpe will monitor the effect indicators at the project level and the leading partners at the watershed level. Profonanpe will provide training to grantees to monitoring and reporting regarding expected targets. These plans will be aligned with the project's results framework and indicators and provide the schedule for annual reports, field monitoring visits, evaluations, and audits.

The leading partners will report quarterly on both technical and financial implementation, and Profonanpe will report quarterly for the entire EDA. Two external evaluation reports will be prepared, 2.5 years after the start of the project and at the end of the period.

Monitoring of the activities financed throughout the EDA Peru project will be reported to the competent authorities in charge of supervising the implementation of the NDCs in the country to record progress.

Procurement regulations.

Leading partners must follow its own procurement regulations and guidance and information on the procurement should be readily available.

Financial management The financial management and procurement will be guided by Profonanpe rules and regulations which are in compliant with international standards.

Project closure

All grants will be closed out in accordance with Profonanpe guidelines and close out documentation submitted after the project termination. A meeting will be held with the subproject leading partners to review and determine that all grant activities and audits have been completed in accordance with the agreement, and that any financial and technical reports that are due will be submitted within 30 days of completion of the grant.

The grant budget will be reconciled to ensure that the leading partners refunds the balance of unobligated fund that was advanced. Grants will be evaluated based on their contribution to the defined objectives.

Any property which has been acquired using grant funds shall be accounted for and disposition thereof will be made according to Profonanpe guidelines.

B. Describe the measures for financial and project/programme risk management.

Table Nº 11: Measures for financial and project risk management

RISK	RISK LEVEL	MITIGATION
Failure to deliver EDA approach modality	**LOW**	Profonanpe has been operating a sub-national grant financing model for over 30 years and has the existing staff, operational manuals, and processes in place, with strong oversight and safeguards that guarantee the Fund can deliver the proposed modality. It has a track record of delivering projects using this modality in the last 5 years. Entrepreneurs for Nature have provided small grants for a total amount of **US$ 400,000** and have successfully issued grants for small business associations.
Fiduciary and corruption risk for EDA / Risk of misuse of funds by project implementers, or non-compliance with laws and procedures	**LOW**	Profonanpe has developed procedures for the acquisition and procurement of goods and services, which are described in the cooperative agreement with the selected leading partner. These were developed based on standards of multilateral cooperation, and their application is constantly audited and evaluated by donors. Profonanpe has an Ethic Code approved in November 2021 that establishes the principles of behavior that should guide all actions performed as part of its functions, in order to maintain a solid ethical conduct. It promotes the practices of Transparency, Respect for Others, Compliance with Standards, Integrity, Order and Discipline and Commitment to Truth, Honesty and Credibility. Profonanpe collaborators are encouraged to exercise freedom of opinion and service attitude and lead by example with suitability and veracity. Likewise, collaborators are expected to inform about unusual or suspicious transactions informing FIU-Peru through the Suspicious Transactions Report (STR) or the ROSEL System when appropriate, including acts of bribery. To mitigate the risk of financial fraud, Profonanpe conducts regular audits and spot checks and reviews quarterly financial statement reports. External audits are conducted regularly to assess rules and procedures at Fund and project levels. Recommendations by external auditors are carefully implemented. Special training on anti-fraud is carried out to reduce the likelihood of fraud.
Insufficient interest in call for proposals and thus projects	**LOW**	The project has undertaken a comprehensive consultation process in the selected watershed, and at least four organizations have shown interest in responding to the call. A prior due diligence has been carried out in four intended leading partners (see annexes 10 to 13).

Table Nº 11: Measures for financial and project risk management		
RISK	**RISK LEVEL**	**MITIGATION**
		PROFONANPE has established solid relationships with indigenous communities, leaders, and organizations; with government authorities and other services providers and non-governmental organizations working in this isolated area.
Risk of poor-quality proposals and thus low impact from subnational modality	**LOW**	Profonanpe will provide technical support to ensure the quality of the proposals. Besides, the technical committee will give further advice to transit from the concept note to the full proposal
Insufficient safeguards	**LOW**	Profonanpe has a series of safeguards Policies and processes in six areas include: safeguarding, human resources, whistleblowing, risk management, codes of conduct and governance. Profonanpe´s has a policy on Equity-Diversity & Inclusion approved in February 2021 and the whistleblowing policy approved in November 2021. This policy recognizes the value and importance of traditional knowledge, respect the rights, privacy, and safety of people who are impacted directly and indirectly by project activities. All activities consider Prior Informed Consent (PIC) principles with communities and work protecting the health and safety of all project staff.
Compliance with Environmental and Social Policy of Adaptation Fund, and Gender Policy of Adaptation Fund, are not deliver	**LOW**	Profonanpe screened the environmental and social risks during the comprehensive participatory consultation and rated the 15 policies of the EDA- AF as category B. It has also proposed a risk mitigation plan for six activated policies. EDA Peru will also have a GAP to reduce barriers to vulnerable populations and women's participation in the three watersheds with a budget of US$ 1,334,200 To monitoring the ESMP Profonanpe will allocate specialists for the five years for the total amount of US$. 545.823
Sub-national organization lack the resources and capacity to develop project proposals and deliver these	**LOW**	Component 1 budget foresees training workshops and the necessary technical staff to support interested organizations in submitting subprojects. Profonanpe also has experience with online and interactive training for remote organizations.
Failure to create ownership of the project at the subnational level.	**LOW**	The comprehensive and participatory consultation has shown great interest in climate change adaptation. The activities proposed in the EDA Peru reflect the interests of the organizations in the selected watersheds and the proposals are rooted in their daily lives. Performance has signed agreements with organizations interested in participating, so there is a long-term interest in working together.
Monitoring and Evaluation	**LOW**	Profonanpe has a well-established Monitoring and Evaluation Department which ensures more accurate, consistent, and reliable data are collected and reported. It has also produced a MONITORING & EVALUATION MANUAL, which is a tool to guide for all projects and program recipients on principals, procedures, and processes of designing, implementing and using Results based Monitoring and Evaluation Systems (SISME). The Profonanpe SISME contains four components: **The Monitoring component**, which is a permanent, systemic, and continuous process. Generates alerts on progress in meeting goals and objectives derived from the Logical Framework of the Project. Allows analysis of information identifying strengths, weaknesses, and proposals for improvement. **The evaluation component** which reviews the effects and impacts of the products and sub-products in the results proposed in the Logical Framework and aligned with institutional vision and mission. Provides items for

Table Nº 11: Measures for financial and project risk management		
RISK	**RISK LEVEL**	**MITIGATION**
		improvement of policy, strategy, and programming. **The Continuous Improvement Component, that a**llows continuous improvement and strengthening institutional management trigger by the effective use of the evidence generated in monitoring and evaluation; and finally the **Information management component which is** a cross-cutting component and forms the basis of the M&E System, collecting information from all levels of the value chain (activities, products, specific and final results), through the collection, registration, processing consistency and validation of information and reporting is ensured.
Delays in the disbursement of funds, procurement and Institutional inefficiencies delay the resulting in delayed recruitment of project staff and hence project implementation.	**LOW**	PROFONANPE has implemented 36 programs and projects during its 30 years of existence and channeling (as implementer or co-implementer) about USD 110 million dollars.
Lack of co-ordination with other climate change projects limits capacity or effectiveness	**LOW**	The project technical committee plays an important role in articulating the EDA project with other climate change projects. Profonanpe maintains close coordination with MINAM Climate Change Directorate and the local governments to guarantee synergies at local level.
Staff recruitment and retainment for the FMT may hamper progress.	**LOW**	Profonanpe has an active presence in professional networks and a human resources department with hiring procedures that ensure the necessary project personnel will be hired on time. Profonanpe currently has more than 110 workers.
Cost-effectiveness of projects	**LOW**	Profonanpe requires all projects to establish the value for money, based on economy, effectiveness, and efficiency, and this ensures high cost-effectiveness and impact from investments. Profonanpe implements projects throughout the country and therefore has updated costs according to the country's different regions. As for the value for money of measures in other sectors such as agriculture, water irrigation, forestry, and forestry, the technical committee will be in charge of establishing the benchmarking for the project.

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The risk category of the project is B because the sub projects can have potential limited adverse environmental or social risks and/or impacts that are few, generally site-specific, largely reversible, and readily addressed through a Social and Environment Management plans.

The overall Category of the project is Category B. It is stressed that for the EDA- Perú call for proposals, only projects registered as B or C will be funded. No A rated projects will be funded. All Unidentified Subprojects (USP) will be required to complete AF ESP 15 principles and will be screened against the criteria. It is important to note that projects that do not meet the requirements of the programme, that is, are found to pose significant risks in terms of AF ESP, will not be selected.

Profonanpe Grievance Mechanisms.

The project will be guided by Profonanpe Grievance Mechanism (GM). However, as this project will be implemented using an on-granting approach, the implementing partners will be expected to apply their respective GM which they will also be assessed for during the proposal screening process. In the absence of a specific GM, Profonanpe GM will be made available to all project beneficiary communities

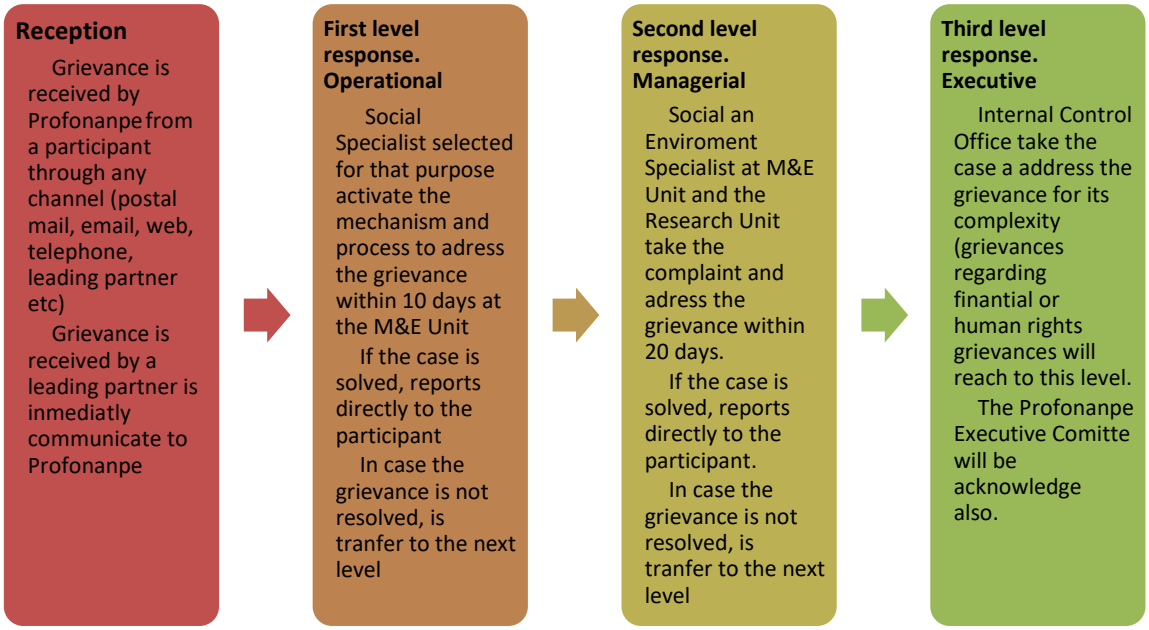
and stakeholders. The GM allows them to have an accessible, transparent, fair, and effective means to communicate with the project management (and Project Steering Committee) if there are any concerns regarding the project design and implementation.

All GMs will be implemented on the basis that Profonanpe or the Leading partner will provide an accessible avenue for the submission of complaints by aggrieved stakeholders or interested parties to which they will receive feedback. Aggrieved persons can be individuals and whole communities. The GMs enable efficient response and accountability to project stakeholders and beneficiaries and ensure that problems are solved amicably to reduce any further risks to the project that can have adverse impacts on the intended beneficiaries.

To address the complaint, the code of ethics, the administrative guidelines, the equity, diversity and inclusion policy, the indigenous people policy, and the environmental and social policies of AF and Profonanpe will apply; as well as the rules for the prevention and fight against corruption, terrorism and other internal controls developed by Profonanpe.

The GM of Profonanpe will seek to address complaints as assertively as possible. The first level of response is activated if the complaint is related to the project interventions and can be resolved quickly with the respective instruments and protocols. The second level is activated if the case requires further investigation and requires a decision to resolve the complaint. The third level is activated only in rare and serious cases that require the intervention of the internal control office and the CEO of Profonanpe is notified. Cases related to financial activity, human rights violations, or other serious cases may reach this level.

Profonanpe three level Grievance Mechanism.



A social and environmental risk analysis has been carried out based on the Profonanpe classification methodology for the 15 policies of the Adaptation Fund, activating policies for which an environmental and social management plan is proposed. EDA Peru has also provided a GAP to address the gaps of participation of women and vulnerable groups identified during the consultation process.

Profonanpe Risk severity classification		
Severity	**Classification**	**Description**

Critical	5	Significant adverse impacts on populations and/or the environment. Adverse impacts over a large spatial extent (e.g., large geographic area, often outside the scope of the intervention, affecting a significant number of people, with transboundary impacts, cumulative impacts) and often long-term and irreversible; affecting areas of high biodiversity sensitivity and conservation value; adverse impacts on indigenous peoples' rights, lands, resources, and territories; displacement or resettlement; and may result in significant social conflict.
Severe	4	Adverse impacts on people and/or the environment of medium to large magnitude. Less spatial and temporal extent than critical level risks and impacts. Risks and impacts are considered predictable, mostly temporary and reversible.
Moderate	3	Risks and impacts considered moderate to low magnitude. Impacts are limited in scale (site-specific) and duration (temporal), can be avoided and/or mitigated by relatively simple and generally accepted measures.
Slight	2	Risks and impacts are minimal in terms of magnitude (e.g., small, affected area, small-scale activities, very low number of people affected) and duration (short, e.g., only during construction phase), and risks and impacts can be easily avoided and/or mitigated.
Negligible	1	Negligible or no risks and impacts on communities, individuals and/or the environment.

Probability of occurrence	**Classification**	**Description**
Expected	5	The risk is almost certain to occur very frequently (< once a week).
Highly likely	4	Risk is very likely to occur frequently (> once a week and < once a month).
Moderately likely (3)	3	The risk is likely to occur during the implementation of the intervention (> once a month and < once a year).
Less likely	2	The risk is unlikely to occur. If it does occur, it will be infrequent (> once a year and < once every 05 years).
Unlikely.	1	It is very rare or impossible for the risk to occur (> once every 05 years).

Risk=Probability x Severity		**Severity of impact**				
Probability of occurrence		**Negligible**	**Slight**	**Moderate**	**Severe**	**Critical**
		1	2	3	4	5
Expected	5	5.0	10.0	15.0	20.0	25.0
Highly likely	4	4.0	8.0	12.0	16.0	20.0
Moderately likely (3)	3	3.0	6.0	9.0	12.0	15.0
Less likely	2	2.0	0.4	6.0	8.0	10.0
Unlikely.	1	1.0	0.2	3.0	4.0	5.0

Risk	Score	Risk Management
Critical	**10 a +**	Requires previous actions and restructuring of the project
Severe	**7 a 9**	It requires specialized action at the technical, managerial and political levels.
Moderate	**4 a 6**	Requires specialized action at the technical level
Slight	**2 a 3**	Routine procedural action required.
Negligible	**1 a 2**	No action required.

Table Nº 12: EDA Perú Environment and Social Management Plan (ESMP)				
Environmental & Social Policies (AF)	**Potential Risk**	**Risk Score**	**Risk Management Actions**	**Responsible/ Level of intervention/ Timing**
Compliance with the law	All proposed subprojects will ensure compliance with all relevant national legislation and international laws; However, the project requires to apply national sectoral standards and regulation related to climate adaptation measures, environmental standars and other related to the FA Environment and Social Policies. Annex 4 presents the sectoral technical standards that apply to the different adaptation measures proposed in the EDA Peru project.	Moderate (3)	Regular Monitoring activities regarding the application of sectorial standards and regulations are provided in Annex 4.	Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Leading partners reports on the application of sectorial standards and regulations. Coordination with sectorial branches at local level.
Access and Equity	EDA subprojects will in no way compromise the communities' access to basic health, drinking water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. However, Due to diverse barriers to participation such as physical access, age, gender, language and other circumstances, vulnerable groups could be excluded from project benefits.	Moderate (3)	**Regular Monitoring activities** regarding project implementation, participants selection criteria. **Prepare an internal communication** strategy to present the project objectives to a large audience. Review list of participants periodically. **Identification of beneficiaries**. The implementation of the project contemplates several activities that provide material and immaterial benefits, which should be distributed equitably among participants, their families, and critical stakeholders of the pilot sites that meet the project conditions. Therefore, the beneficiary identification process should contemplate establishing concrete conditions, as	Selected leading partners. Semi-annual reports. Technical level Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Coordination with local goverments to include social inclusion criteria in projects´participation.

Table Nº 12: EDA Perú Environment and Social Management Plan (ESMP)				
Environmental & Social Policies (AF)	**Potential Risk**	**Risk Score**	**Risk Management Actions**	**Responsible/ Level of intervention/ Timing**
			detailed and explicit as possible, for achieving the project and contributing to local adaptation	
Marginalized and Vulnerable Groups	Due to diverse barriers to participation such as physical access, age, gender, language and other circumstances, vulnerable groups could be excluded from project benefits.	Moderate (3)	Close coordination with district municipalities & social programs and other sources to identify vulnerable population.	Selected leading partners. Semi-annual reports. Technical level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Marginalized and Vulnerable Groups	Concentration of project benefits in a few most advanced groups	Moderate (3)	**Prepare an internal communication** strategy to present the project objectives to a large audience. Review list of participants periodically. **Identification of beneficiaries**. The implementation of the project contemplates several activities that provide material and immaterial benefits, which should be distributed equitably among participants, their families, and critical stakeholders of the pilot sites that meet the project conditions. Therefore, the beneficiary identification process should contemplate establishing concrete conditions, as detailed and explicit as possible, for achieving the project and contributing to local adaptation.	Selected leading partners. Semi-annual reports. Technical level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Human Rights	All proposed subprojects will respect and adhere to national legislation and international conventions on human rights, including access to basic needs such as water and electricity.	Slight 2	Routine procedural action required.	Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Selected leading partner
Gender Equality and	Women and indigenous organizations excluded due to	Moderate (3)	Hire key personnel who speak the local language. Regular use of translators must be included in the subproject budget	Selected leading partners. Semi-annual reports.

Table Nº 12: EDA Perú Environment and Social Management Plan (ESMP)				
Environmental & Social Policies (AF)	**Potential Risk**	**Risk Score**	**Risk Management Actions**	**Responsible/ Level of intervention/ Timing**
Women's Empowerment	technicalities in climate information, hydrology indicators.			Technical level. Profonanpe M&E Unit. Annual Report Includes a review of ToC assumptions..
Gender Equality and Women's Empowerment	Overload due to the demand placed by community works, especially on women.	Moderate (3)	**Preparation of engagement plan (EP)** This activity involves the elaboration of a work plan at the level of each group. The EP must contain a roadmap and a timetable, with assigned responsibilities for all members. To this end, a series of working meetings should be held to achieve three aspects: i) to fully understand the activity and its implications, in terms of time and resources. ii) to define their expectations at the local level. iii) to prioritize the most strategic activities/tasks, iv) The project will provide resources to reduce the barriers for their participation (language, time, knowledge, access to internet, etc.)	Selected leading partners. Semi-annual reports. Technical level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Gender Equality and Women's Empowerment	Projects selected by local governments do not reflect the demands of women. Or the technology proposed are not suitable for women	Moderate (3)	**Stakeholder Consultation meetings** with stakeholders with the following objectives: i) Presentation of the complete project and its benefits (ii) To express the expectations of the communities ii) Share a work schedule and work it together with stakeholders. iii) Preparation of documents proving the ownership of the land on which the works are to be carried out.	Selected leading partners. Semi-annual reports. Technical level. Profonanpe M&E Unit. Annual Report Includes a review of ToC assumptions.

Table Nº 12: EDA Perú Environment and Social Management Plan (ESMP)				
Environmental & Social Policies (AF)	**Potential Risk**	**Risk Score**	**Risk Management Actions**	**Responsible/ Level of intervention/ Timing**
			iv) Agreements on community collaborative work (if any). v) Standards of behavior of outside workers (if any). vi) Identify the mechanisms for handling complaints and claims.	
Core Labour Rights	The EDA Peru project will adhere to core labour laws and the rights of all parties. Budgets must reflect formal workers	Slight (2)	Routine procedural action required.	Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Selected leading partners
Indigenous *Peoples*	indigenous people excluded due to language	Moderate (3)	Hire key project personnel who speak the local language and has experience working with indigenous people. Regular use of translators must be included in the subproject budget	Selected leading partners. Semi-annual reports. Technical and Managerial level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Indigenous *Peoples*	Indigenous organizations excluded due to lack of formality	Moderate (3)	Support for the formalization through technical assistance of indigenous associations and organizations.	Selected leading partners. Semi-annual reports. Technical and Managerial level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Indigenous *Peoples*	Projects selected by local governments do not reflect the demands of indigenous communities. Or the technology proposed are not suitable for communities.	Moderate (3)	**Stakeholder Consultation meetings** with stakeholders with the following objectives: i) Presentation of the complete project and its benefits (ii) To express the expectations of the communities iii) Share a work schedule. iv) Preparation of documents proving the ownership of the land on which the works are to be carried out. v) Agreements on community collaborative work (if any). vi) Standards of behavior of outside workers (if any). vii) Identify the mechanisms for handling complaints and claims)	Selected leading partners. Semi-annual reports. Technical and Managerial level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.

Table Nº 12: EDA Perú Environment and Social Management Plan (ESMP)				
Environmental & Social Policies (AF)	**Potential Risk**	**Risk Score**	**Risk Management Actions**	**Responsible/ Level of intervention/ Timing**
Involuntary Resettlement	None of the planned activities will induce involuntary resettlement	Negligible	Routine procedural action required.	Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Selected leading partner
Protection *of Natural Habitats*	Risk of overgrazing in Huascaran National Park.	Moderate (3)	Grazing agreements between the Pasture Committee and Huascaran National Park	Selected leading partners. Semi-annual reports. Technical level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Protection of Natural Habitats	Risk of logging in the Cordillera Escalera Regional Conservation Area	Moderate (3)	Agreement with the Geobosques (Deforestation) Early Warning System to include communities in the buffer zone. Conservation agreements.	Selected leading partners. Semi-annual reports. Technical level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Protection of Natural Habitats	Risk of overuse of natural resources due to timber and non-timber management plans	Moderate (3)	Periodic review of the management plans	Selected leading partners. Semi-annual reports. Technical. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Conservation of Biological Diversity	Risk of overuse of the ecosystems during economic shocks.	Moderate (3)	Periodic monitoring visits to propose other production activity to remediate the problem, including economic diversification if applicable.	Selected leading partners. Semi-annual reports. Technical and Managerial level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.

Table Nº 12: EDA Perú Environment and Social Management Plan (ESMP)				
Environmental & Social Policies (AF)	**Potential Risk**	**Risk Score**	**Risk Management Actions**	**Responsible/ Level of intervention/ Timing**
Climate Change	The EDA project will contribute to climate change adaptation actions at the country level. Furthermore, the proposed project is in no way intended to increase greenhouse gas emissions or contribute to drivers of climate change.	Slight (2)	Routine procedural action required.	Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Selected Leading partner
Pollution Prevention *and Resource Efficiency*	Risk of river contamination by fossil fuel and oil from motorboats.	Moderate (3)	Promotion of renewable energy. Establish a management plan for fuel spills in the river, if any.	Selected leading partners. Semi-annual reports. Technical and Managerial level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Pollution Prevention *and Resource Efficiency*	Risk of contamination by waste during entry into the forest	Moderate (3)	Use a Profonanpe protocol to entry the forest.	Selected leading partners. Semi-annual reports. Technical and Managerial level. Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions.
Public Health	No risks are anticipated in terms of public health concerns, rather it is intended to include EWS for monitoring and control of malnutrition and anemia and other cc-related diseases such as dengue, chikunkuya, sika, among others).	Slight (2)	Routine procedural action required.	Profonanpe M&E Unit. Annual Report. Selected Leading partner

Table Nº 12: EDA Perú Environment and Social Management Plan (ESMP)				
Environmental & Social Policies (AF)	**Potential Risk**	**Risk Score**	**Risk Management Actions**	**Responsible/ Level of intervention/ Timing**
Physical and Cultural Heritage	To date, no historical places have been identified in the project intervention area.	Negligible	The proposed project will not harm the physical and cultural heritage in the intervention areas. Routine procedural action required.	Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Selected Leading partner
Lands and Soil Conservation	Use of pesticides by community's neighbors.	Slight (2)	EDA projects provide information regarding of permitted pesticides through local agrarian agencies. The project strongly promotes the principles and practices of agroecology	Profonanpe M&E Unit. Annual Report. Includes a review of ToC assumptions. Selected Leading partner

Plan for Unidentified Subprojects (USPs)

Most of EDA Peru subprojects are identified in component 2, 3 and 4. However, in the case of the Women Initiative fund or other initiative outside these components will be selected as Unidentified Sub-Projects (USP) The following tables indicates the characteristics and the possible action and timing to address this situation.

Type	Characteristics	Action	Timing	Responsible
Partially unidentified: specific location identified, activity to be determined.	The environmental and social settings for the activities are already known, allowing to Profonanpe and the leading partners to compliance with the ESP and GAP during project formulation to select the most suitable activity for each location, and to build capacity or carry out other preparatory activities prior to final location selection.	Preparation of the initial screening and take provision to provide technical assistance to the implementation of the ESMP	First and second call for subproject proposal Second semester Yea1 First semester Year 3	Profonanpe will closely monitor and supervise the ESMP, Including a review of ToC assumptions.

Partially unidentified: specific activity identified, location to be determined.	The inherent risks of the activities are already known so that much of ESP and GAP compliance determination can be done during project formulation. Compliance with ESP and GAP may be much less demanding as tailored tools for risks identification and management can be designed during project/programme formulation.	Delegate the screening to ESP to a selected leader partner, providing technical assistance for the application of the instruments for the 15 environmental, social and gender policies.	First and second call for subproject proposal Second semester Yea1 First semester Year 3	Leading partner at the basin level.

Gender Assessment:

Gender Assessment			
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
What is the legal status of women in the country of intervention? https://data.unwomen.org/country/peru	Globally, some progress on women's rights has been achieved. In Peru, 83.3% of legal frameworks that promote, enforce and monitor gender equality under the SDG indicators, with a focus on violence against women, are in place. In 2018, 66.6% of women of reproductive age (15-49 years) had their need for family planning satisfied with modern methods and 17.4% of women aged 20–24 years old were married or in a union before age 18. In 2018, 11.1% of women aged 15-49 years reported that they had been subject to physical and/or sexual violence by a current or former intimate partner in the previous 12 months. As of december 2020, only 59% of indicators needed to monitor the SDGs from a gender perspective were available. In addition, many areas – such as gender and poverty, physical and sexual harassment, women's access to assets (including land), and gender and the environment – lack comparable methodologies for regular monitoring. Closing these gender data gaps is essential for achieving gender-related SDG commitments in Peru.		
Women political participation in Peru Report Set 2023. https://www.alignplatform.org/resources/women-politics-impact-social-media-peruvian-congresswomen	Women's political participation in Peru is limited, with women accounting for only around a quarter of elected representatives at the national and local levels. While their numbers have been growing over the years, they have done so at a slower pace than expected, particularly given the introduction of laws to establish parity through quotas meant to equalize their participation. Through social media analysis, interviews and literature review, the study found that gendered disinformation and online abuse against women in politics are pervasive in Peru and tend to reinforce harmful gender stereotypes against women. While Peruvian Congresswomen express concern about this, they have also come to normalize it and see it as an almost inevitable part of the political job. The impact this has on the political engagement of young women and the future of women's leadership, however, is of utmost concern.		
Women in the labor market https://www.cfr.org/womens-participation-in-global-economy/case-studies/peru/	Economic and cultural constraints continue to limit women's employment opportunities. Women tend to be segregated into lower paying jobs, such as nursing and teaching, and time—consuming household responsibilities (women perform the majority of unpaid care work) further constrain their job options. Gender gaps remain widest in poor, rural, and indigenous communities. Women who are unable to find jobs in the formal economy frequently head their own small— and medium—sized enterprises out of necessity, and about 70 percent of these business ventures are informal. Many female entrepreneurs have relatively strong access to finance, due to improved property rights as well as government policies to increase women's access to capital. However, many women operating self-owned businesses face challenges in achieving the financial literacy necessary to scale their businesses or bring them into the formal sector. Furthermore, women in the informal economy are not covered by government policies to promote and protect women in the workforce and are more vulnerable to market risks. Government data shows that 60 percent of all women workers in the country continue to work in the informal economy, with only 15 percent having health coverage and 4 percent enjoying retirement benefits. While the country has a ninety-eight-day maternity leave policy and other programs to support working mothers, women in the informal sector do not benefit from them.		

Gender Assessment			
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
Maternal mortality situation post -covid 19	Since the early 1990s, Peru has seen a significant decline in the maternal mortality rate. In fact, the country was already on track to achieve target 3.1 of Sustainable Development Goal (SDG 3), which aims to reduce the global maternal mortality rate to less than 70 per 100,000 live births by 2030. But the pandemic Covid-19 has generated significant delays. Peru quickly implemented strict measures to control the spread of the virus, including closing borders, restricting freedom of movement throughout the country, banning mass gatherings, and closing schools, universities, and churches. It also restricted all non-essential activities or services, including non-emergency primary health services. Despite these actions, it is among the countries with the highest incidence and mortality rates from covid-19 in Latin America and the Caribbean, as well as in the world (Johns Hopkins University Coronavirus Resource Center 2020, The Economist 2020). As with other health conditions, including covid-19, maternal mortality is unevenly distributed in Peru. Reports from 2019 show that the Amazon regions reported much higher maternal mortality rates (MMR) than national rates (Gil 2018). The covid 19 pandemic has highlighted the weakness of a health system that directly affects maternal mortality, especially in rural areas.		
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
Number of people speaking some indigenous language	28,079	0	15,834
Age of death (2017-2021)	Male 62 years old Female 68 years old	Male 66 years old Female 69 years old	Male 48.2 years old Female 46 years old
infant mortality rate less 5 year x 1000	15,2	12,1	9,3
educational status of girls and boys. Net school enrollment rate (%) of girls and boys aged 6 to 11 years in primary education, compared between 2010 and 2021, by region. INEI, Household Survey.	**Ancash**: +10,6%	**Cajamarca**: +12,8% **Lambayeque**: +10,7%	**Loreto**: 12,6% **San Martin**: 2,4%
adult literacy rate (disaggregated by sex),	Male 4% Female 13%	Male 10% Female 19%	Male 5% Female 13%
Percentage of women and men without income, compared between 2011 and 2021, by region. INEI, Household Survey.	**Ancash**: Female (-2,8%) Male: (-2%)	**Cajamarca**: Female (-8,4%); Male (-3,7%). **Lambayeque**: Female (-1,4%); Male (-1,6%)	**Loreto**: Female (-6,3%); Male (-0,2%) **San Martin**: Female (-5,1); Male (-0,5%).

Gender Assessment			
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
Labor force participation rate (disaggregated by sex). Report XIV of the equal opportunities policy 2020. Ministry of Women and Vulnerable Populations (2020).	Between January and September 2020, only 36.3% of women have a formal job, while men in this condition reach 48%, at the national level.		
Unemployment rate (disaggregated by sex). INEI (January-Set. 2020). Report XIV of the equal opportunities policy 2020. Ministry of Women and Vulnerable Populations (2020).	The unemployment rate increased between January and September 2020. This situation responds directly to the health emergency caused by the COVID-19. The unemployment rate for women for the period January-September 2020 is higher at 2.8% and affects young women between 14 and 24 years old who currently have more years of study than their male peers. Report on		
What are commonly held beliefs, perceptions, and stereotypes related to gender in the project/program footprint area or the country of intervention	It is accepted that women, in addition to domestic work, can carry out income-generating activities close to the home, raising small animals and tourism (accommodation and food). With the permission of their husbands, they can go out to local and regional markets to sell their products. The water irrigation management is considered a mainly male issue; many women accompany their husbands to the monthly meetings, but do not participate much and when they do, they are not considered.		Traditionally, the Shawi have lived in small family groups spanning up to three generations. In the past it was customary for young people to marry early, sometimes before puberty, and the husband moved into the wife's home or community, at least until the birth of the first child. Gender roles and expectations are well rooted in Shawi communities. Women are expected to take care of domestic affairs and have the advice of older women to fulfill them. Men specialize in hunting and fishing. They share activities in planting cassava and banana. The Shawi women of the Paranapura River do not frequently go out to Yurimaguas or Tarapoto, although young women are now allowed to leave the communities in the company of other women.
What is the division of labor among women and men in the project/program footprint area and/or the country of intervention?	In the Andean basins, beside domestic shores, women are dedicated to raise small animals such as guinea pigs, chickens, and rabbits, which provide income with very little investment and marketed nearby. Livestock market decisions are considered a male issue that extends to cousins, in-laws and brothers. Men are responsible for seeking technical assistance and training on all livestock-related matters. However, in relation to the production of dairy products such as cheese, milk, yogurt (Lambayeque basin), young women have increased their participation.		Women's activities are carried out mainly in the house and on the farm and river. Women are responsible for food preparation, washing clothes in the river, preparing masato, and collecting water and firewood. The latter are becoming increasingly scarce, requiring them to go further afield. Activities for income generation are handicraft and pottery activities.
What is the participation between women and men in the formal/informal economy in the project/program footprint area?	Women participate mostly in the small livestock associations (guinea pigs, chickens, rabbits, pigs) and family gardens (vegetables, medicinal plants and cultivated pastures). The guinea pig association in the town of Shilla is made up of 20 members; 16 of them are women. Of the 34 associations of agricultural and textile producers of the district		Shawi women are shyer than their Quechua or Shipibo counterparts and their participation in local markets are limited. However, since Shawi indigenous organizations are promoting the formation of artisan workshops, Shawi women with the permission of their families are in small numbers

Gender Assessment			
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
	municipality of Catilluc, 50% are led by women, especially in the production of cheese and yogurt and the raising of small animals.		participating in local fairs and markets in Yurimaguas and Tarapoto.
What is the situation of women and men in the specific sector of intervention or in the project/program footprint area?	In the irrigation water user committees, there is a predominance of men, although there are women users who have inherited land from their parents or grandparents, or are widows, but their participation is limited. Only a minimal percentage of women hold the positions of President of the Irrigation Committees. In the Basin Council there is a representation of women whose designated institutional representatives are mostly men. Women are assigned to roles traditionally considered feminine, such as secretarial positions, and the regulations do not provide for women's participation.		
In terms of the proposed project/program, will there be any anticipated differences in men's and women's vulnerability and adaptive capacity to climate change? If so, what are these?	Food insecurity affects women more strongly because it is related to their assigned roles of caring for the family. For this reason, the project seeks to strengthen the activities they are already carrying out (crafts, tourism, husbandry) by strengthening the formation of groups/workshops and women's associations to seek long-term joint solutions to reduce the effects of climate shocks on food security.		
Are there existing gender inequalities that may be exacerbated by climate change impacts in the proposed project/program footprint area?	The women oversee health issues for family members and husbandry. In the last few years, temperatures have been dropping more and respiratory diseases such as influenza, pneumonia, bronchitis become more intense especially in small animals and children, older also get sick. Women became overload. During the participatory consultation the groups reported that there are transitional months when getting food becomes difficult. The men make the decision to migrate temporarily to work in nearby cities. Young women undertake handicraft activities, small-scale farming, and vegetable gardens as coping strategies.		The main problems affecting Shawi women are related to access to education, limits to political participation, subordination to men, family formation at an early age (the average age at which unions begin is from 15 to 17 years old). During Covid-19 many Shawi women who had migrated to Yurimaguas, Tarapoto or Iquitos have returned with their families to their communities, applied for land, and rejoined community life. These women are creating new models for Shawi women, as they participate more actively in women's groups and schools.
What are some of the inequalities that exist between different social groups in the project/program footprint area? How do these inequalities affect people's capacity to adapt to climate change?	Most of elder women are Quechua/ Shawi-speaking and do not usually communicate fluently in Spanish, which prevent them to have access to resources outside the communities. Traditionally cultural, logistical, and economic barriers prevent women from having mobility to travel to cities either to sell their products or study. However, young men and women are more motivated to take risks and challenging cultural beliefs.		

Gender Assessment			
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
What roles women and men are anticipated to play in the context of the project/program? What will these entail in terms of time commitment and need for mobility?	It is anticipated that young women in the Andean zone can progressively increase their participation in the market for their ventures as their business and financial capabilities increase. In the case of Amazonian communities, it is expected that indigenous organizations will be sensitive to supporting women's ventures by providing logistical facilities, conversations with families to allow the mobility of women outside the communities, among other roles. Working together with the indigenous organization to overcame cultural barriers for women participation has been proved in other projects (i.e. REDD+, Amazonia 2.0). However, this is a long term goal.		
What resources (economic, financial, physical, natural, other assets) do women and men have access to? Who manages or controls access to these resources? **Land access**	Due to cultural practices in these high Andean zones, women acquire land rights upon the death of their husbands (widowhood) or by inheritance from their parents. Buying and selling decisions within the family fall mainly on the men, but household administration is mutual. Women who are widowed, elderly or have no male family members are more vulnerable.		Land is communal and decisions about its use are made in assemblies with representation of the men as heads of households. Shawi women married to outsiders can claim land if they decide to resettle. There are mestizos who have applied or are in the process of applying for land in the communities, only some of which are married to Shawi women. Each family is allocated between 1 to 3 hectares to grow their food.
What resources (economic, financial, physical, natural, other assets) do women and men have access to? Who manages or controls access to these resources? **Water access**	The use of water for irrigation is considered a mainly male issue; many women accompany their husbands to the monthly meetings, but do not participate much and when they do, they are not considered. Single women complaint about having access to less water than their male counterparts.		Shawi communities do not have access to drinking water. In component 2 is included the preparation of technical dossiers for the preparation of public investment projects in drinking water since women spend much time carrying water from long distances.
Access to credit & technical assistance			
Do women and men from vulnerable communities have equal access to information and opportunities necessary to participate and benefit fully from the anticipated outcomes of the project/program?	Language and cultural are barriers to have equal access to information and opportunities for women. In component 2: community early warning systems have been included in at least three languages. The information shared should be in Shawi, Quechua, and Spanish.		
Do women have equal access to education, technical knowledge, and/or skill upgradation? Will services and technologies provided by the project/program be available and accessible to both women and men?	No. The specialized technical centers are closer to rural communities and offer educational alternatives to young men and women from the Quechua and Shawi communities. However, the careers offered maintain gender stereotypes and there is restriction for young shawi women to study at CETPRO for which will requires the father or husband's permission. The project will work with CETPROS training teachers to include climate change in the curricula. It has not been planned to work on the gender approach in the CETPROS as it requires a greater effort.		

Gender Assessment			
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
To what extent do women and men from vulnerable communities participate in decision – making processes? What type of decisions are made by women? What are the constrains (social, cultural, economic, political) that restrict women's active participation in household and community level decision – making processes?	In the districts where participatory consultations have been held, vulnerable groups do not participate in the planning meetings convened by the municipality or other conveners. Language and timing are the main barrier, and a lack of communication means to reach rural isolated population. In the associations of women producers, the participation of women is greater, especially in matters related to their ventures.		The participation of Shawi women in community assemblies is very restricted. Greater participation is found in small groups, workshops and committees.
Are there any opportunities to promote the leadership of women in local governance/political systems and formal/informal institutions? If not, what are some of the constrains that hinder women from assuming leadership roles?	The focus group of adult women in the Shilla district expressed experiential tourism as an opportunity to generate income and connect with other women and strength their capacities.	Of the 34 associations of agricultural and textile producers of the district municipality of Catilluc, 50% are led by women, especially in the production of cheese and yogurt and husbandry.	Young shawi women find it advantageous to speak the local language because they can get jobs as bilingual teachers and official translators accredited by the Ministry of Culture.
What are the differential needs/priorities of women and men in the context of the project/program? Will the project/program be able to address their respective needs and priorities? If so, how?	Component 4 has included support for economic activities directly carried out by women, such as raising small animals, weaving, and handicrafts and the social and economic barriers that exist for women to benefit from these activities. Based on the findings from the consultation process a GAP (table 13) was designed and a specific activity in component 2 has been proposed to promote innovation in women organizations funds of US$ 180,000. The total value for the GAP is US$ 1,256,200 to fund initiatives that address inequalities among vulnerable groups.		
Have the needs of specific (and vulnerable) sub-groups been considered by the project/program (e.g., children, girls, women and men with disabilities, the elderly, widows)? Has the project/program recognized the distinct vulnerabilities of women and men and developed specific response strategies for each target group? Are the specific knowledge and skills of women and men, especially from vulnerable groups, being utilized to contribute to project/program outcomes and solutions?	Yes. Specific mitigation measures have also been included in the environmental and social risk management plan to avoid the risk of barriers to the participation of the most vulnerable in the projects (please refer to paragraph C on part III).Single older adults who have little land are likely to be excluded from project benefits. They are older adults who only speak the local language and do not have an identity document, so they cannot participate in municipal social programs. The most frequent barriers to social inclusion are age, gender, language, and land size. Component 3 includes activating the Marginalized and Vulnerable Groups policy because women and adult men who have little land may be excluded from water systems such as reservoirs and canals because decisions in the irrigation committees are made by men who have more land, speak Spanish and are in a more advantageous position to obtain the benefits of the project. Component 4 includes activities that the most vulnerable groups, especially women, are involved in.		
Has the project/program identified opportunities to challenge gender stereotypes and increase positive gender relations	Yes. The new municipal administrations have included young professional women as	Yes. Young bilingual women are interested in staying in the communities working on tourism	Indigenous organizations are promoting women's leadership and currently the President of the regional indigenous

Gender Assessment			
Main Questions	**Cuenca Santa Ancash**	**Cuenca Chancay Lambayeque**	**Cuenca Paranapura**
through equitable actions? If so, what are these opportunities and actions?	managers in the environmental area showing new non-traditional roles for women.	projects, proposing new roles as entrepreneurs.	organization of the province CORPI-SL is a woman, which is breaking prototypes about indigenous representation.

Table Nº 13: EDA Peru Gender Action Plan (GAP).

Impact Statement:
The results of the participatory consultation yield essential information on the gender and age differences of the people involved in climate change adaptation. In particular, young and adult women present significant barriers to taking advantage of opportunities to improve their position and status in their communities.
The desired situation is that at the end of the project, young women will increase their leadership in climate change adaptation because social and economic barriers to their participation have been overcome, and their leadership capacities have increased. It is also expected that adult women will have improved their situation due to their access to risk reduction systems in their places of residence.
Expected Impact: Increased food security for differentiated gender, age and vulnerable groups by receiving direct technical assistance and support of risk reduction activities and increasing ecosystems resilience.

Outcome Statement:
An estimated of 2,325 small entrepreneurs of which 975 area women, 200 are young females, and 200 are young men are involved in income generation initiatives climate- resilient based on their indigenous knowledge.

Output(s) Statement(s):
Women and vulnerable indigenous communities have access to direct technical assistance and support for climate resilience measures.

Activities in The Results Framework	Indicators	Targets	Timeline	Responsibilities	Costs Total 1.272,600
2.1.1 Development of cultural friendly early warning systems for the most frequent risks related to climate variability and climate	Number of communities receiving information culturally friendly with stakeholder participation.	112 Shawi communities 10 Quechua communities	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed.	**US$ 120,000**

Activities in The Results Framework	Indicators	Targets	Timeline	Responsibilities	Costs Total 1.272,600
change in the three selected watersheds.				The leading partner in the Santa and Chancay- Lambayeque Watershed.	
2.1.2. Development of an early warning system for monitoring and control of malnutrition and anemia and other cc-related diseases such as dengue, chikunkuya, sika, among others).	Health centers coordinating EWS culturally friendly	*14 health centers in shawi communities* *15 health centers in quechua speaking communities.* *15 health centers in Spanish speaking districts*	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 81,000***
2.2.1 Strengthening organizations to respond to the effects of climate change.	Community based organizations are trained in climate change adaptation culturally friendly.	***226 organizations*** *112 shawi organizations at community level* *04 shawi organizations at district level* *25 irrigation committees at quechua communities* *35 irrigation committee in Spanish speaking districts* *50 associations in Spanish speaking districts*	***From year 1 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 135,000***
2.2.3 Recovery of ancestral knowledge of Andean and Amazonian indigenous communities to increase resilience.	Communities recovering indigenous knowledge to increase their resilience.	*112 Shawi Communities* *10 Quechua communities*	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 30,000***
2.2.6 Strengthen the technical training of young people by including courses on climate change adaptation in the technological institutes in Shawi and Quechua.	Technical education centers include climate change adaptation in their training programs. (agriculture and nursing)	*80 young male* *20 young female*	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 40,000***
2.2.5 Support women innovation initiatives.		***10 women organizations*** ***100 women***	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed.	***US$ 180,000***

Activities in The Results Framework	Indicators	Targets	Timeline	Responsibilities	Costs Total 1.272,600
	Number of young and older women accessing to awards for outstanding work on climate change adaptation			The leading partner in the Santa and Chancay- Lambayeque Watershed.	
4.1.1 Recovery of traditional crops such as dale dale, bread fruit, organic cotton, chocho, etc.	Women´s organizations accessing to seeds and technical assistance.	***132***	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 76,600***
4.2.2 Sustainable and culturally appropriate promotion of small animal husbandry.	Number of small entrepreneurs receive technical assistance to improve their income from which 35% are women and 15% are young females and men under 35 years old. Women improving a minimum of 350 USD per year	***450***	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 147,000***
4.2.3 Installation of drying plants to add value to banana and cassava.	Number of small entrepreneurs receive technical assistance to improve their income from which 35% are women and 15% are young females and men under 35 years old. Number of Women earning a minimum of US$350 per year	***100***	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed.	***US$ 169,000***
4.2.4. Installation of Shawi artisanal weaving workshops	Number of Women engaged in value-added activities. Women earning a minimum of US$350 per year	*100*	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed.	***US$ 150,000***
4.2.5 Financial literacy for male and female entrepreneurs.	Number of small entrepreneurs receive technical assistance to improve their income from which 35% are women and 15% are young females and male under 35 years old	**2,325** total 950 men 975 women 200 young men	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 59,400***

Activities in The Results Framework	Indicators	Targets	Timeline	Responsibilities	Costs Total 1.272,600
		200 young women			
4.2.6 Technical assistance for local tourism promotion	Number of Women earning a minimum of US$350 per year	225	***From year 2 to year 4 out of 5 years project***	Indigenous Organization in the Lower Huallaga and Paranapura Watershed. The leading partner in the Santa and Chancay- Lambayeque Watershed.	***US$ 84,600***

Source: Adapted from https://www.greenclimate.fund/sites/default/files/document/simplified-approval-process-annex-4-gender-assessment-and-action-plan.pdf

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.

Profonanpe has a well-established Monitoring and Evaluation Department which ensures more accurate, consistent, and reliable data are collected and reported. It has also produced a MONITORING & EVALUATION MANUAL, which is a tool to guide for all projects and program recipients on principals, procedures, and processes of designing, implementing, and using Results based Monitoring and Evaluation Systems (SISME).

The Profonanpe SISME contains four components: **The Monitoring component**, which is a permanent, systemic, and continuous process. Generates alerts on progress in meeting goals and objectives derived from the Logical Framework of the Project. Allows analysis of information identifying strengths, weaknesses, and proposals for improvement.

The evaluation component which reviews the effects and impacts of the products and sub-products in the results proposed in the Logical Framework and aligned with institutional vision and mission. Provides items for improvement of policy, strategy, and programming.

The Continuous Improvement Component, that allows continuous improvement and strengthening institutional management trigger by the effective use of the evidence generated in monitoring and evaluation; and finally the **Information management component** which is a cross-cutting component and forms the basis of the M&E System, collecting information from all levels of the value chain (activities, products, specific and final results), through the collection, registration, processing consistency and validation of information and reporting is ensured.

The preparation of the monitoring and learning system will have a special emphasis on the evidence regarding the effectiveness of the intervention to increase community resilience and the lessons that can be learned from ecosystems under intervention.

Time of project technical assistance and resources allocated to monitoring as follow:

- ✓ Social & Gender & Indigenous Specialist (30%)
- ✓ Climate Change Specialist (30%)
- ✓ Agroecology Specialist (30%)
- ✓ Infrastructure Specialist (30%)
- ✓ Monitoring Specialist (Profonanpe)

The resources allocated to the Monitoring of EDA Peru are as follows:

Table Nº 14: EDA Perú Monitoring & Evaluation budget US$

	Year 1	Year 2	Year 3	Year 4	Year 5
EDA- Peru Specialists (Gender, Indigenous People: Natural & Infrastructure, Agroecology).	38.400	38.400	38.400	38.400	38.400
EDA Peru project coordinator (30%)	16.200	14.400	14.400	14.400	14.400
Monitoring Specialists (ESMP) Profonanpe (Included in the Fee)	47,005	47,005	47,005	47,005	47,005

Midterm review			20.000		
Final Evaluation					25.000
Subtotal	**101.605**	**99.805**	**119.805**	**99.805**	**124.805**
Total 5 years					**545.823**

Mid-term review. At the end of the first half of the implementation period, Profonanpe commissions an internal mid-term review with lead partners in each watershed. Here the subprojects beneficiaries have a chance to give a detailed picture on the performance of the project beyond the information provided through progress reports.

The review also prepares the submission of the mid-term review report.

With regards to financial reporting. The leading partners must prepare a quarterly financial report (revenue and expenditure statement, budget execution report, bank reconciliation with a copy of the bank statement) and annual financial reports.

Final evaluation. Towards the end of the project, an independent evaluator will carry out an evaluation of the project. The evaluation report is submitted to Profonanpe.

Case studies. These studies will make it possible to identify the most successful or difficult experiences in the implementation of EDA Peru subprojects specially regarding the adaptation measures in different cultural settings to improve knowledge and understanding of community resilience. Table 7 provides EDA Perú´s KM&Com themes and questions.

Each subproject should contain a budget to monitor goals and results, provide information on participants and report periodically on the progress of the project.Table 15 provides the expected activity and outputs expected indicators.

Annex 8 provides EDA Perú list of tables for reporting adaptation fund core impact indicators.

E. Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
Project Final Objective					
Increase the population's capacity to adapt to climate change through financing adaptation measures in the sectors of water regulation, agriculture and food security, and forest and forestry prioritized in the National Determined Contributions in selected vulnerable watersheds.		Percentage of targeted population with sustained climate-resilient livelihoods. Number of direct and indirect beneficiaries supported by the project disaggregate by gender and age. Number of families covered by a multi-hazard EWS.		Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project final report Project report on Environment and Social Management Plan (ESMP) Profonanpe.
Project expected impact					
Increased resiliency at the community and subnational level to climate variability and climate change in selected ecosystems.		Climate change priorities integrated into regional and local development strategy in selected watersheds.			Project final report Project report on Environment and Social Management Plan (ESMP) Profonanpe
Outcome 1: Increased national capacity to design, implement and evaluate robust climate change adaptation projects at sub-national level.		Number and type of targeted institutions with increased capacity to minimize exposure to climate variability risks.			Project final report Project report on Environment and Social Management Plan (ESMP) Profonanpe.

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
Output 1.1 Increased innovation in subnational entities through the implementation of EDA-Peru Facility.	1.1.1 Call for proposal and selecting leading partners in each basin. 1.1.2 Provide Technical assistance & Training. 1.1.3 Establishment of the EDA Peru´s Technical Committee (MINAM, MIDAGRI, INDECI, SERFOR, ANA) are fully functional. 1.1.4 Prepare and implement a KM & communication plan focusing on lessons learned.	Number of initiatives at subnational level contributing to National Adaptation Plan. Number of Subnational organizations with strengthened capacities to implement adaptation projects. Profonanpe & Leading partners report to the local media their contributions to the country's NDC.	Local organizations such as Indigenous organizations, irrigation committees; small business associations do not have experience in adaptation projects	Implementing partners are willing to implement adaptation projects	Annual Reports on the number of adaptation strategies in the area. Selected Leading Partner
Outcome 2: Reduced exposure to climate-related hazards and threats.		● Number of families covered by the EWS. ● Reduction in the number of affected families ● Reduced number of cropping areas damaged. ● Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses.			Project final report Project report on Environment and Social Management Plan (ESMP) Profonanpe.

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
Output 2.1 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	2.1.1 Development of culturally friendly early warning systems for the most frequent risks related to climate variability and climate change in the three selected watersheds. 2.1.2. Development of an early warning system for monitoring and control of malnutrition and anemia and other cc-related diseases such as dengue, chikunkuya, sika, among others). 2.1.3 Development of an early warning system for deforestation in Amazonian communities.	Number of municipalities covered by a multi-hazard EWS. Number of families covered by the EWS. Number of communities receiving information culturally friendly with stakeholder participation. Number of health centres coordinating EWS culturally friendly. Number of preventive or response actions carried out by the communities to the identified risks. Number and type of risk reduction actions or strategies introduced at local level. Modification in targeted population behavior (survey).	There are reports issued periodically by scientific entities that do not reach the most remote communities in the appropriate language.	Communities and individuals find benefits from early warning systems. Cooperative agreement with telecommunication companies.	Annual Reports on the number of adaptation strategies in the area. Selected Leading Partner
Output 2.2 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.	2.2.1 Strengthening organizations to respond to the effects of climate change.	Number of local organizations trained in climate change adaptation. Number of indigenous communities with Life Plans which include	30% of communities have life plans that include disaster risk management and adaptation.	Ancestral knowledge has a scientific empirical basis that ensures its effectiveness. Local adaptation plans are prioritized for public funding.	Number of registrations. Minutes of agreements. KM&Com report.

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
	2.2.2. Including Disaster Risk Management in Indigenous communities' Life Plans 2.2.3 Recovery of ancestral knowledge of Andean and Amazonian indigenous communities to increase resilience. 2.2.4. Preparation of local climate change plans in local governments. 2.2.5 Support women's innovation initiatives. 2.2.6 Strengthen the technical training of young people by including courses on climate change adaptation in the technological institutes in Shawi and Quechua.	disaster risk management and adaptation. Number of Communities recovering indigenous knowledge to increase their resilience. Number of cultural innovations based in indigenous knowledge contributing to climate change resilience. Number of local governments with Local Adaptation Plans Number of young and older women accessing to awards for outstanding work on climate change adaptation Technical education centres include climate change adaptation in their training programs. (agriculture and nursing).	Diverse ancestral knowledge related to the medicinal and nutritional use of wild plants and trees has been reported during the baseline. Ministry of Environment has issued guidelines for the preparation of local climate change plans and pilots are underway. Local government of Shilla with a Risk Reduction Plan 2021-2023 (CENEPRED). .There is no fund to meet the specific demands of women to improve their leadership position in their communities. Technical Institutes in the target location do not include climate change adaptation in the study plan	Technology centres are interested in incorporating adaptation into the technical training of young people. Women willing to participate and excel in climate action	Report on local climate change plans. Project report Project report Selected Leading Partners Project Annual report Selected Leading Partners
Output 2.3 Targeted population groups covered by adequate risk reduction systems.	2.3.1. Support local and regional governments for addressing basic needs from vulnerable communities throughout public investment and social programs.	Number of municipalities with technical dossiers to public funding initiatives in climate change adaptation.	There are several projects presented by the communities that do not have technical dossiers for their approval.	New Local authorities prioritize climate change adaptation projects.	Public Project registration Selected Leading Partners

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
Outcome 3: Supporting the resilience of selected ecosystems		**Number of families with physical assets protected or rehabilitated.** **Number of communities with natural assets protected or rehabilitated.**			Project final report Project report on Environment and Social Management Plan (ESMP) Profonanpe.
Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability	3.1.1 Improving sustainable forest management.	Number of indigenous communities improved forest & fish sustainable management. Area (ha) of conserved and recovered ecosystems that provide water regulation and provision services, in basins vulnerable to climate change. Number of families improved agroecological and pasture management. Number of Irrigation committees trained in water management resources under climate change.	Currently, the communities are not aware of, nor do they apply these enabling titles granted to them by the Forestry and Wildlife Law.	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities..	Project Report. Selected Leading Partners
	3.1.2 Promotion of sustainable artisanal fishing in rivers and lakes.		Currently, fishermen use barbasco poison that also eliminates small fish.	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report. Selected Leading Partners
	3.1.3 Formation, training and accreditation of forest monitoring and surveillance committees		The Shawi communities do not have forest control and surveillance committees.		Project Report. Selected Leading Partners
	3.1.4. Protection and treatment of water sources through bioremediation & reforestation with native species.		Water sources are not protected from the sun, animals, and pollutants. There is acid rock drainage because of glacial retreat.		Project Report Selected Leading Partners
	3.1.5. Improvement of agroecological practices and sustainable pasture´s management.		There is currently no technical assistance available for agroecological practices in agricultural and pasture production.		Project Report Selected Leading Partners

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
	3.1.6 Capacity building for integrated water resources management.		There are conflicts over lack of understanding of water rights.	Authorities and leaders have the willingness to coordinate and collaborate to adaptation projects	Project Report Selected Leading Partners
	3.1.7 Establishment of a mechanism for the management of river and port transportation on the Paranapura River.		Lack of coordination between authorities and leaders to manage river transportation and river maintenance.		Project Report Selected Leading Partners
Output 3.2 Natural infrastructure for water regulation, soil conservation and risk reduction from floods and extreme rains. .	3.2.1. Natural infrastructure for water regulation.	Number of Hectares of land under irrigation. Number of families have access to technified irrigation systems.	Irrigation infrastructure is artisanal in 85% of the cases.	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report Selected Leading Partners
	3.2.2. Installation of technified irrigation.		80% of irrigation is flood irrigation.		
	3.2.3. Natural infrastructure for planting and harvesting water		Only 20% of families collect rainwater.		
Outcome 4: Supporting food security in vulnerable communities.		**Number of families Increased income or avoided decrease in income.**			Project final report Project report on Environment and Social Management Plan (ESMP) Profonanpe.
Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)	4.1.1 Recovery of traditional crops such as dale dale, bread fruit, organic cotton, chocho, etc.	Number of families recovering and conserving biodiversity products. Women´s organizations accessing to seeds and technical assistance.	There is a market in Yurimaguas and Tarapoto for regional products.	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report Selected Leading Partners
	4.1.2 Establishment of seed banks in communities		There are no seed banks in the Paranapura River communities.		

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or forestry activities and added value activities.	4.2.1 Installation and commercialization of organic cocoa in deforested areas.	Number of Families that improve their annual income by at least US$350 per year	There is interest from indigenous organizations in this crop.	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report Selected Leading Partners
	4.2.2 Sustainable and culturally appropriate promotion of small animal husbandry	Number of Women improving a minimum of 350 USD per year.	There are initiatives carried out without technical assistance	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report Selected Leading Partners
	4.2.3. Value added activities from local production (i.e banana and cassava).	Number of small entrepreneurs receive technical assistance to improve their income from which 35% are women and 15% are young females and men under 35 years old.	There are initiatives carried out without technical assistance	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report Selected Leading Partners
	4.2.4. Installation of Shawi artisanal weaving workshops.	Number Women engaged in value-added activities	Indigenous organizations are promoting handicrafts oriented to young women.	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report Selected Leading Partners
	4.2.5 Financial literacy for men and women entrepreneurs.	Number of small entrepreneurs receive technical assistance to improve their income from which 35% are women and 15% are young females and men under 35 years old.	There are initiatives carried out without technical assistance.	Communities are willing to preserve the ecosystem in the long term in facing economic shortages by adopting other economic activities.	Project Report Selected Leading Partners

Table Nº 15: EDA Perú Results Framework *					
Expected Results	**Activities**	**Indicators**	**Baseline**	**Assumptions**	**Means of Verification/ Responsible**
	4.2.6 Technical assistance for local tourism promotion	Number of small entrepreneurs receive technical assistance to improve their income from which 35% are women and 15% are young females and men under 35 years old.	There are initiatives carried out without technical assistance	Associations have an agreement with the Huascaran National Park for tourism activities	Project Report Selected Leading Partners

* Annex 8 provides EDA Perú list of tables for reporting adaptation fund core impact indicators.

Adaptation Fund Core Impact Indicators Report	
Date of Report	2024
Project Title	Fund for Innovative Adaptation in vulnerable ecosystems in North of Perú. (Ancash, Cajamarca; Lambayeque& San Martin y Loreto)
Country	Perú
Implementing Agency	Profonanpe
Project Duration	5 years

Adaptation Fund Core Impact Indicator "Number of Beneficiaries"(1)				
	Baseline *(absolute number)*	Target at project approval *(absolute number)*	Adjusted target first year of implementation *(absolute number)*	Actual at completion 1/ *(absolute number)*
Direct beneficiaries supported by the project	0	501,014		
Female		249,251		
Youth		251,763		
Indirect beneficiaries supported by the project	**0**	**533,738**		
Female		264,962		

Adaptation Fund Core Impact Indicators Report				
Youth		268,776		
	Project approval	**Watersheds**		
		Santa	**Paranapura**	**Chancay Lambayeque**
Direct beneficiaries supported by the project	**501,014**	**290,106**	**141,447**	**69,461**
Female	249,251	145,135	70,327	33,789
Youth	251,763	144,971	71,120	35,672
Indirect beneficiaries supported by the project	533,738	345,721		188,017
Female	264,962	170,526		94,436
Youth	268,776	175,195		93,581

Adaptation Fund Core Impact Indicator "Early Warning Systems"(2)				
Adopted Early Warning Systems	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion
2.1.1 Development of early warning systems for the most frequent risks related to climate variability and climate change in the three selected watersheds. *risk knowledge.*				
Families covered by the EWS.	0	120,369		
response capability				
Number of affected families (years 2020-2022)	5,285			
Destroyed homes (years 2020-2022)	1,386			
Number of cropping areas damaged Has (years 2020-2022)	149			
Hazard	Relevant			
Geographical coverage *(km2)*	16,859	16,859		
Number of municipalities	44	44		

	Project approval	**Watersheds**		
		Santa	**Paranapura**	**Chancay Lambayeque**
Geographical coverage (km2)	16,859	5,038	8,032	3,789
Number of municipalities	44	20	5	19

Adaptation Fund Core Impact Indicators Report				
Families covered by the EWS.	120,369	72,213	26,729	21,427
Aggregate data each three years				
Reduction in the number of affected families	5,285	895	3,715	675
Reduction of destroyed homes	1,386	297	969	120
Reduced number of cropping areas damaged.	149	7	2.0	140
Source: INDECI. Control Dashboard – Report of emergencies by districts.				

Adaptation Fund Core Impact Indicator "Assets Produced, Developed, Improved, or Strengthened"(3)				
1.Targeted Asset	**Baseline**	**Target at project approval**	**Adjusted target first year of implementation**	**Actual at completion**
1) Health and Social Infrastructure				
New families with drinking water.		27,994		
% of households without drinking water services	33.4% (40,164)			
Families with climate resilient dwellings.		2,770		
% households with inadequate physical conditions	11.6% (13,953)			
New families with sanitation services.		11,663		
% of households without sanitation services.	11.8% (14,153)			
New Families with access to renewable energy		10,433		
% of households without electricity	16.0% (19,285)			
Source: Ministry of Health (MINSA). Single National Repository for Health Information (REUNIS). Basic Indicators 2022.				
2. Physical asset	**Baseline**	**Target at project approval**	**Adjusted target first year of implementation**	**Actual at completion**
Families with agroecological practices	0	7,500		
Number of New families with technified irrigation	0	2,500		
Hectares with technified irrigation	0	4,044		
Families benefited, reforestation, native species, bioremediation	0	1,500		
Families that increase their productive physical assets	0	2,650		
Source: Project monitoring reports				

3. Changes in Asset					
Coverage of Effects and impacts	**Indicators for Effects**	**Total**	**Coverage by watershed**		
			Santa	**Parana-pura**	**Chancay Lambayeque**

Districts with Health centers with EWS.		44	20	4	20
Andean and Amazonian communites. & local Association	Number of local organizations making decision based on climate information.	226	50	126	50
Technical dossiers for public investment	New families with drinking water.	27,994	14,370	5,632	7,992
	Families with climate resilient dwellings.	2,770	880		1,890
	New families with sanitation services.	11,663	5,725	5,938	
	New Families with access to renewable energy	10,433	8,543		1,890
Families with agro-ecological practices		7,500	5,000	1,000	1,500
Number of New families with technified irrigation		2,500	1,000		1,500
Hectares with technified irrigation		4,044	820		3,224
Families benefited, reforestation, native species, bioremediation		1,500	1,000		500

Adaptation Fund Impact Indicator "Increased income, or avoided decrease in income"(4)				
	Baseline	**Target at project approval**	**Adjusted target first year of implementation**	**Actual at completion**
Families with agro-ecological practices				
Families with sources of income diversified	0	7,500		
Entrepreneurial small producers:				
Families that improve their annual income	0	2,650		
Number of households	0	10,150		
	Total	**Santa**	**Paranapura**	**Chancay Lambayeque**
1) Families with sources of income diversified				
Families with agro-ecological practices	7,500	5000	1000	1500
2) Entrepreneurial small producers:				
Families that improve their annual income	2,650	925	800	925
Men	1,125	475	375	375
Women	1,525	450	425	550
Source: Project monitoring reports				

Adaptation Fund Core Impact Indicator "Natural Assets Protected or Rehabilitated"(5)

Natural Asset or Ecosystem	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion 3/
Expected annual deforestation rate.		0.36%		
Annual deforestation rate 2001-2021	0.68%			
Families benefited, reforestation, native species, bioremediation		1,500		
Change in state *Has*				
Hectares of district forest loss avoided		15,763		
Source: GEOBOSQUE. 2023				

Total number of natural assets or ecosystems protected/rehabilitated	Total	Santa	Paranapura	Chancay Lambayeque
Hectares of district forest loss avoided	15,763		15,763	
Annual deforestation rate 2001-2021			0.68%	
Balzapuerto			0.45%	
Yurimaguas			1.62%	
Caynarachi			0.80%	
San Roque de Cumbaza			0.16%	
Papaplaya			0.26%	
Expected annual deforestation rate			0.36%	
Balzapuerto			0.25%	
Yurimaguas			0.80%	
Caynarachi			0.40%	
San Roque de Cumbaza			0.10%	
Papaplaya			0.15%	
Families benefited, reforestation, native species, bioremediation	1,500	1,000		500

F. Demonstrate how the project/program aligns with the Results Framework of the Adaptation Fund

Table Nº 16: EDA Peru alignment with AF Results Framework				
Project Objective(s)[1]	**Project Objective Indicator(s)**	**Fund Outcome**	**Fund Outcome Indicator**	**Grant Amount (USD)**
Increase the population's capacity to adapt to climate change through financing adaptation measures in the sectors of water regulation, agriculture and food security, and forest and forestry prioritized in the National Determined Contributions in selected vulnerable watersheds.	Percentage of targeted population with sustained climate-resilient livelihoods	**Outcome 1:** Reduced exposure at national level to climate-related hazards and threats.	Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis. Number of families covered by a multi-hazard EWS.	**5,000,0000**
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
Outcome 1: Increased national capacity to design, implement and evaluate robust climate change adaptation projects at sub-national level.	Number of initiatives at subnational level contributing to the National Adaptation Plan. Number of Subnational organizations with strengthened capacities to implement adaptation projects. Profonanpe & Leading partners report to the local media their contributions to the country's NDC.	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate induced. socioeconomic and environmental losses	2.1. No. and type of targeted institutions with increased capacity to minimize exposure to climate. variability risks. Number of people with reduced risk to extreme weather events. Number of families covered by a multi-hazard EWS.	**872,000**
Outcome 2: Reduced exposure to climate-related hazards and threats socioeconomic and environmental losses	Number of municipalities covered by a EWS to cover the following hazards: -Floods & severe storms and landslides (in the 3 basins). Profonanpe & Leading partners report to the local media their contributions to the country's NDC	***Output 3***: Targeted population groups participating in adaptation and risk reduction. awareness activities	3.1.1 No. and type of risk reduction actions or strategies introduced at local level. 3.1.2 No of news outlets in the local press and media that have covered the topic.	**900,000**

[1] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology, but the overall principle should still apply

Table Nº 16: EDA Peru alignment with AF Results Framework				
Project Objective(s)[1]	**Project Objective Indicator(s)**	**Fund Outcome**	**Fund Outcome Indicator**	**Grant Amount (USD)**
Outcome 3. Increased ecosystem resilience in response to climate change and variability-induced stress.	Area (ha) of conserved and recovered ecosystems that provide water regulation and provision services, in basins vulnerable to climate change.	**Output 5***:* Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	5.1. No. and type of natural assets created, maintained, or improved to withstand conditions resulting from climate variability and change (by type of assets) . No. and type of physical assets created, maintained, or improved to withstand conditions resulting from climate variability and change (by type of assets)	**1,700,000**
Outcome 4. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Number of households and communities having more secure (increased) access to livelihood assets (% women lead households and % under 35 years old.	**Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies. 6.1.2. Type of income sources for households generated under climate change scenario	1.068,200

G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
Outcome 1: Capacity building to design, implement and evaluate robust climate change adaptation projects at sub-national level.												
Output 1.1 Increased innovation in subnational entities through the implementation of EDA-Peru Facility.	**1.1.1 Call for proposals and selecting leading partners.**	Plataforma digital EDA Perú	Global	1	20.000	20.000	20.000					20.000
		ACC Specialist-Project Coordinator	monthly	60	4.500	270.000	54.000	54.000	54.000	54.000	54.000	270.000
		Technical and Administrative assistance	monthly	60	2.200	132.000	26.400	26.400	26.400	26.400	26.400	132.000
		Monitoring /Technical Assistance /training	Travels	20	2.000	40.000	6.000	10.000	10.000	8.000	6.000	40.000
	1.1.2 Technical assistance & training	Agroecological Specialist	Consultant	20	3.200	64.000	12.800	12.800	12.800	12.800	12.800	64.000
		Gender & Social & Indigenous Specialist	Consultant	20	3.200	64.000	12.800	12.800	12.800	12.800	12.800	64.000
		Natural Infrastructure Specialist	Consultant	20	3.200	64.000	12.800	12.800	12.800	12.800	12.800	64.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
		Workshops National Level	Global	2	20.000	40.000	20.000				20.000	40.000
		Internal Mid Term Review	Consultant services	1	20.000	20.000			20.000			20.000
	1.1.3 Establishment of EDA Peru´s Technical Committee.	Monitoring visits RBM	Travels	20	2.000	40.000	6.000	10.000	10.000	8.000	6.000	40.000
		Workshops /Technical meetings	Global	5	2.000	10.000	2.000	2.000	2.000	2.000	2.000	10.000
	1.1.4 Prepare and implement a communication plan focusing on lessons learned.	Communications materials, audiovisuals, etc.	Global	4	15.000	60.000		15.000	15.000	10.000	20.000	60.000
		Consultants /Communication, Learning & Innovation	monthly	15	3.200	48.000	9.600	9.600	9.600	9.600	9.600	48.000
						872.000	**182.400**	**165.400**	**185.400**	**156.400**	**182.400**	**872.000**
Outcome2 : Reduced exposure to climate-related hazards and threats												

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
Output 2.1 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	**2.1.1 Development of cultural friendly early warning systems for the most frequent risks related to climate variability and climate change in the three selected watersheds**	Included in the grant	Global	3	30.000	90.000	10.000	30.000	30.000	20.000		90.000
		Included in the grant	Communication/ Training materials	3	10.000	30.000	5.000	5.000	10.000	10.000	-	30.000
	2.1.2. Development of an early warning system for monitoring and control of malnutrition and anemia and other cc-related diseases such as dengue, chikunkuya,sika, among others).	Included in the grant	Global	3	15.000	45.000	7.500	7.500	15.000	15.000		45.000
		Included in the grant	Communication/ Training materials	3	12.000	36.000	6.000	6.000	12.000	6.000	6.000	36.000
	2.1.3 Development of an early warning	Included in the grant	Global	2	25.000	50.000	10.000	15.000	25.000	-	-	50.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
	system for deforestation in Amazonian communities.	Included in the grant	Traveling	20	800	16.000	4.000	4.000	4.000	4.000	-	16.000
Output 2.2 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.	**2.2.1 Strengthening organizations to respond to the effects of climate change. training activities on climate change culturally adapted**	Included in the grant	Consultants	3	15.000	45.000	5.000	10.000	15.000	15.000	-	45.000
		Included in the grant	Workshops	50	1.200	60.000	3.600	18.000	18.000	14.400	6.000	60.000
		Included in the grant	Communication/ Training materials	3	10.000	30.000	5.000	5.000	10.000	10.000	-	30.000
	2.2.2. Including Disaster Risk Management in Indigenous communities' life plans .	Included in the grant	Travelling	10	800	8.000	1.600	1.600	1.600	1.600	1.600	8.000
		Included in the grant	Conusultants	2	30.000	60.000	15.000	15.000	15.000	15.000	-	60.000
	2.2.3 Recovery of ancestral knowledge of Andean and Amazonian	Included in the grant	Workshops	20	1.500	30.000	3.000	9.000	9.000	3.000	6.000	30.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			UNIT	QTY.	UNIT COST	TOTAL	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total Amount (USD)
	indigenous communities to increase resilience.											
	2.2.4. Preparation of local climate change plans in local governments.	Included in the grant	Consultants	8	10.000	80.000	20.000	20.000	20.000	20.000	-	80.000
	2.2.6 Strengthen the technical training of young people by including courses on climate change adaptation in the technological institutes in Shawi and Quechua	Included in the grant	Global	4	10.000	40.000	5.000	10.000	15.000	10.000		40.000
	2.2.5 Support women innovation initiatives.	Included in the grant	Global	18	10.000	180.000	-		90.000	90.000		180.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
Output 2.3 Targeted population groups covered by adequate risk reduction systems	**2.3.1. Support local and regional governments for addressing basic needs from vulnerable communities throughout public investment and social programs.**	Included in the grant	Consultants	4	25.000	100.000	20.000	30.000	30.000	20.000		100.000
						900.000	**120.700**	**186.100**	**319.600**	**254.000**	**19.600**	**900.000**
Outcome 3: Supporting the resilience of selected ecosystems												
Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change	**3.1.1 Improving sustainable forest management.**	Included in the grant	Consultants	38	1.500	57.000	10.000	12.500	22.500	12.000		57.000
		Included in the grant	Communication/ Training materials	2	5.000	10.000	2.500	2.500	2.500	2.500		10.000
		Included in the grant	Travelling	20	800	16.000	2.000	3.600	5.600	4.800		16.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
and climate variability		Included in the grant	Global	30	3.000	90.000	20.000	30.000	20.000	20.000		90.000
	3.1.2 Promotion of sustainable artisanal fishing in rivers and lakes.	Included in the grant	Consultants	20	2.000	40.000	4.000	12.000	12.000	12.000		40.000
		Included in the grant	Communication/ training materials	2	5.000	10.000	2.500	2.500	2.500	2.500		10.000
		Included in the grant	Workshops	12	1.000	12.000	2.000	4.000	2.000	2.000	2.000	12.000
		Included in the grant	Global	38	1.500	57.000	7.500	22.500	22.500	4.500		57.000
	3.1.3 Formation, training and accreditation of forest monitoring and surveillance committees	Included in the grant	Global	15	5.000	75.000	10.000	15.000	25.000	25.000	-	75.000
		Included in the grant	Workshops	30	1.200	36.000	6.000	6.000	12.000	9.600	2.400	36.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
		Included in the grant	Travelling	38	800	30.400	6.000	6.000	12.000	6.400		30.400
	3.1.4. Protection and treatment of water sources through reforestation with native species and bioremediation.	Included in the grant	Global	30	3.000	90.000	10.000	30.000	30.000	20.000	-	90.000
	3.1.5. Improvement of agroecological practices and sustainable pasture´s management.	Included in the grant	Consultants	2	30.000	60.000	10.000	10.000	20.000	20.000		60.000
		Included in the grant	Hectares	2	50.000	100.000	10.000	30.000	40.000	20.000		100.000
		Included in the grant	Workshops	20	1.200	24.000	3.000	6.000	6.000	6.000	3.000	24.000
		Included in the grant	Hectares	20	7.000	140.000	10.000	32.000	56.000	42.000		140.000
	3.1.6 Capacity building for integrated water resources management	Included in the grant	Workshops	35	1.000	35.000	5.000	5.000	10.000	10.000	5.000	35.000
		Included in the grant	Consultants	2	25.000	50.000	5.000	10.000	15.000	20.000		50.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
	3.1.7 Establishment of a mechanism for the management of river and port transportation on the Paranapura River.	Included in the grant	Global	1	30.000	30.000	5.000	5.000	10.000	10.000		30.000
	3.2.1. Protection of irrigation canals (lining, gates installation) for efficient irrigation water management.	Included in the grant	Hectares	50	5.000	250.000	20.000	90.000	90.000	50.000		250.000
		Included in the grant	Consultants /Monthly	36	2.000	72.000	10.000	14.000	24.000	24.000		72.000
		Included in the grant	Travelling	20	800	16.000	1.600	5.600	5.600	3.200		16.000
	3.2.2. Installation of technified irrigation.	Included in the grant	Hectares	20	3.000	60.000	6.000	24.000	24.000	6.000		60.000
		Included in the grant	Consultants /Monthly	35	2.000	70.000	8.000	24.000	24.000	14.000		70.000
		Included in the grant	Communication/ training materials	4	6.000	24.000		6.000	6.000	6.000	6.000	24.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
		Included in the grant	Travelling	12	800	9.600	2.400	2.400	2.400	2.400	-	9.600
	3.2.3. Natural infrastructure for planting and harvesting water	Included in the grant	Hectares	10	15.000	150.000		75.000	75.000		-	150.000
		Included in the grant	Consultants /Monthly	35	2.000	70.000	8.000	24.000	24.000	14.000		70.000
		Included in the grant	Travelling	20	800	16.000	1.600	4.800	6.400	3.200		16.000
						1.700.000	**188.100**	**514.400**	**607.000**	**372.100**	**18.400**	**1.700.000**
Outcome 4: Supporting food security in vulnerable communities												
Output 4.1 Increase the resilience of crops to climate change through conservati	**4.1.1 Recovery of traditional crops such as dale dale, bread fruit, organic cotton, chocho, etc.**	Included in the grant	Global	10	5.000	50.000	5.000	15.000	20.000	5.000	5.000	50.000
		Included in the grant	Travelling	12	800	9.600	1.600	2.400	2.400	2.400	800	9.600
		Included in the grant	Workshops	10	1.200	12.000	2.400	2.400	2.400	2.400	2.400	12.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
on of agrobiodiversity (ABD)		Included in the grant	Communication/ training materials	2	2.500	5.000		2.500	2.500		-	5.000
	4.1.2 Establishment of seed banks in communities	Included in the grant	Consultants	10	3.500	35.000		10.500	10.500	14.000	-	35.000
Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or forestry activities and added value activities	**4.2.1 Installation and commercialization of organic cocoa in deforested areas.**	Included in the grant	Global	35	6.000	210.000	30.000	60.000	60.000	60.000	-	210.000
		Included in the grant	Consultants	14	4.000	56.000	8.000	20.000	28.000		-	56.000
		Included in the grant	Workshops	12	1.000	12.000	1.000	3.000	3.000	3.000	2.000	12.000
		Included in the grant	Communication/ training materials	2	3.500	7.000		3.500	3.500	-	-	7.000
	4.2.2 Sustainable and culturally appropriate promotion of small animal husbandry.	Included in the grant	Global	200	400	80.000	6.000	34.000	20.000	20.000	-	80.000
		Included in the grant	Consultants	85	600	51.000	12.000	15.000	15.000	9.000		51.000
		Included in the grant	Travelling	20	800	16.000	4.000	4.000	4.000	4.000	-	16.000

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
	4.2.3 Value added activities from local production (i.e banana and cassava).	Included in the grant	global	30	3.000	90.000	15.000	30.000	30.000	15.000		90.000
		Included in the grant	Consultants	24	2.500	60.000	15.000	15.000	15.000	15.000	-	60.000
		Included in the grant	Communication/ training materials	2	3.500	7.000		3.500	3.500	-	-	7.000
		Included in the grant	Workshops	12	1.000	12.000	2.000	3.000	3.000	2.000	2.000	12.000
	4.2.4. Installation of Shawi artisanal weaving workshops	Included in the grant	Global	38	2.000	76.000	20.000	20.000	20.000	16.000	-	76.000
		Included in the grant	Communication/ training materials	2	5.000	10.000		5.000	5.000	-	-	10.000
		Included in the grant	Workshops	12	1.200	14.400	1.200	3.600	3.600	3.600	2.400	14.400
		Included in the grant	Consultants	20	2.000	40.000	5.000	9.000	14.000	12.000	-	40.000
		Included in the grant	Travelling	12	800	9.600	1.600	2.400	2.400	1.600	1.600	9.600

TABLE Nº 17: EDA PERU´S BUDGET												E.R 3,7
Outcome/Output/Activities/Task			**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
	4.2.5 Financial literacy for male and female entrepreneurs.	Included in the grant	Communication/ training materials	6	2.500	15.000		7.500	5.000	2.500	-	15.000
		Included in the grant	Workshops	12	1.200	14.400	3.600	2.400	2.400	3.600	2.400	14.400
		Included in the grant	Consultant	6	10.000	60.000	7.500	15.000	15.000	12.500	10.000	60.000
	4.2.6 Technical assistance for local tourism promotion	Included in the grant	Global	1	35.000	35.000	5.000	5.000	10.000	10.000	5.000	35.000
		Included in the grant	Communication/ training materials	4	2.500	10.000		2.500	5.000	2.500		10.000
		Included in the grant	Consultants /year	14	2.500	60.000	7.500	15.000	15.000	12.500	10.00	60.000
		Included in the grant	Travelling	12	800	9.600	1.600	2.400	2.400	1.600	1.600	9.600
						1.068.200	**155.000**	**313.600**	**322.600**	**231.800**	**45.200**	**1.068.200**

TABLE Nº 17: EDA PERU´S BUDGET											E.R 3,7
Outcome/Output/Activities/Task		**UNIT**	**QTY.**	**UNIT COST**	**TOTAL**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total Amount (USD)**
	A. Project Activities Cost (PAC)					**646.200**	**1.179.500**	**1.434.600**	**1.014.300**	**265.600**	**4.540.200**
	B. Project Execution Cost 1.5%					**8.000**	**8.000**	**8.000**	**8.000**	**36.095**	**68.095**
	Travelling (partial)	Global	1							3.095	3.095
	Final Evaluation	Consultant	1	1						25.000	25.000
	Audits	Consultant	1	1		8.000	8.000	8.000	8.000	8.000	40.000
	Total Project Funds (A+B)					**654.200**	**1.187.500**	**1.442.600**	**1.022.300**	**301.695**	**4.608.295**
	C. Implementing entity fee (10%)					**55.607**	**100.937.5**	**122.621**	**86.895.5**	**25.644**	**391.705**
	Total amount of funding requested (A+B+C)					**709.807**	**1.288.438**	**1.566.221**	**1.109.196**	**327.339**	**5.000.000**

Implementing Entity Management Fee Use (8,5%)

Description	Profonanpe services	Estimated Cost of Profonanpe Services (USD)	%
Subproject design and Results Based Management	• Provide training and technical support for subprojects design and implementation. • Detailed screening (technical, legal, financial & social) and risk criteria for a leading partner selection. • Assist with the installation and regular functioning of the Project Technical Committee (PTC) (arrangements and negotiation with government sectors, among others). • Assist in verifying complementarity with other adaptation projects. Share lessons learned. • Monitoring data quality and flow: data sources, collection, management, analysis, and reporting. • Provide guidance and verify quality of report preparation. • Obtain clearances from Adaptation Fund • Respond to information requests, arrange revisions, etc.	$ 58.755.8	15
Monitoring of Environment and Social Management Plan (ESMP)	• Provide technical and operational support for Project team. • Technical support in preparing TORs and verifying expertise for technical positions. • Regular reporting. • Verify technical validity of all reports. • Carry-out supervision missions and field visits. • Identify and resolve the causes of complaints in a timely manner that allows mitigating potential social conflicts and/or environmental impacts. • Management of the Grievances mechanism and provide information on the causes of complaints to prevent them, as well as strengthen monitoring and/or internal control mechanisms as appropriate. • Describe the roles and functions in each phase of the process for resolving complaints. • Oversight the implementation of the AF social and environment policies and update the mitigation plan as necessary. • Provide training and technical assistance to the leading partners in understanding the relevance of the safeguards. • Contribute to feedback on Profonanpe's internal processes, as well as monitoring implemented interventions. • Participate as necessary during Project activities.	$ 235.023	60
Adm. and Financial support	• Prepare the operational manual for project implementation. • Project financial follow-up • Receipt, allocation, and reporting to the AF of financial resources. • Prepare the ToR and supervise annual external audits • Oversight and monitoring of AF funds. • Support and follow-up to project procurements and provide guidance to the leading partners as necessary.	$ $ 39.170.5	10

Description	Profonanpe services	Estimated Cost of Profonanpe Services (USD)	%
Knowledge Management Plan & Communication	• Undertake technical analysis, knowledge maps, validate results and compile lessons learned. • Disseminate technical findings through Profonanpe communications networking • Develop KM capacity to leading partners and support learning activities at local level. • Provide guidance to knowledge collection and sharing. • Review ToR for KM consultant services and communicational products according to Profonanpe an AF protocols	$ 58.755.8	15
TOTAL		**$ 391.705**	**100**

Total Project Execution Cost (PEC) 1.5%

DESCRIPTION	UNIT	QTY.	UNIT COST	TOTAL	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total Amount (USD)
Travelling (partial)	Global					$ -	$ -	$ -		$ 3.095
Final Evaluation	Consultant	1		$ -	$ -	$ -	$ -	$ -	$ 25.000,00	$ 25.000
Audits	Consultant	1			$ 8.000,00	$ 8.000,00	$ 8.000,00	$ 8.000,00	$ 8.000,00	$ 40.000
									TOTAL	68.095

H. Include a disbursement schedule with time-bound milestones.

	Upon signature of Agreement	One Year after Project Start a)	Year 2b)	Year 3	Year 4 c)	Total
Scheduled date	March 2024	March 2025	March 2026	March 2027	March 2028	
Project Funds	$ 654.200	$ 1.187.500	$ 1.442.600	$ 1.022.300	$ 301.695	$ 4.608.295
Implementing Entity Fees	$ 55.607	$ 100.937.5	$ 122.621	$ 86.895.5	$ 25.644	$ 391.705
Total	**$ 709.807**	**$ 1.288.438**	**$ 1.565.221**	**$ 1.109.196**	**$ 327.339**	**$ 5.000.000**

A. **Record of endorsement on behalf of the government[2]** *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:*

Name: Milagros Sandoval Diaz *Position: General Director of Climate Change and Desertification* *Ministry: Ministry of the Environment of Peru*	Date*:* *08,08,* *2022*

[2] 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 entities.

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.*

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 (National Adaptation Plan and National Contributions) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Name & Signature: Anton Willems Delanoy Implementing Entity Coordinator	
Date: *(08, 08, 2022)*	Tel. and email: (511) 218 1097 *awillems@profonanpe.org.pe*
Project Contact Person: Claudia Godfrey Ruiz	
Tel. and Email: (511) 218 1097 *cgodfrey@profonanpe.org.pe*	

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Contend Annexes

Annex 1: EDA Perú: List of Direct and Indirect Beneficiaries.

	List of districts	COD	Departament	Province	
I	**Chancay Lambayeque**				
1	Tocmoche - Chota	101	Cajamarca	Chota	Direct Beneficiaries
2	San Juan de Licupis - Chota	102			
3	Llama - Chota	103			
4	Miracosta - Chota	104			
5	Huambos - Chota	105			
6	Chugur - Hualgayoc	106	Cajamarca	Hualgayoc	
7	Tongod - San Miguel	107	Cajamarca	San Miguel	
8	Calquis - San Miguel	108			
9	Catilluc - San Miguel	109			
10	Yauyucan - Santa Cruz	110	Cajamarca	Santa Cruz	
11	Ninabamba - Santa Cruz	111			
12	Pulan - Santa Cruz	112			
13	Saucepampa - Santa Cruz	113			
14	Catache - Santa Cruz	114			
15	Santa Cruz - Santa Cruz	115			
16	Uticyacu - Santa Cruz	116			
17	La Esperanza - Santa Cruz	117			
18	Sexi - Santa Cruz	118			
19	Chancaybaños - Santa Cruz	119			
20	Tuman - Chiclayo	120	Lambayeque	Chiclayo	Indirect Beneficiaries
21	Oyotun - Chiclayo	121			
22	Monsefu - Chiclayo	122			
23	Reque - Chiclayo	123			
24	Saña - Chiclayo	124			
25	Pucala - Chiclayo	125			

26	Pomalca - Chiclayo	126			
27	Chongoyape - Chiclayo	127			
28	Patapo - Chiclayo	128			
II	**Huallaga Bajo Medio**		Departamento	Provincia	
1	Balzapuerto - Alto Amazonas	202	Loreto	Alto Amazonas	Direct Beneficiaries: Indigenous communities Indirect Beneficiaries Rest of population
2	Yurimaguas - Alto Amazonas	203	Loreto	Alto Amazonas	
3	Caynarachi - Lamas	204	San Martin	Lamas	
4	San Roque de Cumbaza - Lamas	205	San Martin	Lamas	
5	Papaplaya - San Martín	209	San Martin	San Martin	
III	**Santa**				
1	Recuay - Recuay	329	Ancash	Recuay	Direct Beneficiaries
2	Ticapampa - Recuay	330			
3	Catac - Recuay	331			
4	Olleros - Huaraz	310	Ancash	Huaraz	
5	Independencia - Huaraz	311			
6	Tarica - Huaraz	312			
7	Huaraz - Huaraz	313			
8	San Miguel de Aco - Carhuaz	301	Ancash	Carhuaz	
9	Marcara - Carhuaz	302			
10	Shilla - Carhuaz	303			
11	Carhuaz - Carhuaz	304			
12	Yungay - Yungay	334	Ancash	Yungay	
13	Mancos - Yungay	342			
14	Caraz - Huaylas	314	Ancash	Huaylas	
15	Santa Cruz - Huaylas	315			
16	Pueblo Libre - Huaylas	316			
17	Mato - Huaylas	317			

18	Santo Toribio - Huaylas	318			
19	Huallanca - Huaylas	319			
20	Yuracmarca - Huaylas	320			
21	Bambas - Corongo	305	Ancash	Corongo	Indirect Beneficiaries
22	Corongo - Corongo	306			
23	Yupan - Corongo	307			
24	Cusca - Corongo	308			
25	La Pampa - Corongo	309			
26	Santa Rosa - Pallasca	321	Ancash	Pallasca	
27	Pallasca - Pallasca	322			
28	Bolognesi - Pallasca	323			
29	Huandoval - Pallasca	324			
30	Pampas - Pallasca	325			
31	Conchucos - Pallasca	326			
32	Tauca - Pallasca	327			
33	Cabana - Pallasca	328			
34	Chimbote - Santa	332	Ancash	Santa	
35	Macate - Santa	333			
36	Santa Cruz de Chuca - Santiago de Chuco	335	La Libertad	Santiago de Chuco	
37	Angasmarca - Santiago de Chuco	336			
38	Santiago de Chuco - Santiago de Chuco	337			
39	Cachicadan - Santiago de Chuco	338			
40	Quiruvilca - Santiago de Chuco	339			
41	Chao - Viru	340	La Libertad	Viru	
42	Guadalupito - Viru	341			

Annex 2: EDA Perú Cost - Benefit Analysis

EDA Perú Analysis of Benefits and Costs
Early Warning Systems and PAL

Annex 4.5. PRODUCT AND MEASURE NATIONALLY DETERMINED CONTRIBUTIONS - NDC WATER SECTOR
Adaptation Measure: Implementation of early warning systems for floods, droughts, floods and glacial hazards in watersheds vulnerable to climate change.
Product indicator:
Coverage of the Early Warning System for floods caused by heavy rains in basins vulnerable to climate change.
Coverage of the early warning system for droughts in basins vulnerable to climate change.
Coverage of the early warning system for alluvium and glacial hazards in basins vulnerable to climate change.
Benefits and co-benefits of the measures
The EWS will make it possible to alert the population about the potential impact and damage of severe droughts, floods and alluvial hazards associated with climate change on their livelihoods, economic activities, natural capital, among others, providing information and protocols for implementing preventive actions to reduce vulnerability and increase the population's response capacity. EWS generate co-benefits in terms of disaster risk management that can generate higher costs and delay development, generating preventive awareness in the actors involved.

Benefits	Co-benefits
Mitigation and management of risks, preventing social and economic damages.	Raises awareness among the population on water culture and disaster risk management.

IDB (2015). Flood Risk Profile in Peru National Report. Environment Division.
Environment, Rural Development and Disaster Risk Management
1) Unit value of agricultural crops by region Hydrographic region
(US$/m2)

	Unit value (US$/m2)
Costa	0.46
Jungle	0.48
Sierra	0.26
Pastures	0.01 US$/m2

2) Unit value of buildings by region

	Material	Unit value (US$/ m2)
Costa	Masonry (Type II)	144.51
	Concrete (Type I)	321.29
	Wood (Type III)	83.51
	Arithmetic mean	183.11
Jungle	Masonry (Type II)	127.44

	Concrete (Type I)	361.39
	Wood (Type III)	41.89
	Arithmetic mean	176.90
Sierra	Masonry (Type II)	159.86
	Concrete (Type I)	330.51
	Wood (Type III)	87.36
	Arithmetic mean	192.56

IDB (2018). Public investment analysis for disaster risk reduction in Peru. Environment, Rural Development and Disaster Risk Management Division.

Impact of the Measure	Potential loss reduction for flooding	Cost (% of E. V.) for Flooding
Under	5% a 35%	3.5%
Medium	5% a 50%	3.7%
High	10% a 60%	4.0%

The benefit associated with a strategy is defined as the difference between the present value of the economic losses absorbed expressed in the loss excess curve when no mitigation measure is adopted (gross losses) and the losses absorbed when it decides to adopt some mitigation measure (net losses).
Natural hazards with the greatest historical impact in Peru. Source: EM-DAT

Events	Total damage (US$ millions)	Loss of life	Affected	Average per affected USD
Slip	$1,213.50	10,534	790,678	1535
Drought	$296.00	0	3,606,104	82
Extreme temperatures	$94.00	2,020	5,392,620	17
Storms	$12.00	653	667,412	18
Flooding	$3,183.00	2,159	6,071,754	524
Average impact	4,799		16,528,568	290

Information available in The International Disaster Database EM-DAT16 (Emergency Events Database) for Peru, which contains a summary of damages caused by natural events over the last 60 years (1958 to 2017).

Forests

SERFOR (2018). TENTATIVE PROGRAMMING FOR ADAPTATION MEASURES IN THE THEMATIC AREA OF FORESTS.

Adaptation Output (P1): Ecosystems managed with a landscape approach to ensure the provision of ecosystem goods and services in a context of climate change.

MACC1-P1. Implementation of ancestral practices in rural and/or native communities for the sustainable use of ecosystem goods and services and adaptation to climate change.
MACC2-P1. Restoration of ecosystems within the National System of Natural Protected Areas to maintain landscape connectivity and reduce impacts of extreme climate events.

MACC3-P1. Implementation of a national program to monitor forest dynamics to measure the impact of climate change and prioritize adaptation measures.
MACC4-P1. Implementation of sustainable practices for the conservation of ecosystems in watersheds of Natural Protected Areas vulnerable to extreme climate events.
MACC5-P1. Implementation of the monitoring and control system in Natural Protected Areas to reduce vulnerability to climatic and non-climatic effects.

Benefits and co-benefits of the measures

Adaptation Measure	Benefits	Cobenefits
MACC1-P1	Sustainability of the production of forest goods and services through the use of different services provided by forests. Conservation of forests and their functions.	- Increased cultural value through the use of ancestral practices - Increased carbon stocks and reduced GHG emissions. - Improvement of ecosystem services such as water provision and regulation, erosion control, among others.
MACC2-P1	Re-establish the capacity of forests to continue providing economic goods and services to cope with the effects of climate change.	- Increased carbon stocks and reduced GHG emissions - Increased water service provision. - Improved soil erosion control. - Maintenance of genetic diversity.
MACC3-P1	Reduction of costs in the economic activities of goods and services linked to the forest.	- Increase in carbon stocks - Improved productivity of economic activities other than forestry. - Improved risk management of public or private investment project interventions.
MACC4-P1	Improve the benefits from the use of forest ecosystem goods and services.	- Improves water retention by infiltration. - Control of soil erosion. - Tourism benefits due to the conservation of ecosystems and biodiversity. - Carbon stocks are conserved and GHG emissions are reduced.
MACC5-P1	- Reduction of the costs of the loss of goods and services of natural protected areas due to anthropogenic activities.	- Conservation of the landscape beauty service. - Conservation of ecosystems and biodiversity. - Increased carbon sequestration service. Improved biodiversity management activities.

Adaptation output (P5): Rural and native communities have access to timely information systems to implement actions to reduce impacts of extreme climate events on forest systems.

MACC 11-P5: Implementation of early warning system (EWS) for climatic and non-climatic hazards to reduce impact on conservation and sustainable use

Adaptation Measure	Benefits	Cobenefits
MACC11-P5	Avoid the loss of economic benefits from forest goods and services by native and rural communities.	Minimize economic losses in productive activities other than the use of forest goods and services in the face of climatic and non-climatic events. - Generate immediate response actions to warnings of climatic and non-climatic hazards to avoid loss of infrastructure, services and livelihoods.

SERFOR-INEI (2021). Peru Forest Account: A look at the contribution of forests to the economy.

Forest GVA (Millions of Soles 2019)	7,909
Forest GVA (USD 2019)	2,346,884,273
Total Amazon Forest (Has)	73,245,980
Average GVA Forest Ha - To be applied as the value of the minimum benefits provided by the forests that were avoided to be destroyed.	32 USD per ha

Water for agricultural use and agroecology

MIDAGRI (2018). Tentative Programming of the Thematic Area Agriculture - Adaptation.
Annex 4.5. Product and Measurement Sheets Nationally Determined Contributions - NDC Water

Adaptation Measure 1: Improvement and construction of reservoirs for the provision of water services for agricultural use in watersheds vulnerable to climate change.

Output Indicator: Volume of surface water stored in reservoirs for the provision of irrigation water service in basins vulnerable to climate change.

Benefits and Co-Benefits (Effects and impact): The main benefit of reservoirs, reservoirs, microservoirs for agricultural purposes consists of supplying the water resource in times of higher low water and/or prolonged droughts, reducing uncertainty in relation to the delay or advance of the rainy period that serves as an input in agricultural productive processes. It will also make it possible to store atypical surface water runoff from heavy rains and glacier melt, among other phenomena associated with climate change. In both cases, agricultural production will be sustainable, families will have food and economic security, and adaptation processes will be effective in the face of the changes in the regional climate and/or local climate variability that are already being observed.

Benefits	Co-benefits
Increased quantity and timeliness in the provision of water for agricultural use, reducing vulnerability to droughts, floods, and soil erosion associated with climate change. This translates into an increase in family agricultural income (monetary and non-monetary).	Economic savings generated by not having to opt for other technologies to access water. Reduction of productivity losses in crops and livestock. Increased food safety

Adaptation Measure 2: Implementation of interventions related to planting and harvesting water for agricultural water security in watersheds vulnerable to climate change.

Output indicator: Volume (M3) of infiltrated water for aquifer recharge in watersheds vulnerable to climate change
The volume of water infiltrated to the subsoil and the reduction of runoff responds to the following technological options:
Area (m2) of water mirror increased by the construction of oxbow lakes;
Area (ha) of reforestation/afforestation and revegetation;
Length (ml) of Infiltration Trenches.

Benefits and Co-benefits: Families increase their water availability in times of greater water scarcity through the management and care of springs and puquiales, the promotion of good agronomic and water practices; and the adequate use of pastures, with rotation areas to sustain agricultural productivity. It contributes to the reduction of water runoff and consequent soil erosion, favoring the recovery and recharge of aquifers and, in general, the hydric consolidation of the micro-watersheds. It also contributes to the revaluation of traditional knowledge, the strengthening of community work, and the promotion and conservation of water-related uses and customs, among other co-benefits.

Benefits	Co-benefits
Increases the availability of water for agricultural use in the dry season in quantity, quality and opportunity for agricultural use. It contributes to water quality by functioning as a natural filter. Promote better conservation of soil and ecosystems, protecting them from erosion and sediment dragging. Reduces runoff, contributing to the reduction of landslides. This translates into an increase in family agricultural income: monetary (sales) and non-monetary (self-consumption).	Improvement of the soil's productive support capacity, resulting in improved agricultural and livestock production conditions for the families or communities involved in the measures. Revaluation of ancestral knowledge, uses and customs related to water. Strengthening of community work– Extends the period for agricultural production. Aquifer recharge serves as a water reserve for agricultural and other water uses. Increased food safety

Adaptation Measure 3: Implementation of hydraulic infrastructure for conduction, distribution and application of water for irrigation in hydrographic basins vulnerable to climate change.

Output indicator: Irrigated area in watersheds vulnerable to climate change.
Benefits and Co-benefits: The improvement of living conditions in rural areas is linked to the development of agriculture and the intervention of the State to provide adequate goods and services in relation to the supply of water for irrigation. These projects make it possible to improve agricultural production levels and crop yields, but also to expand the areas dedicated to agriculture, access to new markets and improve farmers' incomes, raising the quality of life of their families, and strengthening formality in terms of access to irrigation water supply, among other things.

Benefits	Co-benefits
Improve the opportunity to access water for irrigation and thus increase their resilience. Improved efficiency in the conduction and use of water resources, reducing vulnerability to droughts by making better use and increasing irrigation opportunities. Generates an increase in the productivity of the sector, improving farmers' livelihoods.	Increased income from production and increased possibility of expanding the agricultural frontier, improving livelihoods and coping capacities. Increases the economic income of the population that participates in projects. Formalizes and strengthens Water Users Organization (WUO) implementing IWRM criteria and climate change adaptation.

Adaptation Measure 4: Implementation of protection infrastructure in the hydraulic sectors for agricultural use against the impacts of extreme events associated with climate change.
Output indicator: Water sectors with physical protection against hazards in watersheds vulnerable to climate change.
Benefits and Co-benefits: Floods in our country have caused many economic losses, which over time have been accentuated by the impact of climate change, the measure is already being implemented by the State, however the consideration of risk analysis in a context of climate change in studies and project formulation will reduce disruptions and negative impacts on water infrastructure and agricultural production areas, likewise the preventive implementation of such actions will allow the incurring of costs for replacement or repair, and additional costs until the provision or supply of water resources is restored, among others.

Benefits	Co-benefits
It protects the irrigation infrastructure from damage and improves the conduction and use of water resources and avoids interruptions in the irrigation service. Generates an increase in the productivity of the sector, improving farmers' livelihoods. Improve the opportunity to access water for irrigation, thereby increasing their resilience.	Improves agricultural soil conservation and erosion control. Generates economic savings by reducing losses in infrastructure. Reduces crop losses due to lack of water. Reduction in the occurrence of humid diseases or crop pests associated with water resources. Generates shorter irrigation shifts

Adaptation Measure 5: Implementation of technified irrigation systems in watersheds vulnerable to climate change.
Output indicator: Technified irrigated area for agricultural production in watersheds vulnerable to climate change.
Benefits and Co-benefits: Technified irrigation is one of the most useful practices for the development of agriculture, representing multiple advantages with the technification of irrigation: greater efficiency in the use of water leads to a decrease in water consumption in the plots and consequently reduction in shifts and expenses for tariff and fertilizers, likewise, it generates co-benefits by increasing production, better quality of products, higher income and profits, and in general greater availability of time to devote to other activities.

Benefits	Co-benefits
Reduction of water consumption and improvement of efficiency in the conduction, distribution and application of water resources, reducing the vulnerability of producers to droughts associated with climate change. Increased irrigation timeliness by avoiding long irrigation shifts, and reduced tariff costs ... Improved access to water in general and direct application to the crop in the case of drip irrigation. Reduces soil erosion and soil washing, improving the productivity and livelihoods of small and medium-sized farmers. It generates an increase in agricultural productivity, improving the livelihoods of small and medium farmers and, therefore, their response capacity.	Formalizes and strengthens Water Users Organization (WUO) implementing IWRM criteria and climate change adaptation. Increased income from production and increased possibility of expanding the agricultural frontier, improving livelihoods and coping capacities. ... Increases the economic income of the population that participates in projects.

Measure 6. Conservation and recovery of natural infrastructure for the provision of water ecosystem services in watersheds vulnerable to climate change.
Output Indicator: Area of degraded ecosystems that provide water regulation ecosystem services that require recovery in watersheds vulnerable to climate change (outside NPAs).
Benefits and Co-benefits: Ecosystems as natural and semi-natural infrastructure contribute directly to the conservation and increase of ecosystem services of water provision and regulation, both processes intervene in the attributes of quality,

quantity and timeliness of water sources. The composition, structure and functions of the ecosystems or natural infrastructure in the watersheds, as well as the way they interact with other environmental pressures and forms of land and watershed management will determine their contribution to the generation of other co-benefits such as biodiversity preservation, landscape conservation, among others.

Benefits	Co-benefits
Conservation and recovery of the ecosystemic service of water regulation.	Conservation and recovery of other ecosystem services, such as biodiversity and landscape.

Economic evaluation of the measure with the implementation of the Agricultural-Irrigation use measures.
Profits are mainly explained by the increase in agricultural production. This increase (private profit) is due to:
Increasing the area to be used in crop production.
Increased yields, due to the greater availability of water, which acts as a production factor.
Agricultural production is divided into two seasons: a) Main season and b) Rotation season.
The social benefits are comprised of reduced soil degradation and water savings from increased irrigation efficiency. Using World Bank data, a reduction in soil degradation is estimated to be equivalent to 3.5% of the Agricultural GVP. The value of water savings reported by the project in m3 is multiplied by the opportunity cost of the resource.
Water for consumer use

MIDAGRI (2018). Tentative Programming of the Thematic Area Agriculture - Adaptation.
Annex 4.5. Product and Measurement Sheets Nationally Determined Contributions - NDC Water
Adaptation Measure: Expansion, optimization and/or improvement of the production and regulation capacity of drinking water systems.
Output indicator: EPS vulnerable to climate change with sustainable unit production capacity / EPS vulnerable to climate change with adequate regulatory capacity.
Benefits and Co-Benefits: The benefit of the measure is to optimize the production capacity of the vulnerable EPS to values that allow it to face the effects of climate change on current and future water supply. Regarding co-benefits, the measure contributes to improve service continuity and optimize production costs.
In addition to optimizing the drinking water storage/regulation capacity of vulnerable EPSs to values that allow them to face climate change. In terms of co-benefits, the measure contributes to improving service continuity and optimizing distribution costs.

Benefits	Co-benefits
The production capacity of the vulnerable EPS is optimized. In addition to storage/regulation capacity.	Improved continuity of service Reduction of production costs and distribution costs

Adaptation Measure: EPSs that incorporate the MERSE model for the implementation of natural infrastructure for the conservation, recovery and sustainable use of water ecosystem services in areas vulnerable to climate change.
Note: Listed as part of the PAL
Output indicator: Number of vulnerable EPSs that have MRSE approved by SUNASS in their tariff structure.

Benefits and Co-Benefits: The benefits are associated with the implementation of interventions that allow the recovery, conservation and sustainable use of water ecosystem services considering the current and potential effects of climate change. In co-benefits, it contributes to water regulation and quality, as well as reducing sediment control costs.

Benefits	Co-benefits
Recovery, conservation or sustainable use of water ecosystem services in urban areas vulnerable to climate change that have an impact on the quantity, quality and timeliness of the raw water captured by the EPS.	Reduction of EPS operating costs. Improved public perception of HPS management

Tudela, J. - Leos, J. (2018). Estimation of economic benefits from improvements in basic sanitation services through choice experiments. In: Revista Chapingo serie ciencias forestales y del ambiente Vol. 24, N° 02.
Introduction: The management of basic sanitation services in Peru is considered policy high priority.
Objective: Estimate the economic benefits of an improvement in the provision of health care services.
basic sanitation (water, sewerage and water treatment) in Puno, Peru.
Materials and methods: The economic benefits were estimated from the data obtained. in a survey of 392 heads of

household. The econometric estimates were made using a choice experiment with multinomial logit and mixed logit models. Results and discussion: An aggregate marginal willingness to pay of PEN 9.95 (USD 3.32) per month per household was estimated; considering the total number of favored households, this amount represents a measure of economic benefit.
USAID-ICCA (2015). Economic valuation of the quality and reliability of drinking water services in Tarapoto through choice experiments.
Willingness to pay for each of the options that the company has to ensure water supply: protect and reforest the current source of supply or change to a new source. The improvement in the users' welfare resulting from changing the intervention strategy, choosing to protect and reforest the current source of supply and not looking for new sources, is 5.62 soles per month per user. This same change but adding a reduction in the percentage of turbidity in the water (between 50 and 75%), generates a welfare improvement of 7.56 soles per month.
The users of this public service would be willing to pay the sum of 7 soles per month, as an additional amount in their bill, for the improvement in the quality of the drinking water supply service and for the conservation of the current water source through reforestation, with the attribute "water quality: turbidity" accounting for 41% of this value (2.88 soles). The value of conserving the current water source represents 36% of the total value (2.54 soles), the value of increasing the hours of water supply represents 15% of the total value (1.03 soles), while the value of ensuring that the EPS has access to the water resource, regardless of its origin, represents 8% of the total value (0.55 soles).

Family Small Businesses - Value Chains

MIDAGRI (2018). Tentative Programming of the Thematic Area Agriculture - Adaptation.
Adaptation output: Informed agricultural producers develop adaptive technological innovations to address climate change in agricultural value chains. P1-CV
MACC2-P1-CV: Implementation of adaptive technological innovation services for climate change in agricultural value chains.
MACC2-P1-CV: Innovation in the different phases of the agricultural value chain will define adaptive and GHG emission reduction technologies according to the prioritized agricultural products.
Benefits and Co-Benefits

Benefits	Co-benefits
Use of agrobiodiversity resources that have begun to show a level of competitiveness, support for this type of farmer will be key to improving the competitiveness of the small producers who now do not receive technical assistance and do not develop innovations	Adoption of environmentally viable technologies improves productivity, environmental sustainability and efficient use of natural resources. Families strengthen technical capabilities, improve decision making, adopt best practices, solve problems, generate changes and/or take advantage of market opportunities.

Adaptation output: Organized agricultural producers access markets for agricultural value chains in areas vulnerable to climate change. P2-CV
MACC3-P2-CV: Implementation of business strategies that incorporate the management of risks and opportunities in the face of climate change.
MAC4-P2-CV: Added value of agricultural products in value chains in areas vulnerable to climate change.
Product indicators:
Farmers with business plans incorporating risk management and risk management opportunities for value chains in the face of climate change.
Business plans that develop added value through primary transformation in value chains in areas vulnerable to climate change.
No. of hectares of certified organic crops in areas vulnerable to climate change
Benefits and Co-Benefits

Benefits	Co-benefits
Business plans allow for articulation with markets, especially alternative markets, and should also consider risk management and climate change opportunities in the proposed value chain.	Sustainable use of natural resources, especially agrobiodiversity. Increase in family income
Adding value to agricultural production and its retention at origin. Promotes income diversification in agricultural and agro-industrial units of family or peasant agriculture. Reduction of post-harvest losses	Access to dynamic markets Development of a higher value-added supply (agroexport), in order to improve competitiveness and sustainability and contribute to the achievement of development processes.

Benefit Cost - Consistency Matrix

Outputs	Coverage of Effects and impacts	Indicators for Effects	Impacts	Coverage by watershed			
				Total	Santa	Parana pura	Chancay Lambay.
				Target	Target	Target	Target
Component 1: Capacity building to design, implement and evaluate robust climate change adaptation projects at sub-national level.							

Outputs	Coverage of Effects and impacts	Indicators for Effects	Impacts	Coverage by watershed			
				Total	Santa	Parana pura	Chancay Lambay.
				Target	Target	Target	Target
	Number of direct and indirect districts involved.			75	42	5	28
Output 1.1 Increased innovation in subnational entities through the implementation of EDA-Peru Facility.	Andean and Amazonian & Association community.			226	50	126	50
Component 2: Reduced exposure to climate-related hazards and threats							
Outcome 2: Reduced exposure to climate-related hazards and threats	Districts covered by EWS (direct beneficiaries)			44	20	5	19
	Families covered by the EWS.			120,369	72,213	26,729	21,427
	Population covered by EWS.			501,014	290,106	141,447	69,461
			Reduction in the number of affected families				
			Reduction of destroyed homes				
		Reduced number of cropping areas damaged.					
		Reduced number of irrigation canals damaged					
	Districts with Local Climate Change Plans (LCCP).			44	20	5	19
		Men trained in climate change adaptation measures		300	100	100	100
		Women trained in climate change adaptation measures		300	100	100	100
		Indigenous women and leaders trained in Climate change Adaptation.		150	50	50	50
			Reduced number of life lost due to climate related events.	500		500	
	Health centers with EWS.			44	20	4	20

Outputs	Coverage of Effects and impacts	Indicators for Effects	Impacts	Coverage by watershed			
				Total	Santa	Parana pura	Chancay Lambay.
				Target	Target	Target	Target
Output 2.1 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	Andean and Amazonian communites. & local Association	Number of local organizations making decision based on climate information.		226	50	126	50
Output 2.3 Targeted population groups covered by adequate risk reduction systems	Technical dossiers for public investment	New families with drinking water.		27,994	14,370	5,632	7,992
		Families with climate resilient dwellings.		2,770	880		1,890
		New families with sanitation services.		11,663	5,725	5,938	
		Irrigation users with permits		7,000	4,000		3,000
		New Families with access to renewable energy		10,433	8,543		1,890
Output 2.2 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.	Andean and Amazonian communites. & local Association trained in local adaptation			226	50	112	50
	Indigenous communities with livelihood plans that include DRM and climate change adaptation			112		112	
	Communities recovering ancestral knowledge to increase their resilience.	Women benefitting from indigenous knowledge		122	10	112	0
	Number of Women involved in innovative initiatives related to climate change adaptation.			100	35	30	35
3.1.7 Establishment of an organizational mechanism for enhanced port and transportation management on the Paranapura River	Number of Shawi communities covered			112		112	
		Improvement of river and port transportation on the Paranapura River.	Reduction of the gap in the average estimated mortality rate in children < 5a x 1000 inhab.				
			Reduction in the sum of Potential Years of Life Lost (with respect to the year 2021)				

Outputs	Coverage of Effects and impacts	Indicators for Effects	Impacts	Coverage by watershed			
				Total	Santa	Parana pura	Chancay Lambay.
				Target	Target	Target	Target
Outcome 3 Increased ecosystem resilience in response to climate change and variability-induced stress.							
Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability.		Communites with Forest Management permits	(Increase in household income)	112		126	
			Hectares of district forest loss avoided (cumulative 10 years post project)	15,763		15,763	
Output 3.2, Natural infrastructure for water regulation, soil conservation and risk reduction of floods and extreme rains		Average irrigated hectares per household	(Increase in household income)	1.6	1.2		2.1
		Hectares with technified irrigation		4,044	820		3,224
	Number of irrigation committees			60	50		10
		Number of New families with technified irrigation		2,500	1,000		1,500
Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability.	Number of Families covered	Families benefited, reforestation, native species, bioremediation	(Increase in household income).	1,500	1,000		500
		Families with agro-ecological practices	(Increase in household income)	7,500	5,000	1,000	1,500
Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)	Included in 3.1	Families implementing agro-ecological and conservationist practices	(Increase in household income)	1,400	200		200
Outcome 4: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.							
Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)	Andean and Amazonian communites. & local Association increase resilience	Women benefitting from indigenous knowledge		132	10	112	10
		Shawi indigenous organization benefiting from indigenous knowledge			2	4	0
Output 4.2 Increase the resilience of	Families with cocoa production.	Families that improve their annual income by at least USD 350 per year		150		150	

Outputs	Coverage of Effects and impacts	Indicators for Effects	Impacts	Coverage by watershed			
				Total	Santa	Parana pura	Chancay Lambay.
				Target	Target	Target	Target
indigenous and local communities through non-agricultural or forestry activities and added value activities.		Women earning a minimum of US$350 per year		100		100	
		Families that increase their productive physical assets by a minimum of USD 1,000		250		250	
	women's organizations involved in the raising of small animals.	Families that improve their annual income by at least USD 350 per year		700	300	100	300
		Families that increase their productive physical assets by a minimum of USD 1,000		1150	500	150	500
	Families engaged in value-added activities.	Families that improve their annual income by at least USD 350 per year		450	150	150	150
		Women earning a minimum of US$350 per year		300	100	100	100
		Families that increase their productive physical assets by a minimum of USD 1,000		750	250	250	250
	Men and women engaged in tourism activities.	Families that improve their annual income by at least USD 350 per year		350	100	100	150
		Women earning a minimum of US$350 per year		225	75	50	100
		Families that increase their productive physical assets by a minimum of USD 1,000		500	175	150	175
		Entrepreneurial small producers:		2,650	925	800	925
		§ Men		950	300	300	325
		§ Women		1325	475	350	500
		§ Young women		200	75	75	50
		§ Young men		200	75	75	50

Benefits from Early Warning Systems coverage.

Benefits	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Families covered by the EWS:			14,511,119			14,511,119			14,511,119	
Reduction in the number of affected families			1,532,650			1,532,650			1,532,650	
Reduction of destroyed homes			12,585,681			12,585,681			12,585,681	
Reduced number of cropping areas damaged.			392,788			392,788			392,788	

		Unit Cost	Sum	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Santa													
Reduction in the number of affected families	895	290	778,650			259,550			259,550			259,550	
Reduction of destroyed homes	297	9,628	8,578,548			2,859,516			2,859,516			2,859,516	
Reduced number of cropping areas damaged.	7	2,600	57,564			19,188			19,188			19,188	
Reduced number of irrigation canals damaged	-												
Paranapura													
Reduction in the number of affected families	3,715	290	3,232,050			1,077,350			1,077,350			1,077,350	

		Unit Cost	Sum	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Reduction of destroyed homes	969	8,845	25,712,415			8,570,805			8,570,805			8,570,805	
Reduced number of cropping areas damaged.	2.0	4,800	28,800			9,600			9,600			9,600	
Reduced number of irrigation canals damaged	200												
Chancay Lambayeque													
Reduction in the number of affected families	675	290	587,250			195,750			195,750			195,750	
Reduction of destroyed homes	120	9,628	3,466,080			1,155,360			1,155,360			1,155,360	
Reduced number of cropping areas damaged.	140	2,600	1,092,000			364,000			364,000			364,000	
Reduced number of irrigation canals damaged	120												

Benefits from avoided forest loss

Benefits		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Hectares	1,688	1,662	1,637	1,612	1,587	1,563	1,539	1,515	1,492	1,469
Hectares of district forest loss avoided	USD	54,014	53,188	52,373	51,572	50,782	50,005	49,239	48,486	47,743	47,012

Forest Value per hectares.

Gross Value of Forest Production (Millions of Soles 2019)	7,909
Gross Value of Forest production (USD 2019)	2,346,884,273
Total Amazonian Forest (Has)	73,245,980
Gross Value of average Forest Ha	32

Source: SERFOR-INEI (2021). Peru Forest Account: A look at the contribution of forests to the economy.
Forest before and projected over the life of the project.

Distrito	No Forest al 2000[1]	Forest al 2000	Lost Forest 2001-2021	Hidro-grafía[3]	Forest to 2021	Annual Deforestation rate 2001-2021	Forest in 2023	Forest in 2024 Proj_ Year 1	Forest in 2025 Proj_ Year 2	Forest in 2026 Proj_ Year 3	Forest in 2027 Proj_ Year 4	Forest in 2028 Proj_ Year 5
	Has		Has	Has	Has							
Cuenca Paranapura	126,690	667,580	88,084	21,009	579,496	0.68%	571,974	568,270	564,602	560,971	557,377	553,817
Balzapuerto - Alto Amazonas	24,370	270,766	24,420	5,345	246,346	0.45%	244,129	243,027	241,931	240,840	239,753	238,672
Yurimaguas - Alto Amazonas	70,500	142,008	40,684	10,955	101,324	1.62%	98,067	96,478	94,915	93,377	91,864	90,375
Caynarachi - Lamas	21,467	104,005	16,102	1,664	87,904	0.80%	86,496	85,800	85,110	84,426	83,747	83,073
San Roque de Cumbaza - Lamas	5,008	59,647	2,016	568	57,631	0.16%	57,442	57,348	57,254	57,160	57,066	56,973
Papaplaya - San Martín	5,345	91,154	4,862	2,478	86,291	0.26%	85,841	85,616	85,393	85,169	84,947	84,725

District	Lost Forest 2001-2021	Forest in 2028 Proj_ Year 5	Forest loss following the trend of the annual rate 2001-2021									
	Has		T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10
Cuenca Paranapura	88,084	553,817	3,524	3,489	3,455	3,421	3,388	3,355	3,322	3,290	3,259	3,227
Balzapuerto - Alto Amazonas	24,420	238,672	1,077	1,072	1,067	1,062	1,057	1,053	1,048	1,043	1,038	1,034
Yurimaguas - Alto Amazonas	40,684	90,375	1,464	1,441	1,417	1,394	1,372	1,350	1,328	1,306	1,285	1,264
Caynarachi - Lamas	16,102	83,073	668	663	657	652	647	642	636	631	626	621
San Roque de Cumbaza - Lamas	2,016	56,973	93	93	93	93	93	93	92	92	92	92
Papaplaya - San Martín	4,862	84,725	221	221	220	220	219	219	218	217	217	216

Distrito	Annual rate of deforestation 2029-2038	Forest in 2028 Proj_ Year 5	Reduced forest loss									
			T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10
Total Distritos Paranatura	Esperada	469,093	1,709	1,700	1,692	1,683	1,675	1,666	1,658	1,649	1,641	1,633
Balzapuerto - Alto Amazonas	0.25%	238,672	597	595	594	592	591	589	588	586	585	583
Yurimaguas - Alto Amazonas	0.80%	90,375	723	717	711	706	700	695	689	683	678	673
Caynarachi - Lamas	0.40%	83,073	332	331	330	328	327	326	324	323	322	321
San Roque de Cumbaza - Lamas	0.10%	56,973	57	57	57	57	57	57	57	57	57	56

Papaplaya - San Martín	0.15%	84,725	127	127	127	127	126	126	126	126	126	125

Distrito	**Forest loss avoided**	**Forest loss avoided**									
	Has	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10
Total Districts Paranatura	15,763	1,688	1,662	1,637	1,612	1,587	1,563	1,539	1,515	1,492	1,469
Balzapuerto - Alto Amazonas	4,651	480	477	473	470	467	463	460	457	454	450
Yurimaguas - Alto Amazonas	6,646	741	723	706	689	672	655	639	623	607	592
Caynarachi - Lamas	3,180	336	332	328	324	320	316	312	308	304	301
San Roque de Cumbaza - Lamas	360	36	36	36	36	36	36	36	36	36	36
Papaplaya - San Martín	926	94	94	94	93	93	92	92	92	91	91

Increased welfare benefits from basic services

Benefits	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Marginal willingness to pay for the families with drinking water	92,940	92,940	92,940	92,940	92,940	92,940	92,940	92,940	92,940	92,940

		Unit Cost
Monthly family benefit of having basic services	USD	3.32
Annual family benefit of having basic services	USD	39.84

New families with drinking water.	27,994	
Santa		
New families with drinking water.	14,370	
Paranapura		
New families with drinking water.	5,632	
Chancay Lambayeque		
New families with drinking water.	7,992	

Source: Tudela, J. - Leos, J. (2018). Estimation of economic benefits from improvements in basic sanitation services through choice experiments. In: Revista Chapingo serie ciencias forestales y del ambiente Vol. 24, N° 02.

Economic benefits were estimated from data obtained from a survey of 392 household heads. Econometric estimates were made by means of a choice experiment with multinomial logit and mixed logit models.

Results and discussion: An aggregate marginal willingness to pay of PEN 9.95 (USD 3.32) per month per dwelling was estimated; considering the total number of favored households, this amount represents a measure of economic benefit.

Benefits from increased income from the transition to diversified organic farming.

Benefits		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Families implementing agro-ecological and conservationist practices	USD	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000

	Incremental Value	Agroecology	Conventional agriculture

		USD	USD
Total average annual income (Sum of Gross value of production - Costs)	1,500	6,500	5,000
Agriculture income produce plus derivatives		3,500	3,000
Livestock income plus derivatives		2,500	2,000
Overall Income		500	
Horticulture, aromatic herbs and fruits			
Nutritional and pharmaceutical products			
Recovery of native products			

Source: Surveys Participatory Guarantee System 2023. SGP Grau - Apurímac case.

Benefits from the increase in income and physical assets from business ventures.

Benefits	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Families that improve their annual income	927,500	927,500	927,500	927,500	927,500	927,500	927,500	927,500	927,500	927,500
Men	358,750	358,750	358,750	358,750	358,750	358,750	358,750	358,750	358,750	358,750
Women	428,750	428,750	428,750	428,750	428,750	428,750	428,750	428,750	428,750	428,750
Young women	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Young men	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Families that increase their productive physical assets	2,650,000									
Men	925,000									
Women	1,325,000									
Young women	200,000									
Young men	200,000									

Increased income from business ventures	Goal	Increase income	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Santa	475											
§ Men	400	350	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000
Women	375	350	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250
§ Young women	75	350	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250
§ Young men	75	350	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250

Increased income from business ventures	Goal	Increase income	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Paranapura	375											
§ Men	300	350	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000
Women	350	350	122,500	122,500	122,500	122,500	122,500	122,500	122,500	122,500	122,500	122,500
§ Young women	75	350	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250
§ Young men	75	350	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250	26,250
Chancay Lambayeque	375											
§ Men	325	350	113,750	113,750	113,750	113,750	113,750	113,750	113,750	113,750	113,750	113,750
Women	500	350	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000
§ Young women	50	350	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500
§ Young men	50	350	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500

The target increase in income per person is estimated in reference to the minimum amount received by a beneficiary of a JUNTOS-type program.

Increase in the physical assets from business ventures	Goal	Increase in physical assets	Year 1	Year 2-10
Santa				
§ Men	300	1000	300,000	0
Women	475	1000	475,000	
§ Young women	75	1000	75,000	

Increase in the physical assets from business ventures	Goal	Increase in physical assets	Year 1	Year 2-10
§ Young men	75	1000	75,000	
Paranapura				
§ Men	300	1000	300,000	
Women	350	1000	350,000	
§ Young women	75	1000	75,000	
§ Young men	75	1000	75,000	
Chancay Lambayeque				
§ Men	325	1000	325,000	
Women	500	1000	500,000	
§ Young women	50	1000	50,000	
§ Young men	50	1000	50,000	

Annex 3: EDA Peru Alignment with National Contributions Adaptation Measures

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
1	AGRI	Comp.3. Output 3.1 Water /Forest ecosystem services in vulnerable	AGRI1	Agricultural soils conditioned with soil management and conservation practices	Implementation of good soil fertilization practices in areas vulnerable to hazards	1.Availability of technological packages for sustainable soil fertilization in the face of climate change-related hazards.	Percentage of farmers implementing good fertilization practices in sufficient quantity of

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
		watersheds are resilient to climate change and climate variability.		improve their productive capacity in areas vulnerable to hazards associated with climate change.	associated with climate change.	Sensitization of suppliers, technical agents and agricultural producers for the development of fertilization technology packages in the context of climate change.	soils in areas vulnerable to climate change hazards.
2	AGRI		AGRI2	Agricultural soils conditioned with soil management and conservation practices improve their productive capacity in areas vulnerable to hazards associated with climate change.	Implementation of soil erosion management and control technologies in areas vulnerable to hazards associated with climate change.	Intra- and inter-institutional coordination for the transfer of soil conservation technologies in the face of the intensification of hazards associated with climate change.	Number of farmers receiving technical assistance for the implementation of soil erosion management and control technologies in areas vulnerable to hazards associated with climate change.
3	AGRI		AGRI3	Agricultural producers protecting crop areas in critical areas from flooding	Implementation of technologies to protect crop areas in critical flood zones.	Intra- and inter-institutional coordination for the development of practices and infrastructure to protect soils and crops against flooding. Strengthen monitoring and early warning systems in rural areas with crop growing areas.	Number of interventions with protection technologies in crop areas in critical flood zones .
4	AGRI		AGRI4	Soils degraded by intensive agricultural use are recovered for productive processes resilient to associated hazards	Implementation of recovery technologies for agricultural soils degraded by salinization in areas vulnerable to climate change.	Sensitization of public and private stakeholders for the implementation of technological packages for soil recovery and/or restoration in the context of climate change.	Number of farmers developing technologies for the recovery of degraded agricultural soils in areas vulnerable to climate change.
5	AGRI		AGRI5	Producers have and implement good agricultural practices considering the effects of climate change.	Productive diversification in crops and livestock with greater vulnerability to climate change.	3. Raise awareness and strengthen the capacities of producers in productive diversification considering the effects of climate change.	Percentage of producers that diversify their production systems in crops and livestock with greater vulnerability to climate change Number of producers that implement Agricultural and Livestock Production

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
							Reconversion Projects (PRPA) considering the effects of climate change.
6	AGRI		AGRI7	Producers are adequately managing the feeding of livestock in areas vulnerable to hazards associated with climate change.	Management of natural grasslands to ensure feed for livestock and reduce their vulnerability to climate change.	4. Capacity building and technology transfer to producers in the management and conservation of natural grasslands.	Number of hectares of natural grasslands managed in areas vulnerable to climate change
7	AGRI		AGRI8	Producers manage the feeding of livestock in areas vulnerable to hazards associated with climate change.	Management and conservation of cultivated pastures as feed supplementation for livestock in vulnerable areas with hazards associated with climate change.	Capacity building and technology transfer to producers in the management and conservation of cultivated pastures, considering the context of climate change. 3. Coordination with regional and local governments for the management and conservation of cultivated pastures.	Number of hectares of cultivated pasture installed in areas vulnerable to hazards associated with climate change
8	AGRI	Comp. 4 Output 4.1 Increase the resilience of crops to climate change through conservation of agrobiodiversity (ABD)	AGRI10	Agricultural producers accessing breeding services and transfer of resilient genetic resources to adapt to climate change.	In situ and ex situ conservation of agrobiodiversity (ABD) to increase crop resilience to climate change.	3. Capacity building and transfer to producers on the importance of agrobiodiversity conservation.	Number of technical files for the establishment of agrobiodiversity zones sensitive to climate change evaluated with technical opinion.
9	AGRI	Comp. 1 Output 2.1 Relevant threat and hazard information generated and disseminated to	AGRI12	Agricultural production areas have mechanisms to protect against hazards associated with climate change.	Design and implementation of an early warning system (EWS) to reduce impacts in vulnerable areas with hazards associated with climate change.	1. Identify the line body that will be responsible for the design and implementation of the EWS, which in turn must be established within the MINAGRI Organization and Functions Regulation. 2. Promote the generation of agrometeorological information at the micro level.	Number of early warning systems (EWS) implemented in areas vulnerable to hazards associated with climate change.

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
10	AGRI	stakeholders on a timely basis.	AGRI14	Informed agricultural producers develop adaptive technological innovations to address climate change in agricultural value chains	Implementation of strategic agroclimatic information services for adaptation to the effects of climate change.	Institutional arrangements (conventions, contracts and agreements) for the development of agroclimatic information services in the context of climate change.	Percentage of farmers accessing agro-climatic information on the effects of climate change
11	AGRI	Comp. 4. Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or forestry activities and added value activities	AGRI15	Informed agricultural producers develop adaptive technological innovations to address climate change in agricultural value chains	Implementation of adaptive technological innovation services for climate change in agricultural value chains.	3. Institutional coordination for the dissemination and adoption of technologies and technological packages adaptive to climate change in agricultural productivity. Capacity building of professionals, technicians and technical assistance service providers for the adoption of technologies and technological packages that generate resilience to climate change.	Number of agricultural producers with technical assistance for technological innovation adaptive to climate change in agricultural value chains
12	AGRI		AGRI17	Organized agricultural producers gain access to markets in agricultural value chains in areas vulnerable to climate change.	Value added of agricultural products in value chains in areas vulnerable to climate change.	Promotion of access to green markets for value-added agricultural products under climate change conditions.	Number of business plans that develop value added through primary processing in value chains in areas vulnerable to climate change Number of hectares of certified organic crops in areas vulnerable to climate change
13	FOREST	Comp. 2 Output 2.2.2 Recovery of ancestral knowledge of Andean and Amazonian indigenous communities to increase resilience.	BOS1	Recovery of ancestral knowledge and practices in the sustainable use of ecosystem goods and services to adapt to the effects of climate change.		3. Capacity building of indigenous peoples and their organizations to incorporate ancestral knowledge and practices in their activities and management documents and adapt to the effects of climate change. The identification and implementation of financial and non-financial incentives for the implementation of ancestral practices in the	Number of rural and/or native communities that implement ancestral practices for the sustainable use of ecosystem services to improve their adaptation to the effects of climate change.

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
						sustainable use of ecosystems to adapt to the effects of climate change. Incorporation of ancestral practices in the sustainable use of ecosystems to adapt to the effects of climate change in budgetary programs.	
14	FOREST	Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability	BOS8	Implementation of control, surveillance and inspection actions in forests to reduce vulnerability to climatic and non-climatic effects.		1. Adoption of institutional agreements for the implementation of control, surveillance and inspection actions in forests.	Percentage of forest cover that implements control, monitoring and enforcement actions to reduce vulnerability to climate and non-climate impacts.
15	FOREST		BOS10	Strengthen the use of technologies to address the effects of climate change.		1. Systematization of technologies used in the management and sustainable use of forests to reduce the risks of climate change effects.	Number of users strengthen their capacities in the use of technologies for the management and sustainable use of forests in the face of climate change effects.
16	FOREST		BOS11	Implementation of the national and subnational early warning system for hazards associated with climate change to reduce the impact on forest ecosystems.		4. Strengthening the capacity of rural communities and indigenous peoples to develop and implement sustainable forest and wildlife management plans.	Number of national and subnational EWS for climate hazards associated with climate change implemented.
17	FOREST		BOS12	Implementation of strategic production chains in rural and native communities to reduce risks from the effects of climate change.		4. Strengthening the capacity of rural communities and indigenous peoples to develop and implement sustainable forest and wildlife management plans.	Percentage of farming communities and indigenous peoples that implement strategic production chains to reduce climate change risks.
18	FISHING	Output 4.2 Increase the resilience of indigenous and local communities through non-agricultural or	PAC6	Capacity building in good practices for economic diversification and complementary activities for artisanal fisheries.		3. Promote the diversification of artisanal fishing activities in the face of the risks and opportunities associated with climate change.	Number of artisanal fishery agents trained in economic diversification and complementary activities under climate change scenarios.

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
		forestry activities and added value activities					
19	HEALTH	Comp. 2 Output 2.1 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	SAL3	Strengthening public health warning systems for climate change risk management.		5. Design and implementation of a community surveillance system linked to the epidemiological and sanitary monitoring and surveillance system that incorporates climate scenarios.	Number of climate change disease surveillance system reports disseminated.
20	HEALTH		SAL5	Transfer of healthy practices in the face of the increase in contaminated food diseases related to the effects of climate change.		Systematization of ancestral practices for food preservation	Number of families developing healthy practices in response to the increase in diseases transmitted by contaminated food and water.
21	HEALTH		SAL7	Strengthening actions for information and dissemination of healthy practices in the face of risks associated with climate change in public health.		1. Inter-institutional coordination for the dissemination of healthy practices with an intercultural and gender approach.	Number of information and dissemination actions on healthy practices developed.
22	WATER	Output 3.2 Natural infrastructure for water regulation, soil conservation and risk reduction of floods and extreme rainfalls.	AGU1	Improvement and construction of reservoirs for the provision of water services for agricultural use.		6. Training for hydraulic operators, OUA, professionals of the GORES and GOLO in the application of guides, guidelines and methodologies that allow the formulation of investment projects in the agricultural sector, incorporating water consolidation actions (hydraulic projects, and others that can incorporate storage technologies depending on the scales of intervention).	Volume of surface water stored in reservoirs for the provision of irrigation water service in basins vulnerable to climate change .
23	WATER		AGU2	Implementation of water planting and harvesting interventions		5. Strengthening the capacities of community leaders to promote this practice.	Volume (M3) of infiltrated water for aquifer recharge in watersheds vulnerable to climate change .
24	WATER		AGU3	Implementation of hydraulic infrastructure for conduction, distribution and application of water for irrigation.		6. Capacity building in the formulation and implementation of minor irrigation projects	Percentage of irrigated area in basins vulnerable to climate

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
						incorporating climate change adaptation measures.	change .
25	WATER		AGU4	Implementation of protection infrastructure in the hydraulic sectors for agricultural use.		5. Capacity building in the formulation and implementation of flood protection projects for GORE, GOLO.	Number of interventions in hydraulic sectors for physical protection against hazards in watersheds vulnerable to climate change
26	WATER		AGU5	Implementation of technified irrigation systems.		1.To mainstream gender, intercultural and intergenerational approaches in training programs on irrigation technification. Strengthen coordination with universities, institutes and other actors involved in technology transfer processes with the participation of the private sector. 4. Develop educational materials, modules and guides incorporating cross-cutting approaches and development of communication technologies for different geographical areas (coast, highlands, jungle).	Intensity of technified irrigation for agricultural production in watersheds vulnerable to climate change .
27	WATER	Output 3.1 Water /Forest ecosystem services in vulnerable watersheds are resilient to climate change and climate variability	AGU6	Strengthening the institutional framework of the water sectors for agricultural water management.		1. Strengthen the capacities of stakeholders, including the focus on climate change adaptation and climate risk management. 2. Develop a communication and awareness-raising strategy aimed at the irrigation committees. Generate incentives for the irrigation committees to develop, update, improve and implement their management instruments incorporating adaptation and risk management actions. Develop guidelines and manuals to guide the integration of adaptation actions into cropping and irrigation plans, and water distribution plans.	Number of irrigation user organizations recognized in hydraulic sectors in watersheds vulnerable to climate change .

N° M	SECT	EDA PERU -Outputs	COD	Product	Measures	Enabling conditions that the project will support	Indicators *Source: Tentative Programming, NDC (2018)
28	WATER		AGU7	Technical assistance and capacity building of agricultural producers for sustainable water use.		1. The development and/or updating of training programs aimed at agrarian producers, considering gender, intercultural and intergenerational approaches. 3. The development and/or recovery of irrigation and crop technology packages, among others. The diagnosis/balance of the efficiency of irrigation technology packages.	Number of agricultural producers who improve their skills and knowledge for the management and use of water for agricultural purposes in watersheds vulnerable to climate change .
29	WATER		AGU24	Conservation and recovery of natural infrastructure for the provision of water ecosystem services.		13. Design and implement mechanisms and strategies for incorporation and assignment of roles that allow the organized population (peasant communities, native communities, associations, etc.) to assume conservation.	Area (ha) of conserved and recovered ecosystems that provide water regulation and provisioning services, in watersheds vulnerable to climate change.

Annex 4: EDA Peru Relevant technical standards

Project Activities	Technical Standards/ Industry Regulation
COMPONENT 1	
1.1.1 Provide Technical Assistance to Local organizations and private sector to develop robust proposals and implement adaptation projects.	Profonanpe´s Project´s requirements Profonanpe´s M&E requirements Profonanpe´s fiduciary risk assessment EDA Environmental and Social Policy.ESP Fund Gender Policy (GP) EDA Peru Gender Action Plan (table 13) EDA Peru Result Framework (table 15) EDA Peru Theory of Change (table 4) EDA Peru Knowledge Management themes and questions (table 7.1, 7.2,7.3)
1.2.2 Prepare and implement a communication plan focusing on lessons learned.	Profonanpe Communication strategy. Profonanpe Social Media means.

Project Activities	Technical Standards/ Industry Regulation
Component 2: Reduced exposure to climate-related hazards and threats and strengthening institutional capacity to respond.	
2.1.1 Development of early warning systems for the most frequent risks related to climate variability and climate change in the three selected watersheds.	National Institute of Civil Defense (INDECI). RM-N°-173-2015-PCM- Guidelines for the Formation and Operation of the National Early Warning Network. SINAGERD legal framework. Technical guide for the implementation of the Community Early Warning System. 2015.
2.1.2. Enhanced the early warning system for monitoring and control of malnutrition and anemia and other cc-related diseases such as dengue, chikunkuya, sika, among others).	Ministry of Health (MINSA) 2016. National Prevention and Response Plan for the Zika virus disease. Ministry of Health (MINSA) 2016 NTS No. 12S -MINSA/2016/CDC-INS, Norma Técnica. for Epidemiological Surveillance and Laboratory Diagnosis of Dengue, Chikungunya, Zika and other Arboviruses in Peru, Chikungunya, Zika and other Arboviruses in Peru.
2.1.3 Strengthen the early warning system for deforestation in Amazonian communities	National Forest Program for Climate Change Mitigation (PNCBMCC) of the Peruvian Ministry of Environment (MINAM).
2.2.1 Strengthening organizations to respond to the effects of climate change.	National Adaptation Plan 2021.
	Ministry of Culture (MINCUL) Nº 103-2016-MC. Plan de Vida. Guide for Collective Planning at Indigenous Communities.
2.2.2 Recovery of ancestral knowledge of Andean and Amazonian indigenous communities to increase resilience.	The National Institute for the Defense of Competition and the Protection of Intellectual Property (INDECOPI). The regime for the Protection of Collective Knowledge related to biological resources was established with the entry into force of Law 27811- 2002.
2.2.3. Preparation of local climate change plans in local governments	Ministry of Environment (MINAM) RM 196-2021 MINAM. Methodological guidelines for the formulation and updating of Local Climate Change Plans and their annexes.
2.2.4 Strengthen the technical training of young people by including courses on climate change adaptation in the technological institutes in Shawi and Quechua.	Ministry of Education. Technical Productive Education Regulations. Articles 40° to 45° of the General Law of Education Nº 28044- 2012.
2.2.5 Increase indigenous women's leadership in climate change adaptation initiatives.	Ministry of Environment (MINAM). Gender and Climate Change Action Plan. 2016.

Project Activities	Technical Standards/ Industry Regulation
2.2.6. Support local and regional governments for addressing basic needs from vulnerable communities throughout public investment and social programs.	Ministry of Economy and Finance - MEF, 2013. Concepts associated with risk management in a context of climate change.
Component 3	
3.1.1 Improving sustainable forest management.	Ministry of Agriculture and Irrigation (MIDAGRI), National Forest Service (SERFOR). Forestry Law 29763, Art. 148; Article 101 of the Regulations for Forestry and Wildlife Management in Native Communities.
3.1.2 Promotion of sustainable artisanal fishing in rivers and lakes.	DS Nº 015-2009-PRODUCE. Regulation of Fishing Management of the Peruvian Amazon.
3.1.3 Formation, training and accreditation of forest monitoring and surveillance committees # of trustees trained and accredited.	MIDAGRI, SERFOR. Forestry Law 29763, Art. 148; Article 101 of the Regulations for Forestry and Wildlife Management in Native Communities.
3.1.4. Protection and treatment of water sources through reforestation with native species and bioremediation.	GENERAL DIRECTORATE OF ENVIRONMENTAL HEALTH (DIGESA)DS N° 031-2010-SA. Regulation of Water Quality for Human Consumption. National Institute for Research on Glaciers and Mountain Ecosystems (INAIGEM). National Water Authority (ANA). National Institute of Quality (INACAL). Peruvian Technical Standard NTP 214.046:2013 CALIDAD DE AGUA
3.1.5. Improvement of agroecological practices and sustainable pasture's management.	Ministry of Environment (MINAM), 2019. Conservation guide of the state of the bofedal ecosystem. Lima. Ministry of Environment (MINAM), 2016. Complementary Guide to Environmental offsetl: Andean Ecosystems, approved by RM N° 183-2016-MINAM. Ministry of Agriculture and Irrigation. National Livestock Development Plan 2017-2027. RM 0297-2017
3.1.6 Capacity building for integrated water resources management.	Ministry of Agriculture and Irrigation (2015). Manual No. 2 Operation of Irrigation Systems Infrastructure, General Directorate of Agriculture, and Irrigation Infrastructure -DGIAR.
3.1.7 Establishment of an organizational mechanism for enhanced port and transportation management on the Paranapura River	The National Port Authority (APN), an entity attached to the Ministry of Transportation and Communications (MTC). Hydrographic Technical Standard SEHINAV N° 1- 2018. HYDROGRAPHY AND NAVIGATION SERVICE OF THE AMAZON. Ministry of Defense.

Project Activities	Technical Standards/ Industry Regulation
3.2.1 Natural infrastructure for water regulation	Ministry of Transport and Communications The "General Technical Specifications for Construction" (EG-2013). Sections 201 and 511. RD Nº 22-2013-MTC/14 (07.08.2013)
3.2.2. Installation of technified irrigation.	MIDAGRI, General Directorate of Agriculture, and Irrigation Infrastructure. DGIAR (2015). Efficiency Calculation Manual for Irrigation Systems.
3.2.3. Natural infrastructure for planting and harvesting water.	Ministry of Transport and Communications The "General Technical Specifications for Construction" (EG-2013). Sections 201 and 511. RD Nº 22-2013-MTC/14 (07.08.2013) Ministry of Agriculture and Irrigation. Sierra Azul Fund Execution Manual. June 2020. RM N° 183-2020.
Component 4	
4.1.1 Recovery of traditional crops such as dale dale, bread fruit, organic cotton, chocho, etc.	National Institute of Agricultural Research (INIA) and National Health Service (SENASA). Law N° 27262 (year 2000), General Seed Law. For Amazonian products, the governing body is the Peruvian Amazon Research Institute (IIAP).
4.1.2 Establishment of seed banks in communities	
4.2.1 Installation and commercialization of organic cocoa in deforested areas.	National Institute of Quality (INACAL). Peruvian Technical Standard NTP-ISO 2451-2018 Cocoa beans. National Institute of Quality (INACAL). Peruvian Technical Standard NTP 208.040:2017 COCOA AND CHOCOLATE. Good practices for harvesting and processing
4.2.2 Sustainable and culturally appropriate promotion of small animal husbandry.	Ministry of Agriculture and Irrigation. National Livestock Development Plan 2017-2027. RM 0297-2017.
4.2.3. Installation of drying plants to add value to banana and cassava.	Instituto Nacional de Calidad INACAL NTP 011.500:2009 (revised 2014) YUCA Y DERIVADOS. National Institute of Quality INACAL NTP 011.501:2009 (revised 2014) YUCA AND National Institute of Quality DERIVATIVES. Fermented farina. National Quality Institute INACAL NTP-CODEX STAN 238:2014 SWEET YUCA (MANDIOCA) Instituto Nacional de Calidad INACAL NTP 011.503:2010 (revised 2015) YUCA Y DERIVADOS. Starch. Definitions and requirements
4.2.4. Installation of Shawi artisanal weaving workshops	INACAL (2010) PERUVIAN TECHNICAL STANDARD NTP 231.141 1985 (Revised 2010). WOVEN FABRICS. Definitions of generic terms and basic woven fabrics.
4.2.5 Financial literacy for men and women entrepreneurs.	Superintendence of banking and Insurance (SBS) and the Ministry of Education MINEDU. National Financial Education Plan. 2015-2021.

Project Activities	Technical Standards/ Industry Regulation
4.2.6 Technical assistance for local tourism promotion	Ministry of Foreign Trade and Tourism, MINCETUR (2020) Technical Note NTP 799.014:2020. TOURISM. Sanitary requirements for tourist services.

Annex 5: Report of the integral participatory consultation and baseline study. Lower Huallaga and Paranapura basin - Communities of the shawi indigenous people.

Political Location:

Department	Province	Districts
Loreto	Upper Amazon	Jeberos (2.87%) Balsapuerto (74.39%) Yurimaguas (11.74 %)
Loreto	Datem Del Marañon	Cahuapanas (1.33 %)
San Martin	Lamas	Caynarachi (9.21%), San Roque de Cumbaza (0.62 %)
San Martin	San Martin	Papaplaya

Identification	Lower Huallaga and Paranapura Basin
Districts	Papaplaya, Caynarachi, San Roque de Cumbaza, Balsapuerto and Yurimaguas
Province	Lamas, Alto Amazonas
Region	San Martin and Loreto

Consultation dates	Monday, June 19 to Friday, June 23, 2023
Name of facilitators	Josefa Rojas Pérez (Climate Change Adaptation Specialist - Profonanpe); Alex Escudero (CONAP- technical team) Eusebio Huayunga (President FERISHAM). Marco Lezcano (CODEPISAM) Javier Angulo (CODEPISAM) Frankling Cueva Cartagena (Consultor Forestal)

Number of participants, focus groups and interviewed by gender and age

Location	Part no.	H	M
Panan Native Community	8	4	4
Moyobambillo Native Community	13	7	6
Moyobambillo Women´s Group	7	0	7
Charapillo Native Community	25	18	7
Panan Health Center	2	1	1
Regional Government - Forestry Management	1	1	0
Total participants	56	27	19

No. Authorities, leaders, officials by gender, age.

See appendix

1 Introduction

The Shawi people live mainly in the departments of Loreto and San Martin. They are also known as Chayawita, Campo-piyapi, Tshahui, and are approximately 26,000 inhabitants, the Shawi are one of the most numerous indigenous peoples of the Peruvian Amazon, according to the results of the last census. They refer to their own language as Shawi, which belongs to the ethnolinguistic family Cahuapana. The Ministry of Education (2013) classifies it as a vital language, which is spoken by almost 90% of its population. Currently, the Shawi people have four translators and interpreters registered by the Ministry of Culture, and there are 235 bilingual intercultural education schools.

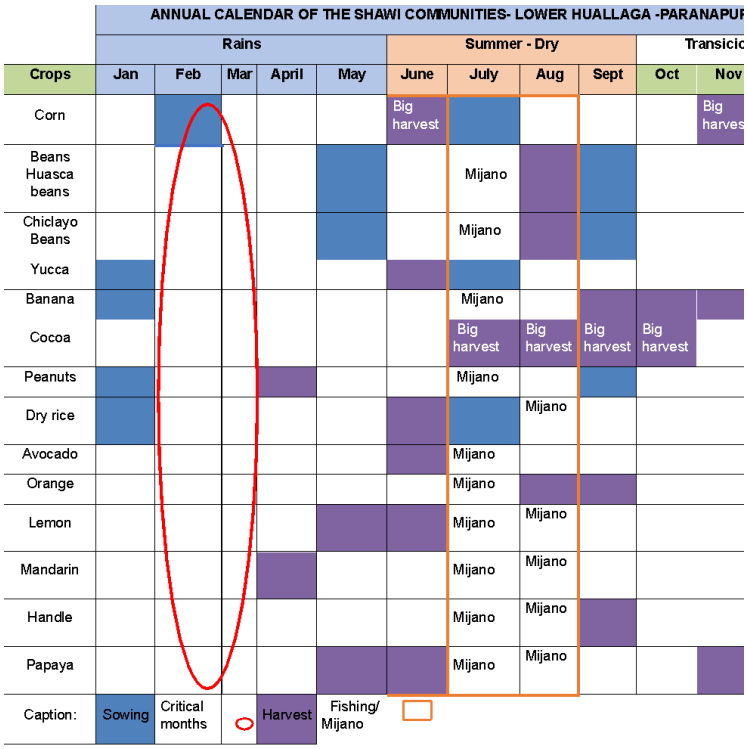
The Shawi people originated in the headwaters of three rivers (Huallaga, Paranapura y Cahuapana), but due to demographic pressures, they have been expanding to the middle and lower basins. This process has generated a dynamic knowledge about the rivers and streams along their entire course, from their headwaters to their mouths, relating to navigation practices, fishing, agriculture, hunting and gathering. In this sense, water resources and forests are an important component of their livelihood, general knowledge, territory, and, consequently, their cultural identity. For this reason, availability of these resources is essential for food, medicine, rituals, practices, among other activities,

However, in recent years there have been drastic alterations in the water sources and forests within their territories, such as riverbank erosion, sedimentation, water contamination and decrease in water quantity. Deforestation has increased especially in the communities of Alto Paranapura due to the opening of the Yurimaguas - Balzapuerto road.

Traditionally, the Shawi have lived in small family groups spanning up to three generations. In the past it was customary for young people to marry early, sometimes before puberty, and the husband moved into the wife's home or community, at least until the birth of the first child (SIL 2006, Fuentes 1988).

The Shawi people traditionally practice slash-and-burn agriculture. Ancestrally, anyone could choose a piece of forest and clear it for their use, where an order was established for crops: first corn, then cassava and plantain. Thus, one of these farms could produce for an average of three years and then be abandoned for regeneration (Dradi 1987).

Traditionally, the concept of property among the Shawi has been markedly individualistic. This is explained by the fact that, for example, if a woman raises chickens, she is the only one who can decide to

	sell them, not even her husband can intervene in this type of decision; the same happens with the canoes, in this case, only the owner can lend them (Ribeiro and Wise 1978).
Strategic geographical position Shawi population in San Martin and Loreto	The Shawi people inhabit riverine and inter-riverine areas, building their dwellings on terraces and hills, while geographically more rugged areas are used for hunting and gathering forest products. The rivers are the main means of communication between communities and with the population centers such as Yurimaguas.
2 Typical seasonal calendar:	The seasonal calendar of the communities located in this ecosystem is directly linked to climatic variability affecting food security, since the availability of protein depends on fishing and hunting. The months of greatest climatic stress are the first months of the year. During the months of July, August and September there is very good fishing in the tributaries of the Amazon, when families take full advantage of the mijano. Mijano - a phenomenon that occurs during the emptying or reduction of river flow (July to September) and is characterized by the extraordinary concentration of fish coinciding with the reproductive process and the beginning of migrations. During the rainy season, families weave dresses, baskets, and pottery. The rivers swell and carry a large number of trees from upstream tributaries. The most stable foods during the year are cassava, plantain, corn and rice. Fruit trees are harvested throughout the year.
	

Extreme weather events and disaster risk management	Among the main climatic events referred to by the population interviewed are: Torrential rains that can last several days or even weeks. Rivers swell and flood houses that do not have high stilts. The water becomes stagnant, which increases the number of mosquitoes. Recently there have been outbreaks of malaria that have been controlled by the health centers. The rains wash away soils and farmland. Hurricane-force winds can blow away bananas and cassava. During the baseline, the Charapillo community was visited; after two successive floods, they relocated to a higher altitude area. They lost their homes, school and health center. They currently have no water or electricity services. In other years, generally associated with the La Niña phenomenon, the summer extends for long months and heat waves become extreme. River flow drops and fish migrate upstream. Navigation stops and food becomes scarce or more expensive. During the last few years there have been more continuous cold spells, up to 3 times in a year, causing the population to sicken more frequently. There is noticeably more heat in the summer season, lasting far longer than usual, with high temperatures maintained until the night. In the dry season the population searches for meat in the forest, but as deforestation has increased, they now must go further to find animals to hunt and to leave traps. There are no emergency committees and/or risk management committees.
Land tenure and agricultural production and ecosystem condition	Approximately 25% of the Shawi communities do not have land titles, and those that do have titles have problems with overlapping areas because community titles are very old. Agricultural production is mostly for subsistence. One of the main crops that provides economic benefit is cocoa, followed by bananas, which are sold in the community and to third parties. Other minor products are cassava, corn, beans, among others. Regarding livestock activities, some communities have been raising a small number of cattle and pigs, and especially chickens, which are used for consumption and sale. The Shawi people in Loreto are the most affected by deforestation due to the new road between Yurimaguas and Balzapuerto. Despite this they have considerable areas of aguaje palm tree (Mauritia flexuosa) a fruit that some communities are using sustainably through management plans (DEMAs). In San Martin, the communities have more forest cover, but there is currently strong pressure from settlers near their territories. Some communities mention that there are illegal entries for resource extraction by neighboring community members, who enter in order to hunt animals and fish with dynamite. The main species hunted and fished are: fasaco, bujurqui, shirui, atinga, shuyo, hualo frogs, majaz, sajino, deer, carachupa, motelo, añuje, partridge, pucacunga, manacaraco, parrot, and monkey. On several occasions these interlopers have been detained and sanctioned. Information meetings have also been held to prevent these practices. The problem "High level of legal vulnerability of the communal territory" is mainly related to the absence of land titles. Food is based on plantains, cassava and peanuts, combined with fishing and hunting. The main source of food are the family farms, which are larger than in previous years due to population increase and hunting is no longer abundant due to deforestation. There is a clear absence of vegetables. In the last three years, during the covid pandemic years (2019-2021) malnutrition and anemia levels for children under 5 years were drop among Paranapura communities. Its is possible that families isolated from the markets had increased their food production, however this is an interesting area of research.
Forests and forest management	According to the ecosystem map approved by MINAM, the landscape of Paranapura Yurimaguas is dominated by low hill forests, and to a lesser extent by high hill forests and non-flooded terraces. On the other hand, the Lower Huallaga landscape is dominated by high and low hill forests, basimontane yungas forest, and some remnants of non-flooded terrace forests and palm swamps. In recent years, the forests of the Shawi people have been deforested due to recent colonization in the area, illegal logging, slash and burn agricultural practices, and oil and gas exploration. Many of the communities located in Paranapura have carried out forest exploitation through third parties, entrepreneurs that in most cases have left the communities with problems due to poor management of their forests, which is why they are currently very wary of working with timber products, opting more for conservation and recovery of their forests. The main species harvested are: tornillo, cedar, huayruro, quillobordon, cumala and aguano masa. According to MINAM's Geobosques data, there are communities that report that between 15 and 30% of their territories have been deforested in the last 20 years.

	The communities located along the Huallaga and Shanusi rivers have greater forest cover and therefore greater potential in their forests. They are thus interested in using them in a sustainable manner, in order to generate economic income for the well-being of the community. According to information from their life plans, deforestation varies between 2-10% in most communities. However, there are some communities experiencing strong pressure on their forests, reporting up to 22% deforestation of their total territory. Without immediate action, the high biodiversity of their forests and the ancestral and cultural knowledge of the Shawi people are threatened by human activity and climate change. Some communities, such as Nuevo Santa Rosa de Alto Chambira, have timber and non-timber forest resources and wildlife that can justify the proposal of protection and conservation zones for these resources in the territory. In addition to timber for housing construction, the forests also provide roofs and medicines for the treatment of illnesses and health care. In most cases, timber extraction is carried out with the consent of the community itself, through decisions made in the General Assembly and recorded in the Book of Minutes.
Drinking water	Most of the communities do not have a water system in their homes. Women are in charge of collecting water from the river or the nearest water sources and from wells. Families also collect rainwater. Water is not boiled, which causes stomach problems, especially among children. This problem is compounded by the inadequate treatment of fecal waste due to the absence of sanitation services. Some 87.5% of the communities use the surrounding bush as sole toilet space. Local government attention to these communities is very deficient, due to their social and cultural isolation. Projects take many years to materialize. A drinking water project being implemented in June 2023 had been designed 12 years previously when the population was 50% smaller and can now only serve part of the community.
3 Gender Analysis. Access and Control of Resources (Activity 3)	
Women's participation	Women's activities are carried out mainly in the house and also on the farm and river. Women are responsible for food preparation, washing clothes in the river, preparing masato, and collecting water and firewood. The latter are becoming increasingly scarce, requiring them to go further afield. On the farm, women help with the planting, cultivation, harvesting and transfer of plantains, cassava and peanuts. When there is abundant fishing and hunting, they dry and salt the meat to preserve it for a longer period of time. They raise chickens to sell the eggs and have vegetable gardens with medicinal herbs very close to the house. They know how to handle the fishing boat. In the afternoons, the younger ones make handicrafts (bracelets, pretinas, spinning cotton, mocahuas) and the older ones make pottery and weave clothes. At the end of the day, women take the children to bathe in the river. Women participate in meetings, but do not speak generally in public, only in individual interviews with the family present. The main problems affecting Shawi women are related to access to education, limits to political participation, subordination to men, family formation at an early age (the average age at which unions begin is from 15 to 17 years old), and an increase in violence by husbands. During Covid-19 many Shawi women who had migrated to Yurimaguas, Tarapoto or Iquitos have returned with their families to their communities, applied for land, and rejoined community life. These women are creating new models for Shawi women, as they participate more actively in women's groups and schools.
Access to and control of land	Land is communal and decisions about its use are made in assemblies with representation of the men as heads of households. Shawi women married to outsiders can claim land if they decide to resettle. There are mestizos who have applied or are in the process of applying for land in the communities, only some of which are married to Shawi women. Each family is allocated between 1 to 3 hectares to grow their food.
Water access and control	The Shawi communities obtain water for drinking and cooking from the river, springs, streams and artesian wells. Women and girls are responsible for carrying water as well as firewood on a daily basis. Rivers represent the means of transportation for these communities and the riverbanks are the places of much social activity in the Shawi communities and the gateway for the entry and exit of people and merchandise. The ports become unusable after the rainy season, making access difficult for children and adults, even for the transfer of injured people or patients or pregnant women who need to be transferred to other health centers for care.

Access to and control of hunting benefits	Hunting is an activity exclusive to the men of the community. The men go out in search of the collpas (waterholes) and collect wild fruits from the trees and palms while the women are in charge of preparing food with the products of the hunt (Majaz, añuje, monkeys, partridge, motelo, carachupa, deer, sajino, huangana).
Access to and control of fishing benefits	In the Shawi communities dedicated to fishing because of their proximity to streams and/or rivers, the fishing activity is linked to both genders and different ages, the times in which this activity is developed are in summer. Fishing is good during the dry season when river levels drop to a minimum. All fishing is for self-consumption and the families recognize that the amount of fish available has been reduced in the last 15 years, partly due to population growth and partly due to the use of barbasco, which indiscriminately eliminates fish of all sizes. The diversity of available fish has also been reduced in the last 10 years. Among the species mentioned are the bujurqui, shuyo, fasaco, macana, shiruwi, atinga, anguilla, sapo cunchi, and churo, boquichico, lisa, catfish, sardine, carachama and mojarra.
Access to and control over the raising of small animals.	The women raise chickens, ducks and pigs for their own consumption and to sell locally. The women in the focus groups mentioned that disease has attacked their pens at least twice this year, losing all production. They would like to receive technical assistance to learn more about raising pigs and avoid economic losses. Each family raises an average of 30 to 40 hens every six months, mostly for family consumption and to a lesser extent for sale. Of this total, at least 10 to 12 hens are sold to the community itself or to outside traders, with prices set at S/. 40.00 per hen and S/. 50.00 per rooster.
Health and education and energy.	The Shawi communities make use of leaves, fruits, tree roots and plants to prepare medicines for common illnesses. There is a list of them that are used by 100% of the families: sanango, abuta, ajoshacha, clavo huasca, uña de gato, chuchuhuasi, ayahuma, renaco, copaiba, are the most mentioned. There are healers, midwives, but few shamans use ayahuasca for healing. The healers use chants as part of the healing ritual. However, there is still no link with western medicine, so families do not know when to take their relatives to the medical center when treatment with traditional medicine is not enough. Health care is more precarious in Bajo Huallaga; the health post has been in operation for 15 years and does not have any personnel who speak the local language. In the district of Balzapuerto on the Paranapura River there are intercultural promoters and they have a care hub in Varadero that receives more complex cases from all the community health centers on the tributaries of the Paranapura, an intermediate port where the most seriously ill can be treated. The next level is Yurimaguas for better care. At the Panan post, contraceptive methods are provided to women who request them, with injectables and patches being the preferred methods. In some native communities that are Adventist, violence against women has not been reported, although their participation in community affairs is not valued at the same level as that of men. In other non-Adventist communities, cases of violence and alcoholism have been mentioned. Education, the communities have kindergarten, primary and, in some cases, secondary education. When there is none, they move to the nearest communities where it is available, which means traveling approximately 1 or 2 hours on foot or 30 minutes by motorcycle cab and 30 minutes by car, if they decide to go to the nearest city. Some communities have solar energy provision from solar panels, implemented by the ERGON Peru project in 2019. Currently, some are working regularly, but are few, because they have not been maintained or people trained to provide maintenance service.
4 GROUP REPORT	Focus Group 1: Older men
Group reports Seasonal Activities, Challenges, Strategies (Activity 1, Step 3)	Seasonal change and climate variability: challenges and strategies. Difficulty in planning hunting trips to the forest. The most available food is cassava and plantains. Fishing has decreased a lot. During the summer season, river flows are increasingly reduced, making access to the communities more difficult and reducing fishing.

Lived experience of climate change (Activity 2) Resilience factors (Activity 4, Step 1) Pathways to Resilience (Activity 4, Step 2) Specific Priorities (Activity 4, Step 2)	During the rainy season people experience more colds and coughs, especially in children and the elderly. The elders weave baskets during the rains to exchange or for family use. In the summer season, there is an increase in mosquitoes, increasing diseases such as malaria, fevers and headaches. Experiences of climate change. The communities in Alto Paranapura state that the climate has changed greatly this year. The rainy season lasted from January to May, normally ending in March or April. Community members remember the floods generated by the rising river flows, damaging a large part of their agricultural crops such as bananas and cassava that are planted along the riverbanks. Another noticeable change in recent years has been the increasingly strong hurricane-level winds that affect agricultural crops. Another climatic factor that has increased is the heat, which is felt more and more strongly, generating a decrease in the flow of rivers and their water temperature; people who used to bathe at 5 or 6 pm now do it at night. While the communities of the Lower Huallaga especially recall landslides in the mountains. In the case of the CCNN of Charapillo, it had to relocate in 2018 because the entire center of the community was affected, including the school and houses. Identification of resilience factors. The older men recognize that their culture is resilient. They can feed themselves from the forest, weave their own clothing and plant cassava and plantains, which can continuously be harvested, since these crops are planted in a temporally staggered manner to produce crops year-round. Pathways to resilience: Interventions. Improve the management and conservation of their forests, because they contain the species that provide the communities with medicine and food to live. Some communities are initiating the sustainable use of aguaje as part of forest management. In the communities with less forest, community members have to walk far more to find the resins, fruits and animals that provide food and medicine. Installation of family fish farms so that community members can have fish all year round in a far more accessible manner. Specific activities Organize and strengthen community forest monitoring and control committees for forest conservation. Establish new cocoa growing areas associated with fast- and medium-growing forest species (SAF). Ensure forest conservation and reforestation with fruit and medicinal species.

GROUP REPORT	Group 1: Young Men
	Seasonal change and climate variability: challenges and strategies. When it rains for a considerable time, the river cannot be navigated due to high volume, congested with sedimentation, and floating of trees that damage family boats. The number of boats circulating between Paranapura and Yurimaguas is between 25 to 35 per week during the rainy season. During the dry season this number is reduced to between 15 to 20 boats, causing discomfort in the communities because they are unable to transport their products, sick people, passengers, and others. During the rains which reduce transportation and communication between communities, community members must stay longer in the community and consequently dedicate more time to weaving baskets and preparing masato. Fishing is reduced substantially when the rivers are flooded because the fish are washed downstream, and when the river is low, the fish are very small. Fish are also preserved by salt treatment and drying. When it stops raining, community members take the opportunity to go out and set traps to capture small animals. They have seen that some farmers have planted cocoa and have done well, because they can harvest at any time of the year and take the produce to market. They mention that some communities in Paranapura have benefited from the cocoa project that was active 7 years ago. However, there are some families that have dedicated themselves to cocoa management and have a yield of 40 to 50 kg every 15 to 20 days. They say that they have done well, because it is a crop that is harvested on a regular basis and has a market. They are currently receiving fertilizer from the NORAD project. Many of the young people have gone to Yurimaguas and have taken some technical courses in agriculture. In addition, many young people are in their 4th and 5th year of secondary school, and in their free time they help their parents with household chores and farm activities. They mention that they use natural fertilizer on their crops, since they received training on the subject at school. The careers they choose most are nursing and teaching, and they are very interested in disseminating indigenous natural medicine. Experiences of climate change. The rainy season lasted from January to May, although usually ending in March or April. River flow has increased a great deal this year, generating more flooding in the farms and has caused losses in banana and cassava crops (usually planted on the banks of the river). Another changing factor in recent years are the increasingly strong winds, hurricane-level they claim, that are damaging agricultural crops. In the community, each family manages more or less 0.5 to 1 ha, mostly for plantain cultivation. Another climatic factor noticed by this group in similar manner to the older men is the increasing heat that can be noticed also in the temperature of the river. People used to bathe at 5 or 6 of the afternoon but now they do it at night, Community members also believe that it is because of the rising river temperature that there are not as many fish as before. Identification of resilience factors. The Shawi culture is very resilient, as they demonstrated during the pandemic. Their traditional knowledge of indigenous medicine has allowed them to care for themselves at times when health services were not available. There is great confidence in cocoa production because it allows them to sell when food is scarce. Their skills in fishing and transportation on the rivers is a skill that all families need to feed themselves. Spawning times of the fish are not respected; all are fished equally. The surveillance of the forests will allow the protection of the forests from illegal loggers. This is specific to the communities in the Lower Huallaga that feel the logging pressure on their territories. Road to resilience. Interventions. Installation of cocoa crops Harvesting of aguaje. Installation of fish farms Recognition of territorial titles.

GROUP REPORT	Group 1: Adult Women
	Seasonal change and climate variability: challenges and strategies. The first months of the year are the most difficult for food. The plantain and yucca are used for the masato and to accompany the fish from the mijano (abundant fish period) in February. When they use the poison mixture called barbasco, children can become intoxicated and sometimes also adults. Huaca is a bark that has the same effect on fish, but does not intoxicate humans. However, it is difficult to change from barbasco, since the elders know well how to prepare it. The women go out to the forest to look for caspi milk, which is used to waterproof the pottery during the dry season. This way they will have it ready for the rainy season when they dedicate themselves to weaving and pottery. Pottery is practiced more by the older women. Women rarely go to Yurimaguas; they stay in their communities, taking care of the children and washing clothes in the river. It is difficult to get firewood during the rainy season and community members are not in the habit of stacking firewood in the house. They carry branches until they run out. Some have improved stoves, but they do not use them because they are at ground level, so they do not see the improvement. The women collect rainwater to drink and save themselves the trip to fetch water from the river or from streams and creeks. In some cases they have to walk 10 to 15 minutes to get water, but in the dry season they have to go farther because the water sources dry up. During the rainy season they weave pampanillas (cotton skirts) and tamshi baskets (the older men). Older women make pottery for drinking masato and other foods. They spend most of their time indoors during the rains. The CONAP project has provided a 30,000 soles voucher for the weaving workshops to encourage entrepreneurship. Experiences of climate change. Those who survived the floods said that they took refuge in the school and received food from the municipality. They quickly returned to their homes, because they are not used to being with so many people in one place. The cold spells (friajes) bring with them a lot of flu, fever, pharyngitis and malaria. Sometimes they go to the medical post, and sometimes they cure themselves with indigenous medicine. The have difficulty deciding when to go to the doctor. During the fieldwork, an 11-month-old girl died of pneumonia that worsened from the flu. She was the daughter of the school teacher. There are also heat waves, and even the river waters get too hot. Community members delay bathing time until 7pm at night to allow the water to cool down somewhat. When the summer is very long the river can be crossed on foot because the boats can no longer navigate. People can plant peanuts on the beaches. Identification of resilience factors. For the interviewees, cultural elements such as indigenous medicine, knowledge of the forest, food, textiles, ceramics and language are the most important elements of their resilience. Considering that they live far from population centers, social contact is limited to teachers and public officials and also merchants who visit the ports. In larger communities of more than 300 people, there are already educational centers at various levels. In almost all educational centers and medical centers there is a person from the Shawi community who speaks the local language. Road to resilience: Interventions. Promote weaving and ceramics to trade with other communities.

	Raise hens for eggs.
GROUP REPORT	Group 1: Young Women
	Seasonal change and climate variability: challenges and strategies. The young women, as well as the older women, tend not leave the communities. The young women learn weaving, masato preparation and ceramics from the older women. Young women get married at an early age, become mothers during adolescence, and go to live in their husband's house. Consequently, strategies for activities in both the the rainy and dry seasons are decided within the extended family. Experiences of climate change. The young women help the older women in the clan to care for the sick, to prepare masato, and carry out household chores. Identification of resilience factors. Woven clothing that they produce is valued in other places, because of its beauty and color. Its manufacture requires a lot of patience due to its labor intensity. Young Shawi women who have gone out to work as teachers receive a bonus for being bilingual and can be hired more easily. Road to resilience. Interventions. The young women are more enthusiastic about weaving the pampalinas and preparing the Shawi costumes. Ceramics are perceived more as work for older women. Regarding hen raising, they prefer free-range rearing.
5 Map of Actors	(Activity 5) see additional format La ONG Paz y Esperanza (titling process completed) UNDP and DRASAM (qualification in process) MINCUL and CODEPISAM (support during the pandemic) NGO Impact a Village (construction and implementation of community first aid kit in process) ERGON Peru (14 household panels installed) and FERISHAM (cocoa and fish farming projects at a standstill). GORESAM DIRESA San Martín MD of Papaplaya Papaplaya Health Post Ministry of Housing, Construction and Sanitation

6. Contact persons

	Name	Sex	Age	Contact cell phone number
1	Brian Alexander Ruiz, obstetrician at the post medical center	M	35	957390042
2	Eng. Raul Noriega Caballero, GERFOR	M	48	939412648
3	Alberth Eisten Ventura Grandez, Institutional Manager Country Program	M	42	931832028
4	Perla Tangoa Vigil, CUNAMAS	F	35	962050547
5	Ricardo Yume Pua, Recording Secretary - Charapillo	M	45	991316822
6	Elhan Ramírez, Water and sanitation expert Moyobamba	M	35	985876848
7	Alex Escudero - CONAP	M	36	997 752 695
8	Javier Angulo. Technical Advisor CODEPISAM	M	60	944931967
9	Marco Lezcano, Technical Advisor CODEPISAM	M	38	995122142

10	Eusebio Huayunga, president FERISHAM	M	38	973822465

7. PHOTOGRAPHIC PANEL

Port of the Moyobambillo community, Paranapura River and announcement of the State water and sanitation project

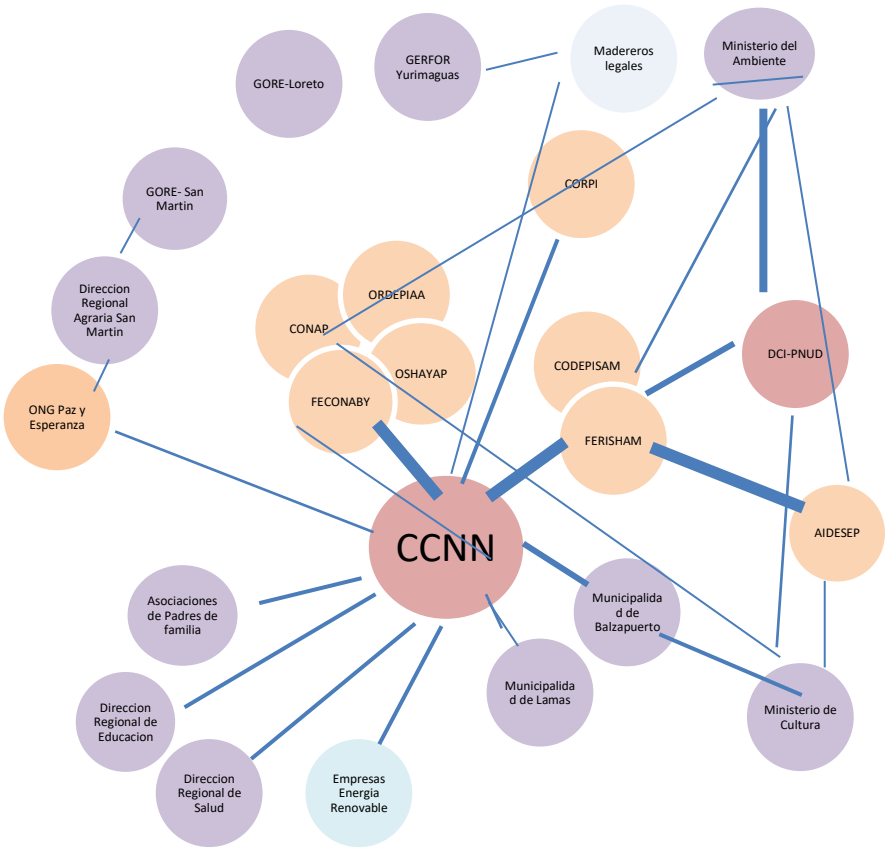
approved 12 years ago.

Interviewing Shawis women near a water well that the family uses.

Shawi woman preparing food for her children and displaying typical clothing

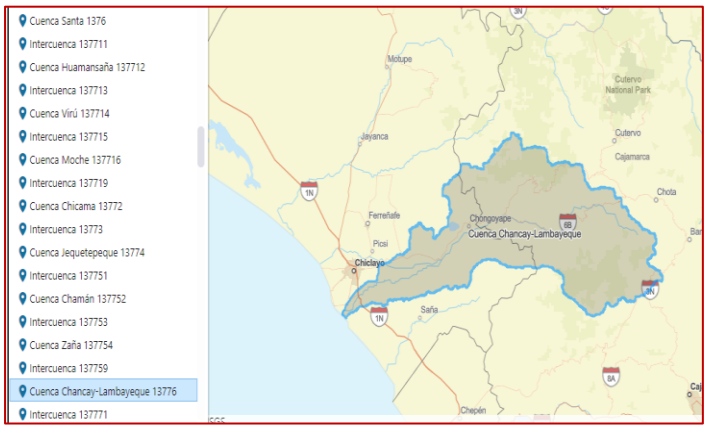
ura River

Mapa de Actores- Cuenca Bajo Huallaga -Paranapura



Regional indigenous organizations such as CODEPISAM, CORPI, ORDEPIAA have a strong connection with the native communities, as do the federations of the Shawi culture. State institutions such as health and education reach the communities directly through health centers, educational institutions and parents' associations.

Annex 6: Report of the comprehensive participatory consultation with stakeholders of the Chancay- Lambayeque watershed. District of Catilluc- San Miguel, Cajamarca.



General Characteristics

The Chancay-Lambayeque basin has a surface area of 4,022.00 km^2 , according to the "Study of Delimitation and Codification of the Hydrographic Units of Peru", approved by Ministerial Resolution N° 033-2008-AG..

The following are some of the general characteristics:

Location of the Basin: Political Location: It includes the following political area:

Department	Province	Districts
Cajamarca	Chota	Tocmoche (2.83 %), San Juan De Licupis (4.97 %), Llama (12.23 %), Miracosta (1.97 %), Huambos (2.38 %)
Cajamarca	Hualgayoc	Chugur (2.60 %)
Cajamarca	San Miguel	Tongod (4.01 %), Calquis (1.70 %), Catilluc (5.01 %)
Cajamarca	Santa Cruz	Yauyucan (0.84 %), Ninabamba (1.43 %), Pulan (3.96 %), Saucepampa (0.77 %), Catache (10.17 %), Santa Cruz (2.62 %), Uticyacu (1.07 %), La Esperanza (1.48 %), Sexi (4.76 %), Chancaybaños (3.14 %).
Lambayeque	Chiclayo	Tuman (2.09 %), Oyotun (4.34 %), Monsefu (0.64 %), Reque (0.94 %), Saña (2.84 %), Pucala (4.36 %), Pomalca (0.79 %), Chongoyape (11.81 %), Patapo (4.30 %)

Administrative Location: It includes the following administrative area:

Water Management Authority	Local Water Administration
Jequetepeque-Zarumilla	Chancay-Lambayeque

Main Geomorphological Characteristics:

Geomorphological Characteristics of the Basin	Value
Area (km^2) *	4,022.00
Perimeter (km) *	433.95

Geomorphological Characteristics of the Basin	Value
River length (km) *	203.93
Main channel slope (%) **	1.89
Average Width (km) **	19.72
Compacity index or Gravelius coefficient (kc)	1.93
Equivalent Rectangle, longest side (km) **	196.51
Equivalent Rectangle, smaller side (km) **	20.47
Concentration Time (minutes) **	1,100.00
Time of Concentration (methodology) **	Kirpich

*(*) Data extracted from official documents. The area from the **Ministerial Resolution N° 033-2008-AG**, the perimeter, from its respective shapefile, and the length of the main channel from the study "Codificación de Recursos de Agua Superficial del Perú" (Codification of Peruvian Surface Water Resources).*
(**) Data calculated, taking into consideration official information.

CATILLUC DISTRICT. COMPREHENSIVE PARTICIPATORY CONSULTATION REPORT

Identification	Chancay - Lambayeque Watershed
Place Name	Catilluc
District	Catilluc
Province	San Miguel
Region	Cajamarca
Territorial organization	Comprises 3 population centers; 21 hamlets; 5 annexes. A population of approximately 4,500 people. Only 2,900 are registered in the electoral roll.
Evaluation dates	Tuesday, June 6 to Friday, June 9, 2023
Name of facilitators	Josefa Rojas Pérez (Climate Change Adaptation Specialist); Cathy Quiroz (Communicator of the Technical Secretariat of the Chancay - Lambayeque Watershed), and Giuliana Aguirre (Sociologist, Instituto de Apoyo al Manejo del Agua de Riego de la Costa Norte).
Number of participants by gender and age	

Location	No.	M	F
El Empalme	15	10	5
Cachorgos, Surupata, El Milagro, La Totora, Choro Blanco, Quilcate	6	2	4
La Union and Los Angeles	5	4	1
Catilluc- Women's Group	30	0	30
Meeting of Catilluc Municipality officials	8	6	2
Catilluc - Youth Group	13	10	3
CP. La Selva	11	8	3

	San Mateo	3	3	0
	Total participants	91	43	48

No. Authorities, leaders, officials by gender, age.	See appendix
Strategic geographical position of the district	Catilluc is home to the Morococha, Lejiacocha, Alforjacocha and Mishacocha lakes, which give rise to the Chancay-Lambayeque River that supplies water to the city of Chiclayo, crops and other industries.
2 Seasonal calendar of the district:	There are only two seasons a year, the rainy season from January to June and the dry season from July to December, with the coldest months being September and October. With the climatic variability they can no longer recognize exactly when a season begins or ends. Overnight frosts have been decreasing in the high-altitude areas (3,800-4,000 m). There is a weather station in Quilcate, but they do not receive information that can guide them in making decisions based on weather information.
Extreme weather events and disaster risk management	In 2017 and 2020, there were landslides and/or mudslides in the area, which destroyed irrigation canals. During the dry season, frosts also occur when the ambient temperature drops to near or below zero degrees, affecting crop yields and livestock activity, which is reflected in the reduction of pastures and the death of livestock and bronchial diseases and flu in children and older adults. The frosts are accompanied by very strong winds that affect the rudimentary houses located in the highest area without tree protection. In 2005 and 2012 there were frosts which affected the potato crop. In 1997, 2003, 2004 and 2016, there were severe droughts that affected the production and productivity of crops and pastures, affecting livestock, which became weak, died or were sold at a low price. Landslides and/or mudslides affect the infrastructure of the Catilluc Alto Canal, especially those that do not have technified irrigation and irrigate 120 hectares. Rainfall deficits have a negative impact on pastures, to which livestock production is highly sensitive, lowering meat and milk yields. The most vulnerable groups are farmers who have less land and access to water, older adults, and single parent households.
Land tenure and agricultural production and ecosystem condition	Small-scale cattle ranching is the most important economic activity in this district, and its practices date back to their ancestors who bought the land of two haciendas before they were expropriated by the agrarian reform of 1968. The cattle are raised using a technique adapted for small-scale cattle raising, which consists of keeping the cattle "staked" within a range of 4 meters to avoid overgrazing. All of them are owners of the land they exploit; the poorest have between 2 to 5 hectares, the middle range between 5 and 30 and only a small percentage have more than 70 hectares. They are linked to the market through the sale of milk to the Gloria Company, Nestlé and local cheese factories, of which there are 8 in the district. They also grow potatoes, corn, oca, olluco, and beans for subsistence and the market. In the last thirty years, the district has grown in population which is coming from the poorer areas of Cajamarca (mainly Chota), increasing social and demographic pressures and decreasing soil capacity. Soil capacity has been reduced due to the intensity of cattle ranching and agriculture without technical assistance. Heavy and persistent rains, associated with the lack of protection of hillside soils and the expansion of agricultural land to steeper slopes, are generating strong erosion. It is assumed that the average erosion in the area is (>60 T/Ha/year). As a consequence of this high erosion, sediment production is very high, especially in the months of higher river flows. This sediment affects the functioning and useful life of downstream equipment and hydraulic structures. The water regime in the upper part of the basin has been modified, reducing its water retention capacity, making it more sensitive to drought and less suitable for a second harvest. Deforestation favors the formation of torrents (high peak floods of short duration), reducing the possibility of using water in the middle and lower parts of the basin. Fear of mining contamination: The increasing mining activity in some districts in the upper part of the basin (Pulan, Cumbil, Secse), has generated conflicts with the inhabitants of the province of Santa Cruz and farmers in the valley, who have expressed their total rejection of mining activity, fearing that mining operations will cause water contamination, and that their economic activities will be affected.

	Bacteriological water contamination: Untreated sewage from the district's three population centers is discharged into drains and canals, affecting water quality. However, the water sources (springs, lakes, and oxbow lakes in the highlands) are clean and trout are present. There are no abandoned mining liabilities. However, there is mining activity (La Zanja and Goldfields mines) in watersheds near Laguna Trucha de Oro and in the Hualgayoc district. The population indicates that it would like to carry out participatory water monitoring. As water availability decreases, conflicts between users increase and there is a lack of knowledge about users' rights and obligations. Limited institutional response capacity: For irrigation users, the local water authority does not carry out its function of providing guidance for the proper use of water and does not have a strong presence in the area. Leaders have to travel to Chiclayo (an 8-hour bus ride away) to coordinate activities or ask questions about tariffs. They are unaware of the Mechanism for the Retribution of Ecosystem Services.
Forests and forest management	Along the Mishacocha and Tabla streams, on the right bank of the main river, there are natural forests in the Selva and Quellahorco areas that are water-producing zones, which can be declared forest conservation areas with native species such as the Andean willow and the Cinchona tree (Cinchona officinalis), known locally as cascarilla. There are also pine plantations, introduced during the 1990s as part of a PRONAMACHS reforestation project. They regret having cut down the forests left by their ancestors to plant pastures and recognize that water has diminished and that they have no protection against the freezing winds of the dry season.
Water for irrigation	Approximately 500 ha (31.25%) are technified with sprinkler irrigation in the sectors of La Selva, Llamapampa, Ojo de Agua, Alto Perú, Quilupay, La Lava, and others. Catilluc has 23 irrigation commissions involving approximately 900 people and a total of 1,600 ha. The users now have to pay for their water rights and must pay an amount of 30 soles (US$8.10) per year. However, there is dissatisfaction with these fees, because only the bills arrive without any explanation. They believe that the fees they pay in the upper part of the basin should not be similar to those paid in the lower part of the basin, which is large-scale agriculture.
Drinking water	The presence of fecal coliforms has been found by the municipality since the beginning of 2023. The water supply is piped water, and the drinking water systems are not maintained and do not function properly. The health center confirmed that there are cases of diarrhea in children. At the district level, it is estimated that 70% of the population of the Catilluc district treat municipal domestic wastewater; however, the three population centers have old water treatment systems that have exceeded their capacity and are draining wastewater into the streams. There are no solid waste dumps in natural waterways, but the municipality has conducted a water quality analysis and found the presence of coliforms in the piped water in some towns. The homes have piped water services in or near the house. In the dry and freezing season there may be a shortage for several hours and in the rainy season the water is cloudy with sediment.
3 Gender Analysis. Access and Control of Resources	
Women's participation	In the irrigation water user committees there is a predominance of men, although there are women users who have inherited land from their parents or grandparents, or are widows, but their participation is limited. Only a minimal percentage of women hold the positions of President of the Irrigation Committees. In the Basin Council there is a representation of women whose designated institutional representatives are mostly men. Women are assigned to roles traditionally considered feminine, such as secretarial positions, and the regulations do not provide for women's participation.
Access to and control of land	Women are joint owners of the land if they are married in community of property; however, they are not recognized as owners. Decisions to buy and sell are made by the men of the family. Women can inherit land from their fathers and can decide what to do with these land titles, which they generally delegate to the men for administration.
Water access and control	Ninety-five percent of irrigation rights holders are men; only a few, mostly widowed and/or single women, are water rights holders.

	In general, women's claims are not taken into account. Irrigation is considered a male issue in Catilluc. However, there is a group of registered women users.
Access to and control of livestock benefits	The women work on milking the cows (twice a day) and providing water and salt to the cows (once a day), every day of the year rain or shine and from Monday to Sunday. The men also milk and take care of pasture decisions. Cattle are raised on small farms using the "estacado" (staking) technique. The cattle are tied to a stake with a 4-meter rope where they will remain during the morning and are moved in the afternoon. At midday, the women fill a bucket with water to give them to drink and move them to the new grazing place. The men move the 3 or 4 porongos of milk, 30 liters each, to the side of the road to be picked up by collectors from Gloria, Nestlé or the cheese factories. There are a total of 8 cheese dairies.
Access to and control over the raising of small animals.	The women raise guinea pigs, rabbits, chickens and pigs. They take care of their food and illnesses and can dispose of the money from sales. They also take care of curing them of illnesses. The local veterinarian is assisted by a woman who guides the women. The most common diseases are salmonella and distemper and avian flu in the hens. There is no technical assistance for this type of farming.
GROUP REPORT	Group 1: Older men
4 Group reports Seasonal Activities, Challenges, Strategies (Activity 1, Step 3) Lived experience of climate change (Activity 2) Resilience Factors (Activity 4, Step 1) Pathways to Resilience (Activity 4, Step 2) Specific Priorities (Activity 4, Step 2)	Seasonal change and climate variability: challenges and strategies. For this focus group of older men, the scarcity of water for pasture at the end of the rainy season is the most critical factor, especially in the months of August-September-October. The sources of the lakes and springs are reduced, so vigilance and neighborhood conflicts are accentuated. In the areas of La Unión, Los Ángeles and La Selva, irrigation is done with a sprayer connected to a hose from the water source. In Cachorgos, Surupata and El Milagro, water travels through canals and is flood irrigated. However, many of these canals are not lined, and there is water waste. Through community work, the canals are cleaned. They have tried grass silage, but say that the cattle are not used to a diet of dry grass and sicken. They use a strategy called "inverna". After planting potatoes, they put one variety of grass (clover), then another variety (rye grass) and then a third variety (oats). Because the cattle are raised using the "staking" technique, the cattle can only eat 4 meters around. This increases the availability of grass during the dry season. For the coldest season, an attempt has been made to build precarious greenhouses for young cattle to spend the night and avoid diseases. Dairy cattle ranching is an ancestral activity in this region, and the practices, uses and customs have been passed down from generation to generation. Experiences of climate change. When the dry season became extended, at first farmers had to sell the cattle at low prices. They began to introduce grass seeds and to rotate the cattle more frequently to avoid overgrazing. During the rainy season, landslides occur in the creeks and the rivers and wash away crops and pastures. Hurricane winds damage the roofs of houses. In the higher zones, farmers have begun to reforest and leave trees as windbreaks. The municipality is in charge of cleaning the roads and highways after the rains. Identification of resilience factors. Family relationships serve as sources of support, money loans, tools, temporary work, etc. This is especially valuable for the most vulnerable households, which are single-headed households, or single elderly adults. Diversity of the family's economic activities (dairy cattle, guinea pigs, chickens, pigs, potatoes, oca, ollucos, corn, etc.) allows them to weather climatic shocks. The most vulnerable households are those that do not have access to water, because they are not included as users, sometimes due to the location of their land outside the networks and distribution channels. Contracts with dairies give them security of sale of milk throughout the year. The Rondas Campesinas can intervene when a villager requests it in a family or water conflict. After an investigation of the conflict, the punishment can be a warning and 3 or more "chicotazos" (small whip lashes). For this group the resilience factors are two: Continuous access to irrigation water throughout the year. Availability of pasture during the dry season. Pathways to resilience. Interventions.

	Build reservoirs or oxbow lakes in the "Trucha de Oro" lake and reservoirs and micro-reservoirs to harvest water during the rainy season. Line old irrigation canals. Extend irrigation to those who do not yet have it. Reforest in the headwaters and as windbreaks around water sources. Water quality monitoring, due to the proximity of several mines (Gold Field, La Zanja). Specific activities Coordinate with the municipality to define the construction of the oxbow lakes in the Trucha de Oro Lake. Determine the size and ownership of the land surrounding the lake. Pay off debts with the National Water Authority to access public resources. Resolve water conflicts between neighbors.

GROUP REPORT	Group 1: Young Men
	Seasonal change and climate variability: challenges and strategies. They use more conceptual terms such as: "climate variation", temperature increase, major disasters, environmental pollution, unusual rainfall. Experiences of climate change. In the rainy season: they plant potatoes and grass; they go fishing; they clean the irrigation ditches to avoid landslides; they fix the roofs of the house; they help fumigate the land in case of a rainstorm. In the frost season: They help connect sprayers for irrigation; collect firewood for cooking. They help in tilling the soil. If there are emergencies, they can leave for Cajamarca, Chiclayo or Lima to work as transport assistants or in minor jobs to return with money for potato planting. Identification of resilience factors. Technify irrigation and cattle raising. Road to resilience: Interventions. Improve irrigation canals to avoid water loss. Leave to work in Cajamarca, Trujillo, Chiclayo or Lima. Specific activities Modernize water management, 100% technified irrigation. Set up milk-based businesses, such as cheese, yogurt.
GROUP REPORT	Group 1: Adult Women
	Seasonal change and climate variability: challenges and strategies. Experiences of climate change. They suffer health problems, especially respiratory problems such as flu, and also arthritis and arthrosis, as they have to milk the cows directly with their hands. Children now get sicker with flu and cough. They go to the health center or pharmacy for medicine. It also affects cattle that get sick when feed is changed and also guinea pigs and chickens. They go to the local veterinarian for medicines. They talk to their neighbors and relatives to exchange prescriptions and results. Potato and corn prices are down because of frost damage. Wet firewood generates more smoke in the kitchen. When the rains increase there is more work on the plots with the cattle and in the house. Identification of resilience factors. The women talk to each other, exchange information, have businesses and belong to associations of guinea pig, trout and chicken breeders. Road to resilience: Interventions. Technical assistance for the raising of small animals. Assistance in learning how to speak in public to express their ideas. Knowledge about safety at work, protecting one's hands while milking cows. Knowledge about cattle diseases and nutrition for their children. Specific activities Use of safety measures such as gloves, for milking, curing of smaller animals, etc. Hot water for laundry/or a clothes washer. Training in public speaking and expressing one's thoughts with fluency.
GROUP REPORT	Group 1: Young Women
	Seasonal change and climate variability: challenges and strategies. They recognize only two seasons: rainy and dry or frosty.

	They generally live in a family with their parents, even if they are single mothers, and their activities are guided by family decisions. Experiences of climate change. During frosts there is more work at home, because children and older adults get sick with bronchial and flu diseases. During the rainy season the smaller animals get sick more often. Unlike the young men, they do not go frequently to Cajamarca, Chiclayo or Lima; even in times of emergency, they stay in Catilluc. Identification of resilience factors. They know more about climate change now because of their classes at school. They can better explain to their parents what is happening. They participate in more activities with the municipality, because there is an environmental engineer who has called them to participate in solid waste management and milk processing activities. However, in terms of participation they are still a minority in the cohort of young people. Road to resilience. Interventions. They are interested in becoming more involved in activities related to water quality and quantity monitoring. Specific activities. Learn about social water management. Participate in information and dissemination campaigns on the impacts of climate change and water conservation.

5. Map of Actors

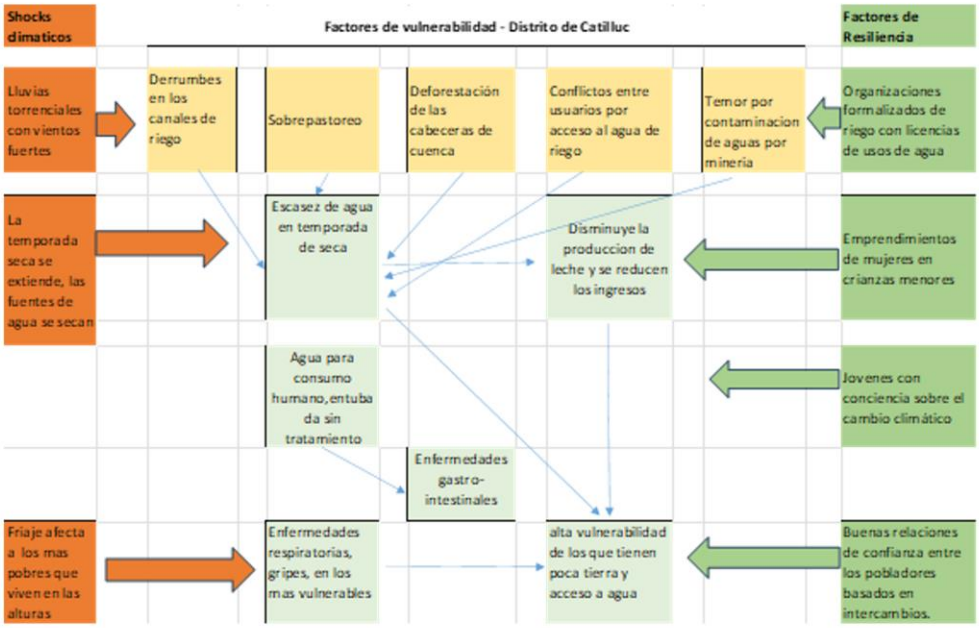
Organization	Interest in the CCA	Priorities	With whom it coordinates
Municipality of Catilluc	A lot of interest in the problems of the district and has a lot of acceptance. It has a technical team of young people who are trying to make changes.	Drinking water and improved kitchens. Improve irrigation canals. Articulate with the central government and social programs.	With Water and Sanitation Boards With the Water irrigation committees (irrigators).
Local Water Authority - Chiclayo	Very little presence in the district despite the importance of the watershed. Had an office in Santa Cruz that was closed during the pandemic.	Dues collection	With the Irrigation Boards
Gold Field Mining Company	It is interested in the Trout Lake. No direct relationship with water users.	It is also an upstream water user.	No relationship.
La Zanja Mining Company	Employs San Mateo residents as day laborers	Its priorities are unknown	No relationship.
Regional Government of Cajamarca	It is interested in developing projects for livestock development in the district. It is concerned about deforestation and is promoting a nursery for reforestation.	Interest in financing water reservoirs and micro reservoirs	With the district municipality.

6. Contact persons

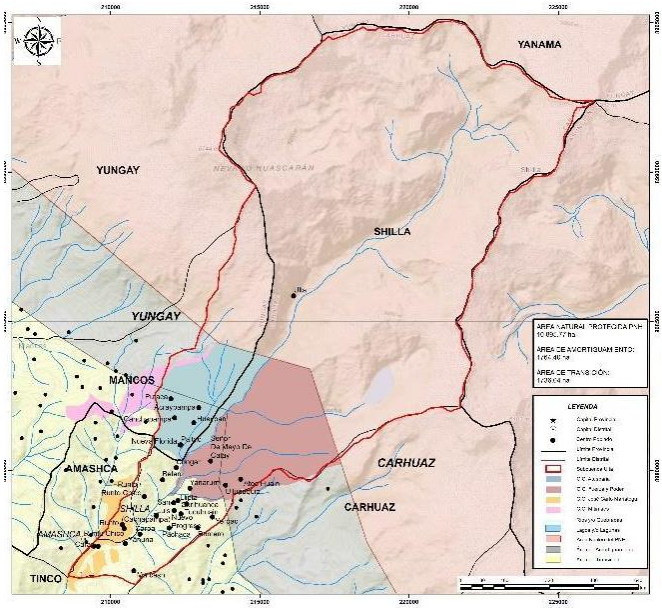
	Name	Sex	Age	Cell phone number

1	Eladio Guerrero Paredes. President of the Catilluc Irrigation Commission.	M	55	976867266
2	Remigio Hernández Becerra. President of Ojo de Agua La Unión	M	63	976971144
3	Lidia Rivera León. Head of the Economic, Environmental and Tourism Development Unit of the Municipality of Catilluc.	F	32	963343291
4	Ellar Mallca Vasquez. Mayor of La Selva town center	M	32	930934438
5	Silvio Alfredo Terrones Mena. Vice President of the Catilluc Irrigation Commission and President of the La Selva JAS.	M	50	928163569
6	Elindor Mallca Romero. Owner of Los Sauces Forest with Quina trees.	M	50	976198614
7	Jose David Tapia Meléndez. Municipal Manager	M	48	904423926
8	Jesús Osmar Acuña Silva. Chief of Civil Defense and Risk Management	M	35	999593594
9	Edwin Caballero Hernandez. Head of ATM (Water and Sanitation)	M	32	921146574
10	Einstein Daytom Mondragón Quispe. Head of Social Development and Municipal Services	M	33	918859662
11	Sixto Fernández. Representative of the Catilluc User Board to the Basin Council.	M	43	976 584 635

7. Photographic panel.


Shocks dimaticos
Factores de vulnerabilidad - Distrito de Catilluc
Factores de Resiliencia
Lluvias torrenciales con vientos fuertes
Derrumbes en los canales de riego
Sobrepastoreo
Deforestación de las cabeceras de cuenca
Conflictos entre usuarios por acceso al agua de riego
Temor por contaminacion de aguas por mineria
Organizaciones formalizados de riego con licencias de usos de agua
La temporada seca se extiende, las fuentes de agua se secan
Escasez de agua en temporada de seca
Disminuye la produccion de leche y se reducen los ingresos
Emprendimientos de mujeres en crianzas menores
Agua para consumo humano, entubada sin tratamiento
Jovenes con conciencia sobre el cambio climático
Enfermedades gastro-intestinales
Friaje afecta a los mas pobres que viven en las alturas
Enfermedades respiratorias, gripes, en los mas vulnerables
alta vulnerabilidad de los que tienen poca tierra y acceso a agua
Buenas relaciones de confianza entre los pobladores basados en intercambios.

Annex 7: Report of the comprehensive participatory consultation with stakeholders of the Ulta micro-watershed – Santa Basin. District of Shilla. Carhuaz.

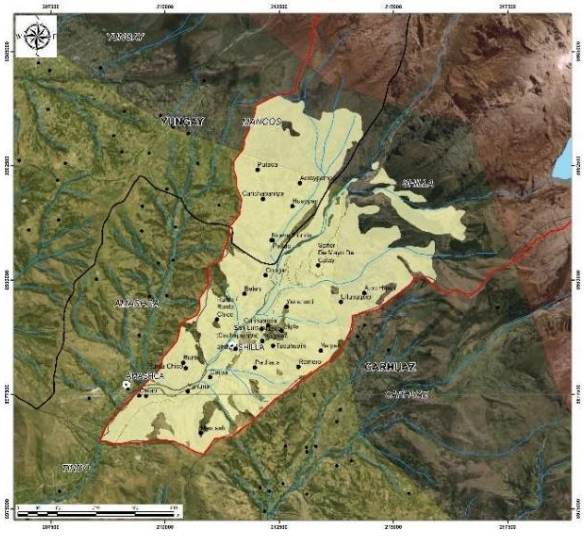


Location of the project area
The project intervention area includes the territory of the middle and lower part of the district of Shilla (21.25%) in the province of Carhuaz and the towns of Huaypan, Putaca, Canchapampa, Acraypampa, Ushno, Matara, Armapampa and Paltac in the district of Mancos (12.41%) in the province of Yungay, department of Ancash. It covers about 3500.44 ha and altitudes ranging from 2980 to 3550 masl.
The intervention area is part of the Quebrada Ulta micro-basin (middle and lower zone), Buin River sub-basin and northeast of the Santa River basin.

Limits of the intervention area
North: It borders Huascarán National Park (PNH).
East: It borders the district of Carhuaz, in the province of the same name.
West: It borders with the district of Amashca in the province of Carhuaz and Mancos in the province of Yungay.
South: It borders with Tinco in the province of Carhuaz.

Ecosystems

The Ulta micro-watershed has Andean grasslands, agricultural areas, forest plantations with a predominance of eucalyptus, shrub thickets, rocky soil or with little vegetation, and glacial areas. The intervention area has approximately 2,270 ha of agricultural land, 1,075 ha of Andean grasslands and approximately 205 ha of shrub thickets.



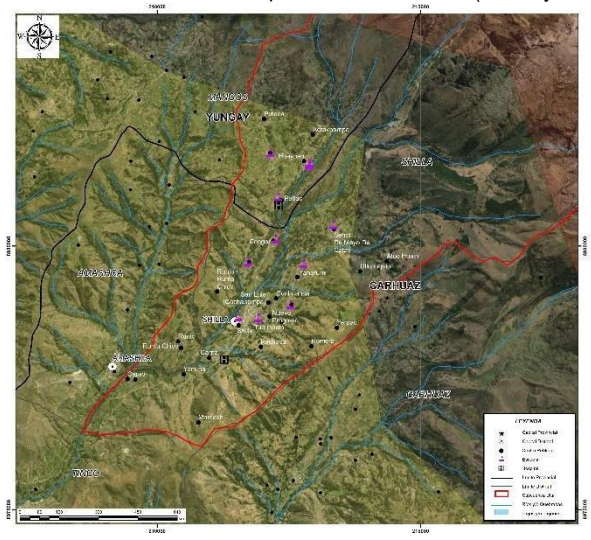
Weather

The characteristics of the climate are; in the low zone it is semi dry, temperate with deficiencies of rains in autumn, winter and spring, humid and in the middle zone it is semi dry, cold, with deficiency of rains in winter and humid. Rainfall (in an ideal year) during the rainy months (October to April) is usually around 250 mm/month while in the dry season (May to September) it is around 10 mm/month. In addition, the maximum temperature during the rainy season is 18 °C while in the dry season it is 22 °C, and the minimum temperature is 10 °C and 5 °C during the rainy and dry seasons, respectively.

Population

The population of the intervention area includes the entire district of Shilla and the towns of Huaypan, Canchapampa, Acraypampa, Putaca, Armapampa, Ushno, Matara and Paltac in the district of Mancos. There are approximately 3986 inhabitants, 54% of whom are women. The majority of the economically active population is dedicated to agriculture and livestock, followed by commerce and, to a lesser extent, the provision of services (mobility, masonry, music, among others).

PROVINCIA	DISTRITO	CENTRO POBLADO	HOMBRES	MUJERES	CENTRO POBLADO	HOMBRES	MUJERES
Carhuaz	Shilla	Shilla	343	345	Carpa	17	23
		Belén	79	106	Carapo	15	13
		Congar	135	158	Nuevo Progreso	48	58
		Señor de Mayo de Catay	112	139	Union	109	128
		Yan Rumi	82	100	Betel	2	2
		Curihuanca	87	107	Tomapampa	22	23
		Llipta	73	81	Incapupampa	19	24
		San Luis	38	44	San Gabriel	45	54
		Pachaca	14	19	Paramayoc	60	65
					SUBTOTAL SHILLA	1300	1489
Yungay	Mancos	Canchapampa	79	93	Putaca	59	64
		Acraypampa	85	101	Paltac	60	73
		Huaypan	151	202	Matara	34	25
		Armapampa	14	14	Ushno	73	70
					SUBTOTAL MANCOS	555	642
						TOTAL	3986



Equipment

There are 11 schools, with the San Juan Bautista school being the one with the largest student population in the intervention area. There is a category I-1 health post in Mancos and an I-2 post (headquarters of the Shilla Micro-Network) located in the capital of the Shilla district.

Drinking water supply coverage is 85% of the population, while access to sewerage and drainage is only 65%. Almost all of the catchment systems are supplied by the nearest natural water sources (streams, creeks, springs, and lagoons). In times of drought or low water levels, some villages and towns tend to run out of drinking water because their natural sources dry up or are reduced to quantities that do not meet demand. Sanitation problems have also been observed because the treatment units are in poor condition and do not meet adequate chlorination standards.

Access Roads

You can access from the asphalt road from Carhuaz to Chacas, being Shilla to 10km of Carhuaz. And by means of small roads from Shilla to the populated centers and the town of Mancos.

COMPREHENSIVE PARTICIPATORY CONSULTATION REPORT- SHILLA DISTRICT

Identification	
Dates	Wednesday, June 21, Thursday, June 22, Friday, June 23 and Tuesday, June 27
Name of facilitators	Vidal Rondan (Andean Mountain Institute);

<table>
<tr><td></td><td>Kiara Aguirre (Andean Mountain Institute);
Leysi Huayanca (Andean Mountain Institute), and
Josefa Rojas (PROFONANPE)</td></tr>
<tr><td>Number of participants by gender</td><td>
<table>
<tr><th>Location</th><th>Part no.</th><th>H</th><th>M</th></tr>
<tr><td>Shilla Municipality</td><td>5</td><td>4</td><td>1</td></tr>
<tr><td>C.P. Shilla</td><td>2</td><td>0</td><td>2</td></tr>
<tr><td>Group of Young at Chilla</td><td>8</td><td>6</td><td>2</td></tr>
<tr><td>Medical Post</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>Huaypan Farmers committee of producers</td><td>5</td><td>4</td><td>1</td></tr>
<tr><td>Huaypan tourism committee</td><td>12</td><td>10</td><td>2</td></tr>
<tr><td>Women´s groups involved in small animal husbandry</td><td></td><td>0</td><td>6</td></tr>
<tr><td>Total participants</td><td>39</td><td>25</td><td>14</td></tr>
</table>
</td></tr>
<tr><td>No. of authorities, leaders, officials by gender and age</td><td>See appendix.</td></tr>
<tr><td colspan="2">Main Features</td></tr>
<tr><td>Agricultural Production:</td><td>Livestock production is characterized by being mixed and extensive; cattle or bovines in the upper and middle part of the micro-basin, and smaller animals in the middle and lower part of the basin. Livestock production is "free or uncontrolled" in the upper zone (Huascarán National Park) and on a small scale by families in the middle and lower zones. Livestock tends to feed on natural pastures, forests and other shrubs in the area, as well as stubble from agricultural production during the dry season.
The areas in the upper and middle zones are used by the Comité de Usuarios de Pastos Naturales (C.U.P.N.) de la Quebrada Ulta, made up of about 120 active users and approximately 2,000 head of cattle, the herds during the months of July and August tend to move down from the upper to the middle zone. In recent years this excessive number of cattle has produced overgrazing in the core zone (P.N.H.). Currently, the C.U.P.N. has taken the decision to reduce 10 head of cattle per user.
Agriculture in the area is incipient because it is done on small plots of land and by families (private ownership), and a large part of the population sells its production to be able to buy complementary foods. Family agricultural production is mainly for self-consumption as a strategy for food security during the dry season. They usually produce tubers such as potatoes, olluco, oca, and others; Andean cereals such as corn and, to a lesser extent, alfalfa, oats and rye grass.
Guinea pig production is one of the most important economic activities for families in the lowlands and some in the middle lands; however, this practice is still deficient and unprofitable. There are about 3 associations recognized by the municipality of Shilla and registered with SUNARP; guinea pig raising is mostly done by women. Most of the fish farming is located in the town of Congar and is managed privately or by family members, producing trout in large quantities for marketing in the cities of Carhuaz and Yungay.
Some problems in agricultural production are due to the lack of capacity to respond to the scarcity of natural pasture areas, water availability for the implementation of technified irrigation and diseases caused by environmental pollution and climate change (pneumonia in animals, stomach infections, etc.).</td></tr>
</table>

Tourism Potential:	The Concerted Development Plans of the provinces consider the "Carhuaz, Shilla, Punta Olímpica and Chacas" tourist circuit as natural and tourist attractions to promote and disseminate. On this route, there is a tourist food service initiative at the PNH control post led by women through the María Auxiliadora Association.
Strategic geographic position for the Santa river basin	The Ulta micro basin, where the project intervention area is located, is the main tributary of the Buin sub-basin, which contributes water to the Santa River basin. This micro basin has several bodies of water that supply the agricultural production of potatoes, corn, olluco, oca, fruits, among others for the food supply of the populations of the districts of Tinco, Amashca, Shilla, Carhuaz, Huaraz and others.
2 Seasonal calendar of the community	
Description	There are only two seasons per year, the rainy season from October to April and the dry season from May to September. With climate variability, it is no longer possible to recognize exactly when a season begins or ends, even more so in recent years with the presence of cyclone Yaku and the El Niño phenomenon. There are no SENAMHI weather stations in the province of Carhuaz and the closest ones are in Yungay and Huaraz, so there are no data available to guide decision-making based on climate information.
Extreme weather events and disaster risk management	During the dry season there are usually frosts with temperatures below °0C and strong, cold winds. In recent years, this climatic event has been worsening, drying out pastures and crops in almost the entire micro-basin, affecting agricultural and livestock production, as well as generating respiratory diseases in animals and the vulnerable population. For example, last year, large numbers of small animals such as guinea pigs died of pneumonia, causing monetary and food losses to families in the middle part of the basin. Another climatic event observed has been the change in the amount and frequency of rainfall, thus affecting the temperature regime, the availability of water for the population, the adequate production of food for self-consumption, as well as the destruction of houses and roads. The delay in rainfall, especially in October and November, has made it impossible to plant food crops such as olluco and quinoa in certain sectors. According to INGEMMET, urban areas and/or areas near the district capital, Congar and Atoc Huan, are exposed to complex mass movements and landslides. A study warns that if landslides and/or mudslides occur in the lower streams of the micro-watershed, the micro-watershed could be isolated because its access roads cross these streams. The groups most vulnerable to these climatic events are families in the middle zone, most of whom live from agricultural and livestock production. In addition, in this zone the presence of older adults without children and single-parent households is higher.
Land tenure and agricultural production and ecosystem condition	Land tenure takes two forms: 1) Two peasant communities, Fuerza y Poder de Shilla and Atusparia de Mancos, with land titles, and 2) private family properties with land titles of less than 1 hectare. Many families decide to lease the land that has been left unworked (migration of the owners) or to join family groups (brothers, sisters-in-law, etc.). The raising of small animals is mostly done by women and crop production is usually done in situ and in the family, many have their houses next to their crops and animals, which in many cases causes sanitary problems. Sheep are raised by means of managed grazing practices such as herding, for which "muzzles" are used to prevent damage to neighboring crops and pastures; they are only removed at certain times and in certain areas to feed. On the other hand, cattle and/or bovines are raised in two ways: 1) in the core zone of Huascaran National Park by adult men in a "free" manner, which has caused an overload on pastures that reduces soil capacity and, since there are no fences or rodeos in recent years, the number of wild cows has increased excessively; and 2) on family lands, cattle are raised next to the house and fed on crop stubble and cultivated pastures.

	Agricultural production (peaches and prickly pears) in the lower zone is generally destined for commerce, especially for the Carhuaz and Huaraz markets. Some farmers with more capital are growing strawberries and flowers in greenhouses to sell in local markets or through incentives from marketing companies in the city of Huaraz and Lima. On the other hand, in the middle zones it is done for self-consumption and in some cases it is marketed in order to be able to buy complementary foods, seeds or some other input for the next planting (chemical fertilizers). The lack of rainfall in the expected months and frost cause crop diseases, in addition to the lack of agricultural technical assistance. Intensified land use (no fallowing of farms or crop rotation) and poor water management have resulted in poor soil quality, which forces farmers to buy agrochemicals or replace certain crops for family food. The reduction in water availability during the dry season and the lack of knowledge about the rights and obligations of the Sanitation Service Administration Boards (JASS) and Irrigation Committees has caused problems for the most vulnerable families (Mancos population centers). For the irrigation committees and the Committee of Natural Pasture Users (CUPN), the local water authority (ALA), the national water authority (ANA) and the local institutions have not responded to their functions or to the management for the adequate use of water, since there are no plans or continuous presence in the area.
Forests and forest management	The middle and lower part of the micro-basin has a large presence of eucalyptus plantations and other species such as alder, as a result of reforestation activities in the 1980s from the FAO-Netherlands reforestation project. In the upper part there are more natural forests with native species such as quenual, quishuar, among others. The plantations are grouped in small forests bordering the farms next to the houses, along the banks of rivers and streams. These plantations are used as fuel (firewood), to build houses, to make furniture (tables, benches, chairs) and in many cases, this furniture is sold in the markets of Carhuaz and Huaraz.
Water for irrigation	There are 20 right-of-use permits registered with ANA: 2 are for aquaculture use by the Comunidad Campesina de Fuerza y Poder y Predio Privado; 5 are for agrarian use belonging to water users' committees; and 13 of population use for the JASS. The main irrigation water supply canal is the Ulta - Acraypampa - Putaca - Ushno - Amashca canal, which is 20 kilometers long and made of rock and earth. This canal supplies more than 25 lateral or secondary canals built with rustic material (masonry), benefiting more than 500 users grouped in a board of irrigators. The longest secondary or lateral canal (6 km) is the Putaca - Huaypan - Belén - Runtu Chico canal, which irrigates crops in the middle part of the Shilla district and the towns of Huaypan, Putaca, Canchapampa, Acraypampa, Ushno, Matara, Armapampa and Paltac in the Mancos district. Another longer canal that irrigates the middle and lower part of the Shilla district is the 13 km long Bandera Yacu - Señor de Mayo de Catay - Yana Rumi - Pachaca - Mulana canal, made of concrete and rock. There are two irrigation commissions that manage the micro-watershed and are responsible for charging 5 soles for the right to use water to each user. These commissions have a coordination link with the Huaraz users' board, the organization in charge of relations with ALA.

	The condition of the canals (from fair to bad), the water deficit during the dry season and the weak management and administration have not allowed the implementation of measures to raise awareness and training in the proper use of water and a storage system (reservoirs and micro-reservoirs) and technical irrigation.
Drinking water	In the district of Shilla, there are 11 JASSs recognized by the municipality, while in the towns of Huaypan, Acraypampa, Canchapampa, Ushno, Matara, Armapampa, Paltac and Putaca in the district of Mancos, there are 4 JASSs that have not yet been formalized. The water supply is piped water and the collection and treatment systems are generally not properly maintained and chlorination processes are not carried out correctly. In addition, the service only covers 85% of the micro basin's population during the rainy season, while during the dry season this percentage decreases, especially in the middle part of the basin. The households farthest from the district capital do not have drinking water service in their homes, so they have to draw from nearby natural water sources (ponds, streams) using containers or buckets. There are no solid waste dumps near the natural water sources; however, in the lower part where most of the houses are located, solid waste contamination can be observed in the streams.
3 Gender analysis. Access and control of resources	
Women's participation	In the natural pasture user committees, irrigation committees and communal boards of directors, there is a predominance of men in management positions. Women are assigned to roles traditionally considered feminine, such as secretaries and treasurers. Women participate mostly in the small livestock associations (guinea pigs, chickens, rabbits, pigs) and family gardens (vegetables, medicinal plants and cultivated pastures). The guinea pig association in the town of Shilla is made up of 20 members; 16 of them are women. The vast majority of the women are Quechua-speaking and do not usually communicate fluently in Spanish, which does not allow an adequate relationship for marketing in the markets of Carhuaz and Huaraz.
Access to and control of land	Due to cultural practices in these high Andean zones, women acquire land rights upon the death of their husbands (widowhood) or by inheritance from their parents. Buying and selling decisions within the family fall mainly on the men, but household administration is mutual. Women who are widowed, elderly or have no male family members are more vulnerable.
Water access and control	The use of water for irrigation is considered a mainly male issue; many women accompany their husbands to the monthly meetings, but do not participate much and when they do, they are not taken into account.
Access to and control of livestock benefits	The women are usually in charge of grazing the cattle and some cows (small numbers and sizes); they have to travel kilometers with their animals in search of pasture and water, so they are muzzled until they reach the areas. Once in the area, they are placed so that they can feed and drink water properly; this task is done every day of the year. Most of the men carry out agricultural activities and participate in the "free" cattle roundups in Huascarán National Park (HNP). The men are in charge of marketing cattle to intermediaries who buy in the town and in the markets of Carhuaz, Huaraz and others.
Access to and control over the raising of small animals	The women are in charge of raising small animals such as guinea pigs, pigs, chickens, among others. From very early in the morning, every day of the year, they clean the cages, feed them and cure them. The most common illnesses are respiratory illnesses; when frosts occur, they usually get pneumonia. In the last few years, temperatures have been dropping more and more and the lack of technical assistance (veterinarians) has caused the death of hundreds of guinea pigs in several families. The small animals are sold to neighbors and in the markets of Carhuaz and Huaraz. One of the family's sources of income is from the sale of these small animals.
4 Group reports	

Group 1: Older men	Seasonal change and climate variability: challenges and strategies. For this focus group, water scarcity at the beginning of the rainy season (October, November and December) is the most critical, since the quality and quantity of crops is affected. Natural water sources are reduced without being able to supply the population's demand, and the entire micro-watershed is flood irrigated. Most of the canals are made of ancestral material (rocks, stones) and have no lining or routine maintenance, so there are leaks that reduce the amount of water for irrigation. In response to this situation, the canals are cleaned, irrigation shifts and other actions are carried out as measures for efficient water use. Experiences in the face of climate variability. When the dry season is extended, farmers try to replace some products with others, such as olluco, however, these changes have not worked as well in terms of quality or quantity, but at least they have been able to cope with the lack of rainfall. Frosts have started to last longer and have affected many crops and animals. In the middle zone, attempts have been made to implement plastic greenhouses to lessen crop damage and calamine sheds for pneumonia in small animals. Heavy rains occasionally cause landslides in houses and creeks in the lower and middle zones. The municipality intervenes by cleaning the roads and creeks and providing support to the direct victims, but these are only temporary solutions that are not controlled or monitored. Identification of resilience factors. The diversity of ecological floors allows them to have a productive agro biodiversity, such as cereals, fruits, tubers, etc. There is a strong culture and ancestral roots of organizational and associative capacity among communities and different social base organizations, therefore, they look for joint alternatives to adapt and undertake different activities. There are tourism, aquaculture and agricultural and livestock production associations in the lower part that have been operating for some years, so the population in the middle part has the initiative to replicate them. The community and the committees have the capacity to communicate and relate with the HNP to carry out tourism services within the Huascarán Biosphere Reserve. Pathways to resilience: interventions. Implement a water storage management system and technified irrigation. Promote the maintenance, lining and management of the technical file of the main canal and others. Build micro reservoirs or family reservoirs for the most remote villages and hamlets. Lining of old canals. Introduce soil improvement practices (crop rotation, organic fertilizers); Production of market-oriented crops such as strawberries and chocho. Pathways to resilience: specific activities. Determine the size, location and ownership of the agricultural areas to implement storage and technified irrigation systems. Coordinate with the municipality of Mancos and Shilla to define actions in the irrigation canal and the implementation of potable water. Implement water management instruments. Implement the cultivation of other food products in model or test farms.
Group 2: Young men	Seasonal change and climate variability: challenges and strategies. This focus group is more aware of climate variation, especially the decrease in temperatures and increase in frost in months other than the usual seasonal calendar. They also take into account environmental pollution, although they do not yet internalize issues such as climate change. Experiences of climate change. Before the rainy season they carry out communal activities (faenas) to some ancestral canals and try to monitor the quality of these, detecting that many need lining and/or cementing completely.

	They are also concerned about the scarcity of land and the lack of efficient water use technologies such as technified irrigation. As a result, they are motivated to migrate to Carhuaz or Huaraz to do other work and thus be able to raise money for their families. Identification of resilience factors. There is capacity to undertake activities in the form of partnerships to develop market-oriented products. There is trade accessibility in Carhuaz, Yungay and Huaraz. Road to Resilience: Interventions Improve water management for irrigation and population consumption. Undertake and evaluate new production and marketing partnerships. Road to resilience: Specific actions Modernize and improve water management together with committees, communities and institutional bodies (ALA, ANA). To carry out trade and tourism activities.
Group 3: Older women	Seasonal change and climate variability: challenges and strategies. This focus group takes into consideration temperature variation and its consequences on small animals, as well as rainfall. Experiences of climate change. Respiratory diseases such as influenza, pneumonia, bronchitis become more intense especially in small animals and children, although older adults (elderly) also get sick. The health center near the hamlets of Mancos is not very well prepared and equipped, so the population goes to Shilla in search of medicines and care. Also, since there are no veterinarians nearby and no resources to bring one, the animals die. The frost causes the crops to freeze so they have to try to sell their products as soon as possible, lowering their prices and trying to buy complementary food or resources for new crops (pesticides, seeds, etc.). Identification of resilience factors. There are guinea pig, fish farm and tourism associations where more women than men participate. Road to Resilience: Interventions Technical assistance for the raising of small animals. Women's social empowerment and leadership. Innovative marketing and production ventures. Understanding and handling of foods for children's nutrition. Road to resilience: Specific actions Parenting trainings. Training to learn the Spanish language, without losing the preservation of Quechua, and to express their intentions and ideas on their own. Training on nutrition and food control for children and vulnerable people.
Group 4: Young women	Seasonal change and climate variability: challenges and strategies. They recognize the times of the seasonal calendar and show concern for the intensity and frequency of frosts. Their daily activities are in accordance with their familiar environment. Experiences of climate change. During the frosts there is more work at home and with the smaller animals since they have to try to cure respiratory problems, they try to use the medicinal plants that they occasionally cultivate. They do not think of migrating or going far away from home. Identification of resilience factors. They have attended high school so they have a better understanding of reality and their environment. They participate more in activities within the parish or organized by family members, but not yet within the organizations of the micro-watershed. Road to Resilience: Interventions They are interested in learning more about their environment through monitoring or participatory actions. Road to resilience: Specific actions Training on resource management and handling. Training for learning and dissemination of climate change impacts.

	Training in the formation of productive and commercial enterprises.
5 Beneficiaries and stakeholders of the climate change adaptation project	
	District Municipality of Shilla.
	District Municipality of Mancos
	Peasant Community of Atusparia
	Comunidad Campesina Fuerza y Poder
	Committee of Natural Pasture Users of Ulta's streams.
	Ullupuquio Natural Pasture Users' Committee
	María Auxiliadora Tourism Association
	Guinea Pig Association of the Shilla Village Center

6. STAKEHOLDER MAP

Organization	Description of the Activity	Priority addressed	With whom he coordinates in the community
FONCODES (Haku Wiñay)	Projects for the development of productive capacities	Implementation of guinea pigs (economic incentive for the purchase of offspring)	With the president of the farming community
PROCOMPITE	Business creation or improvement project	Delivery of economic incentives for business improvements	With the president of the associations
NGO Huascaran Mission	Improved quality of life	Food delivery (fish)	With the authorities of the population centers; agents, lieutenant governors, etc.
Parish	Projects for the development of productive capacities	Implementation of carving and weaving workshops	With the directors of the educational institutions
Huascaran National Park - SERNANP	HNP Conservation Agreements	Use of natural pastures	With the presidents of C.U.P.N. and tourism service associations

ANNEXES

FORMAT TC6 CONTACT PERSONS

N°	Name	Sex	Age	Cell phone number
1	Felix Victoriano Huaraz Quito Mayor of Shilla District	M	47	948312058
2	Ruben Lopez Principal of San Juan Bautista de Shilla School	M	52	943493960
3	Vilma Berrospi Member of the Association of Cuyes del Centro Poblado de Shilla.	F	38	930955113
4	Mónica Jiménez	F	50	944244425

	Doctor in charge of the Shilla Micro Health Network			
5	Manrique Moreno PNH Park Ranger	M		938088247
6	Juan Huacanta Morales President of the C.U.P.N. Ulta	M		930423982
7	Fabian Cruz Julca President of the Tourist Association "María Auxiliadora".	M	43	988741800
8	Eusebio Mendoza President of the Comunidad Campesina Fuerza y Poder (Peasant Community Strength and Power)	M		961388036
9	Roxana Macedo Figueroa Engineer DRA	F		968986030
10	Cesar Cieza AgroRural Engineer	M		998418088

PHOTOGRAPHIC PANEL

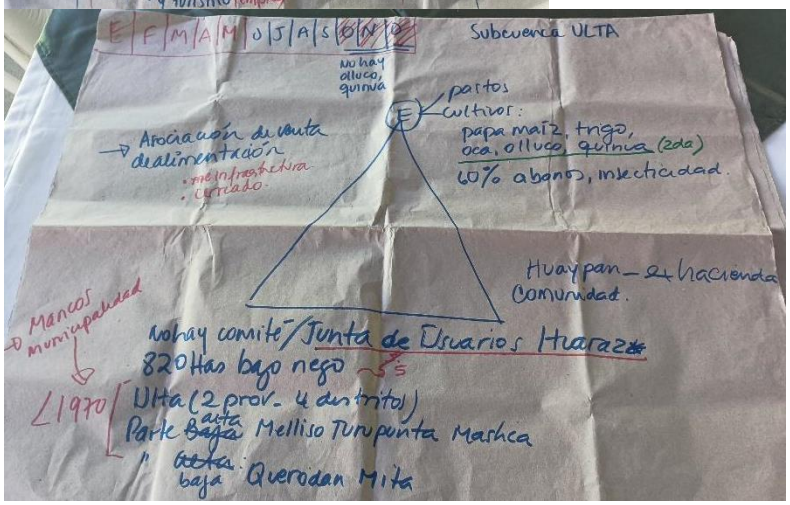
Interviews at San Juan Bautista School in Shilla

Interviews with residents of Huaypam P.C.

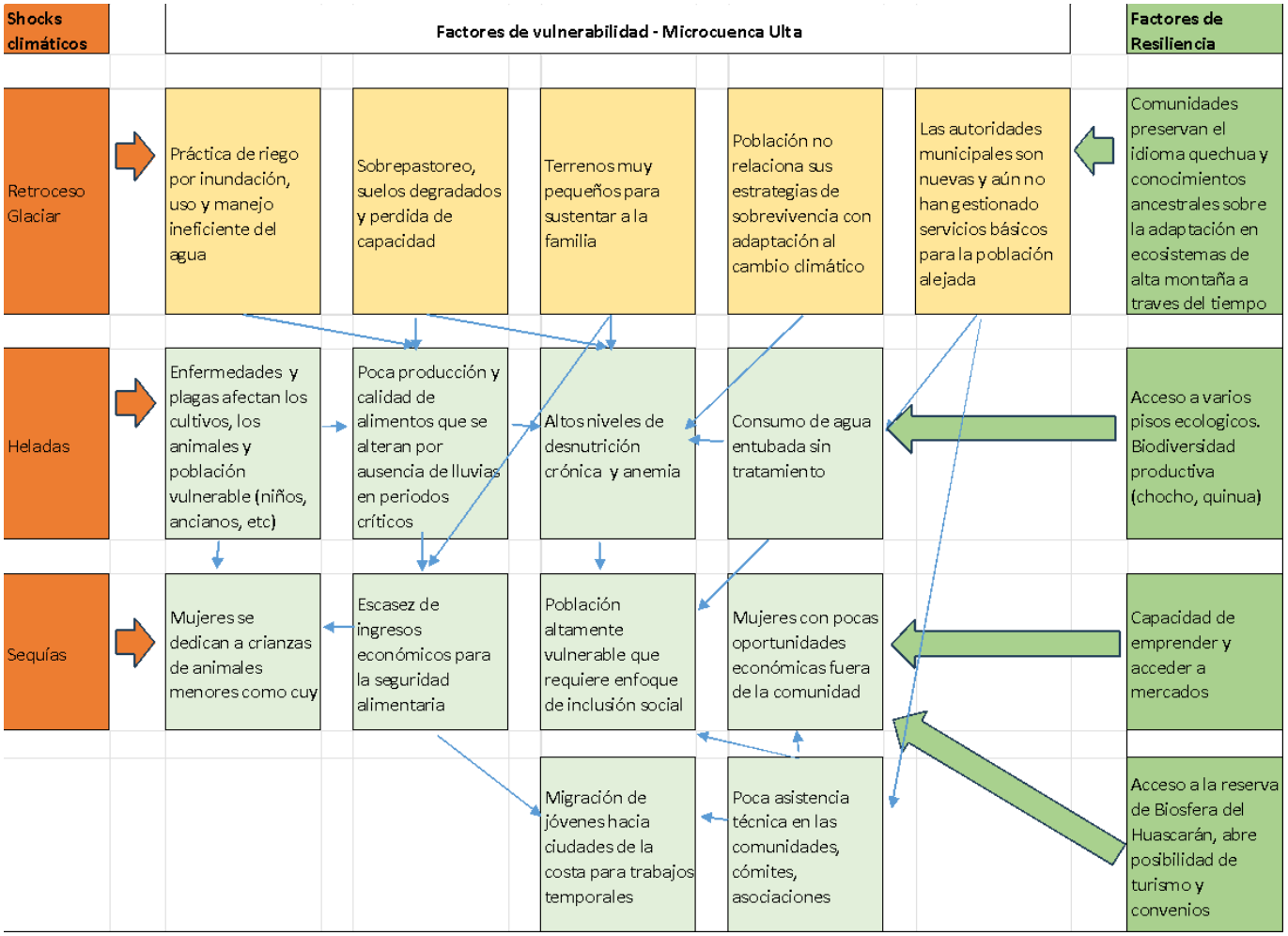

Interviews with residents of C.U.N.P. Ulta and the Tourism Association "María Auxiliadora".

Municipalidad Distrital Shilla Shilla Health Center

Interview with member of Shilla guinea pig breeding association



Information obtained in the field


Shocks climáticos
Factores de vulnerabilidad - Microcuenca Ulta
Factores de Resiliencia
Retroceso Glaciar
Práctica de riego por inundación, uso y manejo ineficiente del agua
Sobrepastoreo, suelos degradados y perdida de capacidad
Terrenos muy pequeños para sustentar a la familia
Población no relaciona sus estrategias de sobrevivencia con adaptación al cambio climático
Las autoridades municipales son nuevas y aún no han gestionado servicios básicos para la población alejada
Comunidades preservan el idioma quechua y conocimientos ancestrales sobre la adaptación en ecosistemas de alta montaña a traves del tiempo
Heladas
Enfermedades y plagas afectan los cultivos, los animales y población vulnerable (niños, ancianos, etc)
Poca producción y calidad de alimentos que se alteran por ausencia de lluvias en periodos críticos
Altos niveles de desnutrición crónica y anemia
Consumo de agua entubada sin tratamiento
Acceso a varios pisos ecologicos. Biodiversidad productiva (chocho, quinua)
Sequías
Mujeres se dedican a crianzas de animales menores como cuy
Escasez de ingresos económicos para la seguridad alimentaria
Población altamente vulnerable que requiere enfoque de inclusión social
Mujeres con pocas oportunidades económicas fuera de la comunidad
Capacidad de emprender y acceder a mercados
Migración de jóvenes hacia ciudades de la costa para trabajos temporales
Poca asistencia técnica en las comunidades, cómites, asociaciones
Acceso a la reserva de Biosfera del Huascarán, abre posibilidad de turismo y convenios

Annex 8: EDA Peru List of Tables for Reporting Adaptation Fund Core Impact Indicators

Adaptation Fund Core Impact Indicator "Number of Beneficiaries"(1)				
Date of Report	2023			
Project Title	Fund for Innovative Adaptation in vulnerable ecosystems in North of Perú. (Ancash, Cajamarca; Lambayeque& San Martin y Loreto)			
Country	Perú			
Implementing Agency	Profonanpe			
Project Duration	5 years			
	Baseline *(absolute number)*	Target at project approval *(absolute number)*	Adjusted target first year of implementation *(absolute number)*	Actual at completion 1/ *(absolute number)*
Direct beneficiaries supported by the project	0	501,014		
Female		249,251		
Youth		251,763		
Indirect beneficiaries supported by the project	0	533,738		
Female		264,962		
Youth		268,776		

1/ At project completion, the proponent could report on % targeted population reached or successfully supported (the absolute numbers could then be deduced from that figure).

	Project approval	Cuencas		
		Santa	Paranapura	Chancay Lambayeque
Direct beneficiaries supported by the project	501,014	290,106	141,447	69,461
Female	249,251	145,135	70,327	33,789

Youth	251,763	144,971	71,120	35,672
Indirect beneficiaries supported by the project	533,738	345,721		188,017
Female	264,962	170,526		94,436
Youth	268,776	175,195		93,581

Adaptation Fund Core Impact Indicator "Early Warning Systems"(2)				
Date of Report	2023			
Project Title	Fund for Innovative Adaptation in vulnerable ecosystems in North of Perú. (Ancash, Cajamarca; Lambayeque& San Martin y Loreto)			
Country	Perú			
Implementing Agency	Profonanpe			
Project Duration	5 years			
	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion
Adopted Early Warning Systems				
2.1.1 Development of early warning systems for the most frequent risks related to climate variability and climate change in the three selected watersheds. *risk knowledge*				
Families covered by the EWS.	0	120,369		
response capability				
Number of affected families (years 2020-2022)	5,285			
Destroyed homes (years 2020-2022)	1,386			
Number of cropping areas damaged Has (years 2020-2022)	149			
Hazard	Relevant			
Geographical coverage *(km2)*	16,859	16,859		
Number of municipalities	44	44		

	Project approval	Watersheds		
		Santa	Paranapura	Chancay Lambayeque
Geographical coverage (km2)	16,859	5,038	8,032	3,789

Number of municipalities	44	20	5	19
Families covered by the EWS.	120,369	72,213	26,729	21,427
Aggregate data each three years				
Reduction in the number of affected families	5,285	895	3,715	675
Reduction of destroyed homes	1,386	297	969	120
Reduced number of cropping areas damaged.	149	7	2.0	140
Source: INDECI. Control Dashboard – Report of emergencies by districts.				

Adaptation Fund Core Impact Indicator "Assets Produced, Developed, Improved, or Strengthened"(3)				
Date of Report	2023			
Project Title	Fund for Innovative Adaptation in vulnerable ecosystems in North of Perú. (Ancash, Cajamarca; Lambayeque& San Martin y Loreto)			
Country	Perú			
Implementing Agency	Profonanpe			
Project Duration	5 years			
	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion
Targeted Asset				
1) Health and Social Infrastructure				
New families with drinking water.		27,994		
% of households without drinking water services	33.4% (40,164)			
Families with climate resilient dwellings.		2,770		
% households with inadequate physical conditions	11.6% (13,953)			
New families with sanitation services.		11,663		
% of households without sanitation services.	11.8% (14,153)			
New Families with access to renewable energy		10,433		
% of households without electricity	16.0% (19,285)			
Source: Ministry of Health (MINSA). Single National Repository for Health Information (REUNIS). Basic Indicators 2022.				
2) Physical asset				
Families with agroecological practices	0	7,500		

Number of New families with technified irrigation	0	2,500		
Hectares with technified irrigation	0	4,044		
Families benefited, reforestation, native species, bioremediation	0	1,500		
Families that increase their productive physical assets	0	2,650		
Source: Project monitoring reports				

Changes in Asset

Coverage of Effects and impacts	Indicators for Effects	Total	Coverage by watershed		
			Santa Target	Parana-pura Target	Chancay Lambayeque Target
Districts with Health centers with EWS.		44	20	4	20
Andean and Amazonian communites. & local Association	Number of local organizations making decision based on climate information.	226	50	126	50
Technical dossiers for public investment	New families with drinking water.	27,994	14,370	5,632	7,992
	Families with climate resilient dwellings.	2,770	880		1,890
	New families with sanitation services.	11,663	5,725	5,938	
	New Families with access to renewable energy	10,433	8,543		1,890

	Total	Santa	Paranapura	Chancay Lambayeque
Families with agro-ecological practices	7,500	5,000	1,000	1,500
Number of New families with technified irrigation	2,500	1,000		1,500
Hectares with technified irrigation	4,044	820		3,224
Families benefited, reforestation, native species, bioremediation	1,500	1,000		500

Adaptation Fund Impact Indicator "Increased income, or avoided decrease in income"(4)				
Date of Report	2023			
Project Title	Fund for Innovative Adaptation in vulnerable ecosystems in North of Perú. (Ancash, Cajamarca; Lambayeque& San Martin y Loreto)			
Country	Perú			
Implementing Agency	Profonanpe			
Project Duration	5 years			
	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion
Families with agro-ecological practices				
Families with sources of income diversified	0	7,500		
Entrepreneurial small producers:				
Families that improve their annual income	0	2,650		
Number of households	0	10,150		
Source: Project monitoring reports				

	Total	Santa	Paranapura	Chancay Lambayeque
1) Families with sources of income diversified				
Families with agro-ecological practices	7,500	5000	1000	1500
2) Entrepreneurial small producers:				

Families that improve their annual income	2,650	925	800	925
Men	1,125	475	375	375
Women	1,525	450	425	550

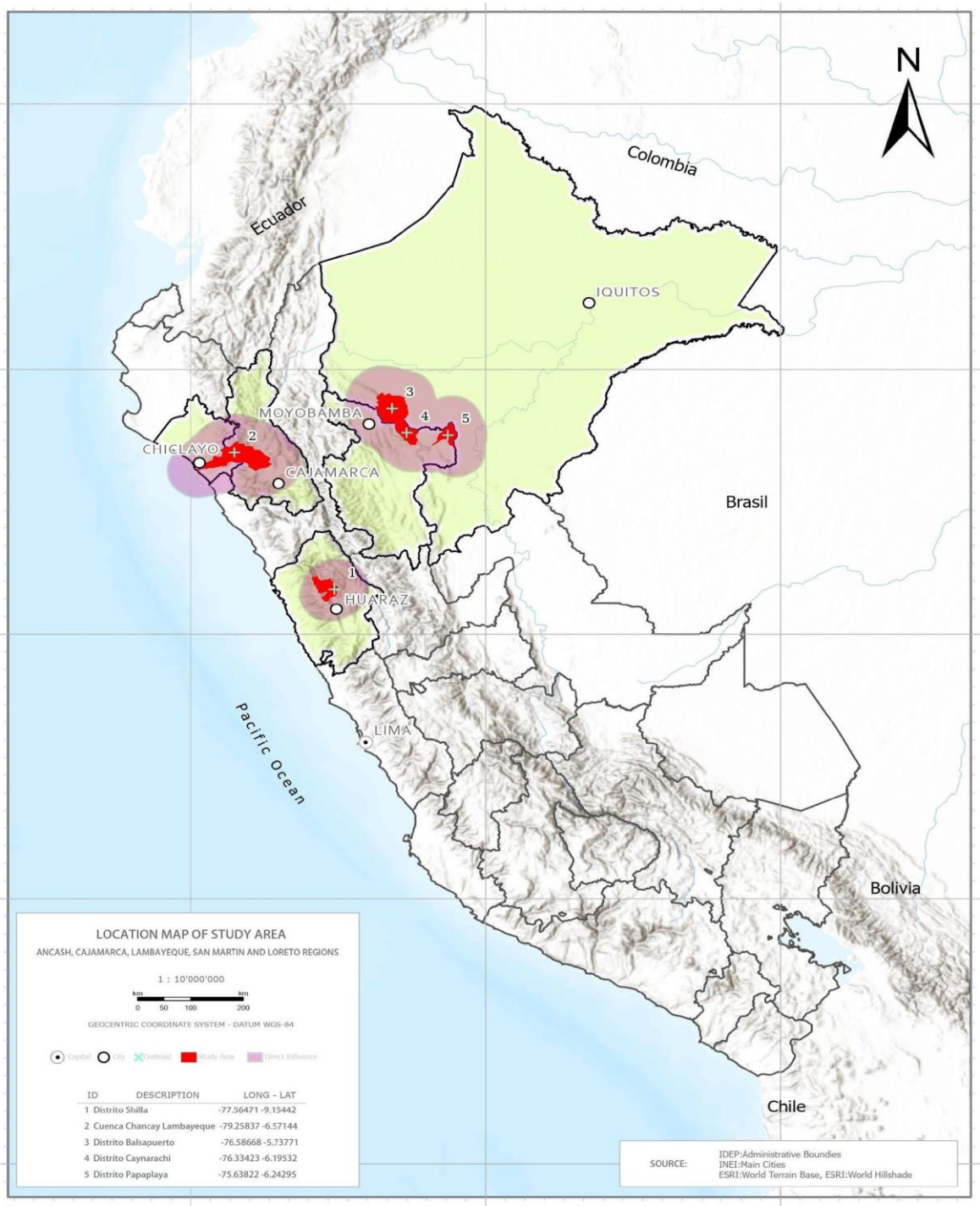
Adaptation Fund Core Impact Indicator "Natural Assets Protected or Rehabilitated"(5)				
Date of Report	2023			
Project Title	Fund for Innovative Adaptation in vulnerable ecosystems in North of Perú. (Ancash, Cajamarca; Lambayeque& San Martin y Loreto)			
Country	Perú			
Implementing Agency	Profonanpe			
Project Duration	5 years			
	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion 3/
Natural Asset or Ecosystem				
Expected annual deforestation rate.		0.36%		
Annual deforestation rate 2001-2021	0.68%			
Families benefited, reforestation, native species, bioremediation		1,500		
Change in state *Has*				
Hectares of district forest loss avoided		15,763		
Source: GEOBOSQUE. 2023				

Total number of natural assets or ecosystems protected/rehabilitated.

	Total	Santa	Paranapura	Chancay Lambayeque
Hectares of district forest loss avoided	15,763		15,763	
Annual deforestation rate 2001-2021			0.68%	
Balzapuerto			0.45%	
Yurimaguas			1.62%	
Caynarachi			0.80%	
San Roque de Cumbaza			0.16%	
Papaplaya			0.26%	
Expected annual deforestation rate			0.36%	
Balzapuerto			0.25%	

Yurimaguas			0.80%	
Caynarachi			0.40%	
San Roque de Cumbaza			0.10%	
Papaplaya			0.15%	
Families benefited, reforestation, native species, bioremediation	1,500	1,000		500

Annex 9: EDA Perú - Location Map



Annex 10. Intended Leading Partner- CONAP

IDENTIFICATION	
Name of Institution	Confederation of Amazonian Nationalities of Peru - CONAP
RUC	20257638155
Fiscal address	Av. Gral. Eugenio Garzón 2474, Jesús María - Lima
Web page if available	https://conap.org/
Date of incorporation	December 04, 1988
SUNARP Registration No.	01852841
Name of legal representative	Oseas Barbarán Sánchez
E-mail of the legal representative	o.barbarans@gmail.com
Legal representative's telephone number	(+51) 990 850 032
TECHNICAL EXPERIENCE (Mark with X the areas of expertise)	
Water management	NO
Forestry and Forestry	YES
Biodiversity Conservation	YES
Food security	YES
Adaptation to Climate Change	YES
Disaster Risk Management	NO
The institution has social and/or environmental responsibility programs.	NO
Does the institution have social and environmental safeguards policies?	NO
MANAGEMENT EXPERIENCE	
PROJECT 1	
Project name	Indigenous Economy and Deforestation-Free Territorial Governance
Duration	5 years
Place of Execution	Loreto, Ucayali, Junín, Pasco, Huánuco and Cusco Regions
Amount of financing	US$ 5'401,244.00
Donor	Norwegian Agency for Development Cooperation - NORAD
DRAFT 2	

Project name	Titling and indigenous governance for biodiversity conservation
Duration	4 years
Place of Execution	Ucayali, Amazonas and Junín
Amount of financing	US$ 1'999,771.00
Donor	Rainforest Trust
DRAFT 3	
Project name	"Paving the way for the full implementation of the Transformation phase of the Peru-Norway-Germany Declaration of Intent (DCI)". Implementation of productive Activities.
Duration	6 months
Place of Execution	Ucayali
Amount of financing	S/ 72,872.00
Donor	UNDP - NORAD (DCI Agreement:

Annex 11: Intended Leading Parter: Andean Mountain Institute.

IDENTIFICATION	
Name of Institution	Andean Mountain Institute Association
RUC	20606009691
Fiscal address	Vargas Machuca # 408, Miraflores, Lima.
Web page if available	www.mountain.org
Date of incorporation	17/02/2020
SUNARP Registration No.	14470077
Name of legal representative	Vidal Rondan Ramirez
E-mail of the legal representative	vrondan@mountain.org
Legal representative's telephone number	945098055
TECHNICAL EXPERIENCE (mark with X the areas of expertise)	
Water management	YES X NO
Forestry and Forestry	YES X NO

Biodiversity Conservation	YES X NO
Food safety	YES X NO
Adaptation to Climate Change	YES X NO
Disaster Risk Management	YES X NO
The institution has social and/or environmental responsibility programs.	YES X NO
Does the institution have social and environmental safeguards policies?	YES X NO
MANAGEMENT EXPERIENCE	
PROJECT 1	
Project name	Evaluation and Implementation of Ecosystem-based Disaster Risk Mitigation Measures (Eco-RRDM)
Duration	12 months
Place of Execution	Huascarán Biosphere Reserve (Cordillera Blanca), Department of Ancash.
Amount of financing	US $ 149,000.00
Donor	FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS - FAO
DRAFT 2	
Project name	Upscaling Mountain Ecosystem based adaptation:
Duration	Oct 21-Set 2022
Place of Execution	Nor Yauyos Cochas (NYC)
Amount of financing	US $ 140,556.00
Donor	International Union for Conservation of Nature (IUCN), International Klimate Initiative-IKI
DRAFT 3	
Project name	Punas-Pastures IV: Promoting innovations for Agro-Ecological Intensification (AEI) in agro-pastoral landscapes of the High Andes of Peru
Duration	Jun 2019 - May 2022
Place of Execution	Ancash
Amount of financing	US $ 300,000.00
Donor	The Mc. Knight foundation
DRAFT 4	
Project name	Solutions Search - Low-cost artificial sedimentation and artificial wetlands for

	bioremediation
Duration	Sep 2021 - Jun 2022
Place of Execution	Ancash
Amount of financing	US $ 25,000.00
Donor	RARE Foundation

Annex 13. Intended Leading Partner -CODEPISAM

IDENTIFICATION	
Name of Institution	Coordinating Committee for the Development and Defense of Indigenous Peoples of the San Martin Region-CODEPISAM
RUC	20601414113
Fiscal address	JR. TUPAC AMARU NRO. S/N (NRO 113 - C-1 - COMUNICACION NATIVA WAYKU) SAN MARTIN - LAMAS - LAMAS
Web page if available	
Date of incorporation	28/11/2007
SUNARP Registration No.	11036206
Name of legal representative	Wilfredo Tsamash Cabrera
E-mail of the legal representative	wilfredo9@gmail.com
Legal representative's telephone number	944 664 401
TECHNICAL EXPERIENCE (Mark with X the areas of expertise)	
Water management	YES NO X
Forestry and Forestry	YES X NO
Biodiversity Conservation	YES X NO
Food safety	YES X NO
Adaptation to Climate Change	YES X NO
Disaster Risk Management	YES X NO
The institution has social and/or environmental responsibility programs.	YES NO X
Does the institution have social and environmental safeguards policies?	YES NO X
MANAGEMENT EXPERIENCE	
PROJECT 1	
Project name	Recognition and Titling of Native Communities in the provinces of Lamas, Dorado and San Martin.

Duration	01/09/2016 to 30/06/2017: 10 MONTHS
Place of Execution	Province of Lamas, dorado and San Martin
Amount of financing	236,493.00 soles
Donor	WORLD BANK
DRAFT 2	
Project name	Recognition of 06 Native Communities of the Kechwa Indigenous People - Region San Martin
Duration	10/30/2017 to 04/29/2018: 06 MONTHS
Place of Execution	Native Communities of the San Martin Region
Amount of financing	58,499.00 soles
Donor	WORLD BANK
DRAFT 3	
Project name	Demarcation and Titling of 07 Native Communities of the Kechwa Indigenous People in the San Martin Region.
Duration	10/30/2017 to 07/29/2018: 09 MONTHS
Place of Execution	Native Communities of the San Martin Region
Amount of financing	278,121.00 soles
Donor	WORLD BANK
DRAFT 4	
Project name	Cocoa Production Improvement in Cocoa Production Systems Agroforestry in the Alto Shambuyacu Native Community, district of San Roque Cumbaza, Lamas- San Martin.
Duration	01/12/2017 to 31/05/2018: 05 MONTHS
Place of Execution	Alto Shambuyacu Native Community
Amount of financing	62, 242.00 SOLES
Donor	WORLD BANK
DRAFT 5	
Project name	Production and Commercialization of Chocolates from Agroforestry Plots in the Copal Sacha Native Community, district of San José de Sisa, Lamas - San Martín.
Duration	01/12/2017 to 31/05/2018: 05 MONTHS
Place of Execution	Copal Sacha Native Community
Amount of financing	61,582.00 soles
Donor	WORLD BANK
DRAFT 6	

Project name	Strengthening Community Forest Governance through the consolidation of Forestry Oversight Bodies in the San Martin Region - Peru
Duration	06/07/2018 to 30/04/2019: 10 months
Place of Execution	Native Communities of the San Martin Region
Amount of financing	45, 670.00 U.S. dollars
Donor	FAO
DRAFT 7	
Project name	Strengthening of community forest monitoring and its articulation with the state institutions responsible for forests and the National Forest and Wildlife Information System SNIFFS.
Duration	11/10/2019 to 31/03/2020: 06 months
Place of Execution	Native Communities of the San Martin Region
Amount of financing	53,525.00 soles
Donor	FAO
DRAFT 8	
Project name	Recognition of territorial rights of four (04) Native Communities in the San Martin Region represented by the Coordinating Committee for the Development and Defense of Indigenous Peoples of the San Martin Region - CODEPISAM.
Duration	01/01/2020 to 06/30/2020: 06 MONTHS
Place of Execution	Native Communities of the San Martin Region
Amount of financing	41,800.00 soles
Donor	WORLD BANK
DRAFT 9	
Project name	Recovery and social protection of indigenous peoples".
Duration	07/01/2020 to 12/31/2020: 06 MONTHS
Place of Execution	Native Communities of the San Martin Region
Amount of financing	174,000.00
Donor	UNDP
DRAFT 10	
Project name	Paving the way for the full implementation of the Transformation phase of the Declaration of Intent Peru, Norway and Germany (DCI)". (Life Plans of 13 CCNNs in the San Martin Region)
Duration	07/01/2021 to 04/31/2022: 10 MONTHS
Place of Execution	Native Communities of the San Martin Region
Amount of financing	468,000.00 soles

Donor	UNDP
DRAFT 11	
Project name	063-2022-FIP-BID "Contracting of consulting services for the preparation and updating of life plans in the department of San Martin".
Duration	In progress
Place of Execution	Native Communities of the San Martin Region
Amount of financing	337,725.00 soles
Donor	National Conservation Program for Climate Change Mitigation (Programa Nacional de Conservación para la Mitigación del Cambio Climático-PNCBMCC)
DRAFT 12	
Project name	"Consulting Service for the Updating and Validation of the Guide for the Elaboration of Life Plans in the Department of San Martín".
Duration	In progress
Place of Execution	Native Communities of the San Martin Region
Amount of financing	149,928.40 soles
Donor	National Conservation Program for Climate Change Mitigation (Programa Nacional de Conservación para la Mitigación del Cambio Climático-PNCBMCC)