



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY:

Country/Region: Perú

Project Title: Strengthening resilience and adaptation to climate change in vulnerable cities in Peru through nature-based solutions with a territorial approach

Thematic Focal Area: Multisector

Implementing Entity: Peruvian Trust Fund for National Parks and Protected Areas (Profonanpe)

Executing Entities: Ministry of Environment of Peru (MINAM)

AF Project ID: AF00000452

IE Project ID:

Requested Financing from Adaptation Fund (US Dollars): 10,000,000.00

Reviewer and contact person: Linda Ogallo

Co-reviewer(s): Alexandra Munoz Surriba

IE Contact Person:

Technical Summary

The project “Strengthening resilience and adaptation to climate change in vulnerable cities in Peru through nature-based solutions with a territorial approach” aims to strengthen the adaptive capacity and climate resilience of Peruvian cities by effectively integrating climate change adaptation into governance, planning, financial management, and territorial action processes led by local governments. This will be done through the five components below:

Component 1: Governance and Planning for Climate Change Adaptation (USD 841,697.70);

Component 2: Financial Management for Climate Change Adaptation (USD 673,358.16);

Component 3: Pilot Interventions for Climate Resilience (USD 5,050,186.22);

Component 4: Diversification and Protection of Livelihoods (USD 1,010,037.24);

Component 5: Knowledge Management and M&E in Adaptation (USD 841,697.70).

Requested financing overview:

Project/Programme Execution Cost: USD 799,612.82

	<p>Total Project/Programme Cost: USD 9,216,589.86 Implementing Fee: USD 783,410.14 Financing Requested: USD 10,000,000.00</p> <p>The proposal includes a request for a project formulation grant and/or project formulation assistance grant of USD 150,000.</p> <p>The initial technical review raised some issues, such as the lack of an Initial Gender Assessment, limited quantification of proposed benefits, alignment with the Environmental and Social Policy, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.</p>
Date:	04 August 2025

Review Criteria	Questions	1st Review Comments August 04, 2025	Response
Country Eligibility	1. Is the country party to the Kyoto Protocol, and/or the Paris Agreement?	<p>Yes.</p> <p>The country has signed and ratified the Kyoto Protocol and the Paris Agreement.</p>	N/A
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	<p>Yes.</p> <p>The country is one of the most climate-vulnerable countries in Latin America and has been exposed to rising temperatures, more frequent and intense extreme weather events, glacial retreat, floods, prolonged droughts, and heatwaves, especially affecting urban and peri-urban populations in the last few decades.</p>	N/A
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	<p>Yes.</p> <p>As per the Endorsement letter dated July 17th, 2025</p>	N/A

	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	<p>No.</p> <p>The concept note is 66 pages including its annexes.</p> <p>CAR1: Kindly reduce the proposal amount to no more than fifty pages including the annexes.</p>	<p>CAR1:</p> <p>The proposal has been revised to comply with the 50-page limit, including annexes.</p>
	3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	<p>Yes, but further information is needed.</p> <p>The project activities aim to improve coordination and territorial integration of climate change adaptation initiatives at both the sectoral and multilevel governance with Peru’s NDC and NAP, including public investment portfolios at the subnational level and implement nature based solutions for urban heat reduction. The proposed activities contribute to multisector perspective. However, the information provided is broad. It is not clear how these actions would lead to a substantial tangible outcome nor what AF strategic objectives are supported.</p> <p>CR1:</p> <ol style="list-style-type: none"> 1. Kindly revise the main projects outputs as, currently, they are writing as outcomes. The concept note provides specific outputs, that depending on the new wording of the main outputs, could need a revise a rephrase. Please clearly outline the specific adaptation 	<p>CR1:</p> <ol style="list-style-type: none"> 1- The main project outputs have been reworded to clearly state specific adaptation actions, tangible deliverables, and measurable impacts. Related activities were also adjusted to ensure full alignment with the revised outputs. 2 - Yes, the project includes USPs classified as “Partially unidentified: specific activity identified, location to be determined,” with justification incorporated under Component 3. <p>CR 2:</p> <p>The Theory of Change diagram has been revised to clearly show the logical pathway from inputs and activities to outputs, outcomes, and the intended long-term change, including key assumptions. In addition, the Theory of Change has</p>

		<p>actions that the project will lead to, including their tangible outcomes and measurable impact.</p> <p>2. Please clarify if the project includes any USPs as per Guidance Document for Project/Programme with Unidentified Sub-Projects</p> <p>CR2: Kindly revise the Theory of Change diagram to clearly illustrate how the proposed interventions will lead to the intended long-term change including the assumptions being made, the possible constraints, the required inputs and how they link to the various project components to support the 'IF' 'THEN' statements in Annex 3. Also, please include the Theory of Change under Part II: Project Justification in the main document and not only as an annex.</p> <p>CAR3: Kindly indicate explicitly how the project supports one or more of the Adaptation Fund Strategic Objectives at Part I B.</p>	<p>been incorporated into Part II: Project Justification.</p> <p>CAR 3: The required justification has been incorporated, explicitly outlining how the project supports the Adaptation Fund Strategic Objectives in Part I B.</p>
	<p>4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Unsure.</p> <p>The proposal outlines general economic, social and environmental benefits of the project but quantitative estimates of these benefits are not quantified. The project sites have been summarized in Table 01 (pages 10-11) alongside the number of exposed populations in each of the 14 target areas. However, the concept note</p>	<p>CR3: The section has been updated to include quantified economic, social, and environmental benefits, using available baseline data and reasonable estimates supported by qualitative proxies. Projections were based on comparable national and regional case studies.</p>

		<p>does not clearly identify the specific vulnerable groups or demonstrate how benefits will be equitably distributed. On indigenous people, particular benefits provided for this group is not clearly stated or calculated. The proposal does not provide an Initial Gender Analysis.</p> <p>CR3: Kindly quantify the economic, social and environmental benefits in section II.B (page 31), whenever possible. In cases where exact figures are not available, please provide reasoned estimates or qualitative proxies to support the anticipated impact of the project. Also, provide a brief explanation of the method used for these calculations.</p> <p>CAR4: Kindly include an Initial Gender Analysis in compliance with the Gender Policy requirements to determine the different needs, capabilities, roles and knowledge resources of women and men, and/or identify how changing gender dynamics might drive changes.</p> <p>CAR5: Kindly indicate the estimated number of direct and indirect beneficiaries and gender-disaggregated for each of the 14 identified communities if possible. Also, please identify the specific vulnerable groups (e.g., smallholder farmers, women, indigenous peoples) who will benefit from the project.</p>	<p>CAR4: An Initial Gender Analysis has been incorporated in compliance with the Gender Policy requirements, addressing differentiated needs, capabilities, roles, and evolving gender dynamics.</p> <p>CAR5: The estimated number of direct and indirect beneficiaries, disaggregated by sex, age group, and vulnerable groups, has been incorporated. Figures were calculated by applying official proportions from the 2017 Census and INEI population projections to the total exposed population included in the Concept Note. These values are approximate and do not replace official district-level data. During the Full Proposal preparation stage, district-level projections and sectoral administrative records will be obtained and processed using the most up-to-date official information to refine the figures and vulnerable population segmentations.</p> <p>CR4: The requested clarification has been incorporated into the document (in section II.B), explicitly outlining how benefits will be</p>
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		CR4: Please describe how benefits will be equitably distributed, including how gender considerations have been integrated.	equitably distributed. The approach emphasizes gender equality, inclusion of vulnerable groups, and the integration of differentiated needs and roles into all project components.
	5. Is the project / programme cost effective?	<p>Unsure.</p> <p>The proposal lists a broad explanation on how the project is cost effective in section II.C (pages 32-33), however, the selected scope and approach is not clearly stated and explained. Also, the sustainability point of view of the cost effectiveness of the project needs more details.</p> <p>CAR6: Kindly revise the proposal to include a comparison of the listed approaches with other potential adaptation and resilience-building interventions including a “do-nothing” or business-as-usual scenario. Where possible, provide quantitative estimates through proxies or qualitative justifications to support the comparison. Additionally, please highlight the sustainability point of view of the proposed interventions.</p>	<p>CAR6:</p> <p>The comment has been addressed by refining the section on cost-effectiveness to clearly state the selected scope and approach, compare NbS and hybrid measures with grey infrastructure and a business-as-usual scenario, and highlight their long-term sustainability. The revised text emphasizes the economic, social, and environmental co-benefits of NbS, supported by quantitative estimates and literature-based proxies.</p>
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national	<p>Yes.</p> <p>As per information provided in section II. D (pages 33-37). The proposal clearly stated the details on how the project is aligned with Peru’s national and subnational frameworks, as well as the</p>	N/A

	communications and adaptation programs of action and other relevant instruments?	contributions of the proposed program to these frameworks.	
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	<p>Yes, but further information is needed.</p> <p>The proposed project includes alignment with relevant national standards and codes including the National Environmental Impact Assessment System (SEIA); building and infrastructure codes; standards on local development planning; and public financial management and public investment projects.</p> <p>CR5: Kindly state how component 3 on NbS aligns with relevant national regulations including the laws on forestry and the Land Use Policy and Land Tenure Laws.</p> <p>CR6: Please provide specific information on the compliance of the proposed project with each technical standard identified.</p>	<p>CR5 The requested information has been incorporated, highlighting how Component 3 on NbS aligns with the Forestry and Wildlife Law, the National Land Use Policy, and Land Tenure Laws, ensuring regulatory compliance and long-term sustainability.</p> <p>CR6: The comment has been addressed. The revised section now provides specific information on the compliance of the proposed project with each identified national technical standard, including: National Building Regulations and infrastructure codes; standards on local development planning; and public financial management and investment procedures. Additional applicable sectoral standards—such as the Forestry and Wildlife Law, the National Land Use Policy, and the Water Resources Law—have also been incorporated.</p>
	8. Is there duplication of project / programme with other funding sources?	<p>Unsure.</p> <p>The proposal provides a broad list of related projects in Peru in Annex 1 (page</p>	<p>CR7 - CR8: The information on related projects has been expanded in the table, including main interventions,</p>

		<p>52). In addition, in section II.F, states that the project complements initiatives such as the GEF-6 Sustainable Cities Program, as well as readiness activities financed by the Green Climate Fund (GCF), the International Climate Initiative (IKI), and other funding sources. However, it does not clearly specify why the proposed project has no duplication with the identified projects in Annex 1. Also, the areas of synergy with these projects are not listed.</p> <p>CR7: Kindly include a more comprehensive list of projects that are or have been implemented in Peru and are related to the proposed project. For all projects, please include details such as main project interventions, timeline, target population, and specific location within the country, and complementarity and synergies with proposed project.</p> <p>CR8: The lack of overlap should be clearly justified (e.g. by indicating the distinct geographic locations and/or types of interventions) for each related project identified.</p>	<p>timelines, target populations, specific locations, complementarity, synergies, and justification of the absence of overlap for each case.</p>
	<p>9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?</p>	<p>Yes, but further information is needed.</p> <p>The proposed project includes learning and knowledge management activities under component 5, in section II.G (pages 40-41).</p> <p>CR9: Kindly explain in section II.G, how, who and when will be tracking the</p>	<p>CR9:</p> <p>The clarification has been incorporated in Section II.G, specifying that the Project's Knowledge Management and M&E Unit, in coordination with MINAM and municipal teams, will track experiences quarterly, conduct</p>

		<p>experiences gained as well as for the periodical analysis.</p>	<p>semi-annual analyses with technical partners, and produce annual synthesis reports to support replication, scaling, and policy processes.</p>
	<p>10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Yes, but further information is needed.</p> <p>The concept note provides broad information about the consultative process in section II.H, and details of each meeting under Annex 2. Technical and institutional consultation were undertaken with different government institutions and government officials at the national and subnational levels. The ministries represented included the Ministry of Women and Vulnerable Populations (MIMP). However, no consultations were done with the affected communities, indigenous communities, marginalized and vulnerable groups.</p> <p>CR10: While the proposal clearly states the participants for each meeting, further explanation is needed on the gender considerations discussed and what interests were considered. Please clarify if it was documented elsewhere.</p>	<p>CR10: Consultations with affected communities, indigenous communities, and marginalized or vulnerable groups will be carried out throughout the Full Proposal phase. In this initial engagement with local governments and sectoral institutions, the main aspects addressed during the meetings were the presentation of the project's scope and objectives, as well as an exchange of information on climate hazards and on initiatives and lessons learned that, from their institutional roles, have been developed in the prioritized areas, with an Ecosystem-based Adaptation (EbA) and/ or Nature based Solution (NbS) approach.</p>
	<p>11. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>Unsure.</p> <p>The adaptation fund operates on the full cost of adaptation reasoning. Part II Section I and in particular the following</p>	<p>CAR7:</p> <p>The text has been revised to clarify the project's full cost of adaptation approach.</p>

		<p>statement “In conclusion, the funding requested covers the incremental costs associated with making planning, investment, ecosystems, livelihoods, and knowledge management climate-resilient, particularly in contexts where such approaches are currently absent or only incorporated in a limited and fragmented manner, without a territorial perspective.”, contradicts this reasoning. CAR7: Please revise the section to reflect a “full cost of adaptation reasoning”.</p>	
	<p>12. Is the project / program aligned with AF’s results framework?</p>	<p>Yes.</p> <p>However amendment is required. As per information provided in section III.A (pages 47-49). The concept note includes a mapping of the proposed project’s results and products to the Adaptation Fund Strategic Results Framework.</p> <p>CAR8: <u>Please ensure that for each outcome/output indicator the costs are separated in the final column of the table.</u></p>	<p>CAR8: An initial cost estimate for each outcome/output indicator has been incorporated in the final column of the table. This estimation will be reviewed and, if necessary, adjusted during the development of the full proposal.</p>
	<p>13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?</p>	<p>Yes, but further information is needed.</p> <p>The proposed project focuses on the institutionalization of climate change adaptation interventions into planning which ensures sustainability. In components 2, the focus is to achieve financial sustainability. The participatory</p>	<p>CR11</p> <p>The requirement has been addressed by detailing the regulatory, financial, institutional, and technical arrangements that will ensure the long-term sustainability, replication, and scaling of benefits, with a specific focus on integrating</p>

		<p>nature of component 3 and 4 and linking them to public private partnerships also supports sustainability. In component 5 a knowledge management system, participatory monitoring, and partnerships with academic institutions is done to ensure sustainability and replication.</p> <p>CR11: Kindly explain the arrangements required for the project's benefits sustainability, including regulatory and financial resources. Please explain clearly how replication and scaling up of the proposed project activities and benefits will be achieved.</p>	<p>NbS into planning and investment frameworks, securing recurrent financing, and formalizing management responsibilities.</p>
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	<p>14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Unsure.</p> <p>The concept note assesses all 15 principles from the Adaptation Fund ESP against the proposed project activities in section II.K (pages 45-47). For each one, the proposed project provides potential impacts and risks (no risk and low) and whether further assessment is required for compliance. However, the project classification (A, B or C) ..</p> <p>CAR9: Please review table in section II.K and state and expand, when corresponds, all potential impacts (direct, indirect, transboundary and cumulative), including how it is planned to mitigate and manage each risk. For more information, please visit: AF's ESP guidance: https://www.adaptation-fund.org/wp-content/uploads/2016/07/ESP-Guidance_Revised-in-June-2016_Guidance-document-for-Implementing-Entities-on-compliance-with-the-Adaptation-Fund-Environmental-and-Social-Policy.pdf. Such impacts or risks should be described in the third column along with mitigation measures.</p> <p>i) in the same third column, risks should be stated for all</p>	<p>CAR9:</p> <p>Risks have been reformulated to explicitly identify potential negative effects, rather than solely stating the approach to be applied. Corresponding mitigation and management measures have been detailed in the third column for each principle.</p> <p>Additionally, the principle on involuntary resettlement has been updated to include the potential risk of unplanned settlement in forest areas as part of NbS reforestation activities, with clear site selection criteria incorporated to prevent any possible involuntary resettlement.</p> <p>CAR10:</p> <p>The observation has been addressed by specifying in Section II.K that the project is classified as Category B, given that potential environmental and social risks are site-specific, reversible, and can be effectively mitigated through the proposed Environmental and Social Management measures.</p>
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		<p>relevant principles. E.g.: instead of saying “An inclusive approach will be applied to ensure territorial and social equity in access to the project's benefits” you may say “There is a risk of unequal access to the project's benefits across different social groups”.</p> <p>ii) the project also assumes no risk of involuntary resettlement, yet has activities on reforestation as part of the NbS.</p> <p>ii) kindly include possible risks that could result from unplanned settlement in forest areas to involuntary resettlement.</p> <p>CAR10: Kindly state the category in which the screening process has classified the project (Category A, B or C) in section II.K. Please see the Environmental and Social Policy of the Adaptation Fund and its guidance document.</p>	
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	Yes.	N/A

	<p>2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?</p>	<p>Yes, but further information is needed.</p> <p>The proposed project includes the financing for each component, and the implementing entity management fee is correct in size. PFG requested is correct in size, with a total amount of 150,000 USD as well as the PFG fee. However, figures are not rounded to a whole number, and the total project cost needs an amendment.</p> <p>CR12: Kindly adjust the following:</p> <ol style="list-style-type: none"> i. Round up the figures to a whole number, no decimals. ii. Re-write the figures correctly and replace the decimal with a comma to represent thousands and millions. For example, '\$673.358' should be '\$673,358'. iii. The total project cost should be 9,216,589.84. Please see, for further information, the definitions in https://www.adaptation-fund.org/generic/costs-and-fees/ and IE and EE Fees Calculator https://www.adaptation-fund.org/document/ie-and-ee-fees-calculator/. <p>CR13: <u>Please confirm if MINAM will also execute the PFG. If this is the</u></p>	<p>CR12: The adjustments have been made as requested, rounding figures to whole numbers, replacing decimals with commas to represent thousands and millions. As a result of the rounding, the total project cost has been adjusted to 9,216,590.</p> <p>CR13: PROFONANPE will execute the PFG; therefore, the PFG request form has been amended accordingly.</p>
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		<p>case, then no change in the PFG request form if required. If PROFONANPE intends to also execute the PFG, please amend the PFG request form.</p>	
	<p>3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?</p>	<p>Yes.</p> <p>As per information provided in Project/Programme Components and Financing Table (pages 13-15).</p> <p>CR14: Please adjust the figures to a whole number, no decimals (see CR18).</p>	<p>CR14: The figures have been adjusted to whole numbers, with no decimals, as requested.</p>
Eligibility of IE	<p>1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?</p>	<p>Yes.</p> <p>Profonanpe is an accredited NIE. Accreditation Expiration Date: 18 June 2026.</p>	<p>N/A</p>
Implementations	<p>1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?</p>	<p>n/a at concept stage</p>	
	<p>2. Are there measures for financial and project/programme risk management?</p>	<p>n/a at concept stage</p>	
	<p>3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>n/a at concept stage</p>	

	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage	
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage	
	6. Is a detailed budget including budget notes included?	n/a at concept stage	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at concept stage	
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage	
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage	



ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:

“Strengthening resilience and adaptation to climate change in vulnerable cities in Peru through nature-based solutions with a territorial approach”

Country: Perú

Thematic Focal Area: Multisector

Type of Implementing Entity: National Implementing Entity

Implementing Entity: Profonanpe

Executing Entities: Ministry of Environment of Peru (MINAM)

Amount of Financing Requested: USD 10,000,000.00 (in U.S Dollars Equivalent)

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

Amount of Requested financing for PFG: USD 150,000 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes No

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

Stage of Submission:

This concept has been submitted before

This is the first submission ever of the concept proposal

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

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

Project/Programme Background and Context:

Peru is a South American country located along the Pacific coast, bordering Ecuador, Colombia, Brazil, Bolivia, and Chile. With a territorial area of 1.28 million km² and more than 3,000 km of coastline, the country is characterized by high geographic and ecological diversity, distributed across three clearly differentiated natural regions: **the coast, the highlands (sierra), and the Amazon rainforest (selva)**. These regions exhibit markedly different climatic conditions, ecosystem types, and socioeconomic dynamics. While the coastal zone is characterized by arid and semi-arid conditions and hosts a significant portion of the urban population, the Andean region experiences greater thermal variability and is exposed to hazards such as landslides, droughts, and glacial retreat. The Amazon region—covering over 60% of the national territory—is highly sensitive to flooding, biodiversity loss, and shifts in precipitation patterns.

Peru is considered **one of the most climate-vulnerable countries in Latin America**, due to its geographical location, complex topography, and socioeconomic inequalities. According to the Fourth National Communication on Climate Change (MINAM, 2024), **the country's high exposure to multiple climate-related hazards—combined with fragile ecosystems and a population with limited adaptive capacity**—makes it particularly susceptible to the adverse effects of climate change. These impacts have become increasingly evident in recent decades, with rising temperatures, more frequent and intense extreme weather events, glacial retreat, floods, prolonged droughts, and heatwaves, especially affecting urban and peri-urban populations.

According to the National Meteorology and Hydrology Service (SENAMHI), average annual **temperatures in Peru have increased significantly in recent decades, particularly in urban areas** where the heat island effect is intensified by land use change and the lack of green infrastructure. Climate projections developed by SENAMHI—using both dynamic and statistical downscaling methods—indicate a consistent increase in minimum and maximum temperatures across multiple regions, with intensified warming in urban zones due to territorial transformation and the absence of nature-based solutions (Climate Change Scenarios for Peru by 2050, SENAMHI 2021).

- Regarding precipitation patterns, climate projections toward 2050 indicate **increases in both the frequency and intensity of rainfall in Peru's northern coastal region**, with consistent results across the three models used. **In the central and southern coastal areas**, increases are also projected, although with less consistency among models. **In the highlands**, an increase in rainfall intensity is expected, particularly in the northwestern highlands (very wet days and heavy rainfall) and the southeastern highlands, where both the intensity and frequency of precipitation are projected to rise—supported by all three models. In contrast, projections *for the Amazon* region suggest a decrease in the number of consecutive wet days and in the intensity of heavy rainfall events, with reductions of up to 10%, although still within the range of current variability; these results also show high consistency among models.

Regiones	Sectores climáticos	CDD (días)	CWD (días)	PRCPTOT (mm)	R10 (días)	R20 (días)	R95PTOT (mm)	R99PTOT (mm)	RX1DAY (mm)	RX5DAY (mm)	RX7DAY (mm)	SDII (mm/día)
Costa	COSTA NORTE	-1.5	-0.8	17.4	12.4	22.7	55.5	112.0	22.6	21.0	20.7	13.5
	COSTA CENTRO	0.5	2.7	4.6	57.1	286.2	2.9	55.1	12.8	14.5	14.0	7.5
	COSTA SUR	-0.4	0.0	42.9	46.8	155.6			44.8	39.3	38.0	27.2
	SIERRA NORTE OCCIDENTAL	6.5	-5.0	5.3	15.0	45.6	52.0	122.9	17.6	14.3	12.8	7.4
Andes	SIERRA NORTE ORIENTAL	0.7	-16.6	-6.5	-2.8	11.7	18.1	57.9	13.0	6.6	5.0	0.6
	SIERRA CENTRAL OCCIDENTAL	2.1	-10.4	0.0	10.9	21.3	17.2	36.6	3.1	3.8	3.4	1.6
	SIERRA CENTRAL ORIENTAL	2.6	-13.0	-1.2	5.7	6.1	23.3	58.6	11.3	9.9	9.0	3.6
	SIERRA SUR OCCIDENTAL	-0.4	-18.1	-9.6	-6.0	13.1	5.3	26.3	3.5	2.2	0.5	7.8
	SIERRA SUR ORIENTAL	1.2	-5.5	6.1	17.7	30.1	37.2	72.0	10.3	13.2	12.6	6.2
	SIERRA SUR OCCIDENTAL	1.2	-5.5	6.1	17.7	30.1	37.2	72.0	10.3	13.2	12.6	6.2
Amazonia	SELVA NORTE ALTA	-15.4	-10.1	-6.8	-10.1	-12.0	-8.1	3.9	4.8	-0.8	-2.0	-5.0
	SELVA NORTE BAJA	-8.1	8.8	-3.3	-6.0	-9.6	-6.9	0.2	5.4	0.2	-1.1	-1.9
	SELVA CENTRAL ALTA	-8.8	-14.9	-10.4	-14.2	-16.4	-9.0	6.8	5.3	-1.0	-2.4	-5.8
	SELVA CENTRAL BAJA	-2.6	-10.0	-8.6	-11.8	-15.2	-12.5	-4.1	3.1	-2.9	-4.2	-4.3
	SELVA SUR ALTA	-1.1	-16.1	-8.5	-10.6	-12.4	-6.5	6.8	2.9	-1.1	-1.7	-3.8
	SELVA SUR BAJA	4.5	-12.3	-8.0	-10.0	-12.3	-9.4	0.3	2.9	-0.8	-2.1	-2.8

Figure 01. Average Changes in Extreme Precipitation Indices.

Red cells indicate average changes greater than 10%.

Source: Climate Change Scenarios for Peru by 2050, SENAMHI 2021.

- **With regard to temperature**, projections for 2050 indicate significant increases in temperature

extremes across the entire Peruvian territory. Along the coast, extreme heat indices are expected to rise by more than 1.5°C, with an increased frequency of warm nights and days, and a decrease in cold nights and days. These changes are slightly less pronounced in the northern coastal region but show strong consistency across models. In the Andes, thermal extremes are projected to increase by over 2°C, with more than a 50% rise in the frequency of warm nights and days, and a 45% reduction in frost days. Finally, in the Amazon region, the most intense changes are projected, with increases exceeding 3°C in annual maximum temperatures—particularly in the central-southern Amazon—alongside a rise of more than 40% in warm nights and days, and an approximate 10% decrease in cold nights and days.

Regiones	Sectores climáticos	TX90P (%)	TX10P (%)	TN90P (%)	TN10P (%)	WSDI (días)	CSDI (días)	TXX (°C)	TXN (°C)	TNX (°C)	TNN (°C)	FDO (días)
Costa	COSTA NORTE	34.1	-10.2	49.1	-12.6	113.5	-27.0	1.8	1.9	1.9	2.4	
	COSTA CENTRO	52.0	-11.2	58.7	-11.6	186.7	-22.9	2.1	2.2	2.0	2.3	
	COSTA SUR	48.3	-10.1	52.9	-11.5	173.6	-22.0	2.2	2.1	1.9	2.4	
	SIERRA NORTE OCCIDENTAL	59.4	-9.3	67.7	-10.1	220.5	-16.7	2.6	2.4	2.4	2.6	-94.4
Andes	SIERRA NORTE ORIENTAL	63.8	-8.9	66.3	-9.7	239.6	-13.4	2.4	2.5	2.3	2.6	-95.5
	SIERRA CENTRAL OCCIDENTAL	63.7	-9.3	67.1	-10.3	240.6	-18.5	2.7	2.6	2.6	2.8	-82.7
	SIERRA CENTRAL ORIENTAL	62.8	-9.1	67.3	-9.9	235.0	-14.7	2.7	2.5	2.5	3.0	-73.2
	SIERRA SUR OCCIDENTAL	59.1	-9.3	57.4	-10.4	221.1	-20.2	2.8	2.6	2.6	3.2	-36.9
	SIERRA SUR ORIENTAL	59.4	-9.2	65.4	-10.1	220.6	-15.9	2.7	2.6	2.5	3.1	-45.1
	Amazonia	SELVA NORTE ALTA	55.4	-8.1	60.8	-9.4	199.0	-11.7	2.8	2.8	2.4	2.7
	SELVA NORTE BAJA	50.3	-8.4	60.4	-9.1	180.1	-10.2	3.1	2.7	2.4	2.8	
	SELVA CENTRAL ALTA	52.9	-8.3	60.7	-9.6	189.2	-13.1	3.1	2.6	2.6	2.7	
	SELVA CENTRAL BAJA	45.7	-7.9	56.7	-9.1	156.6	-11.7	3.6	2.7	2.8	2.9	
	SELVA SUR ALTA	51.5	-8.4	57.9	-9.4	185.8	-13.4	3.2	2.4	2.6	2.4	
	SELVA SUR BAJA	40.5	-7.3	50.5	-8.7	136.1	-11.4	3.9	2.5	3.0	2.5	

Figure 02. Average Changes in Extreme Temperature Indices. Red cells indicate increases projected by all three models. Source: Climate Change Scenarios for Peru by 2050, SENAMHI 2021.

In addition, it is essential to consider **the El Niño Phenomenon**—a natural climate oscillation that disrupts normal temperature and precipitation patterns in the tropical Pacific—which has shown a growing trend in both frequency and intensity over recent decades, amplifying its impacts across Peruvian territory. This phenomenon generates extreme conditions such as torrential rainfall, flooding, severe droughts, and disruptions to coastal and marine ecosystems, significantly affecting urban infrastructure, food security, public health, and rural livelihoods. The most affected regions are typically the northern and central coast—particularly the departments of Piura, Tumbes, Lambayeque, La Libertad, and Lima—where intense rainfall leads to river overflows, landslides (“huaycos”), and infrastructure collapse. The most vulnerable areas, such as informal settlements located on hillsides or low-lying flood-prone zones, are especially impacted by these events, revealing critical shortcomings in urban planning and risk management. According to projections from SENAMHI and international agencies, **El Niño events may become more frequent and severe in the context of climate change**, further reinforcing the urgency of adopting comprehensive, evidence-based adaptation measures.

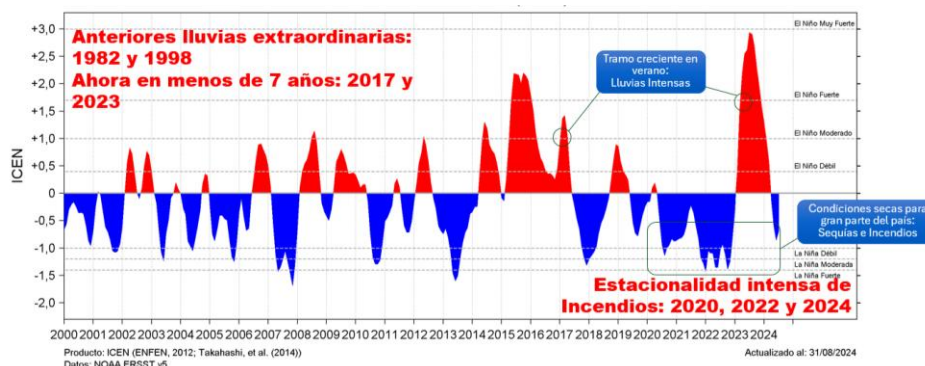


Figure 03. Coastal El Niño Index (ICEN) Source: Secretariat for Disaster Risk Management – PCM, 2025

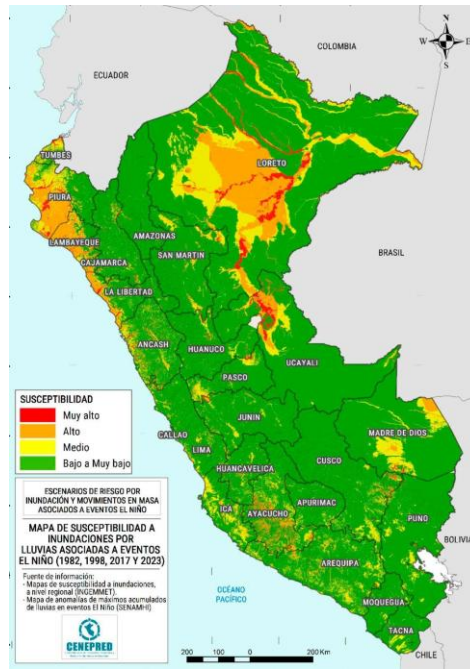


Figure 04. Flood Susceptibility Map Related to the El Niño Phenomenon
Source: CENEPRED, 2024

According to **Peru’s National Adaptation Plan to Climate Change (PNACC)**, approved through Ministerial Resolution No. 096-2021-MINAM in June 2021, cities located across the country’s three main geographic regions—**coast, highlands, and Amazon rainforest**—are exposed to multiple climate change-related hazards specific to each region. These include coastal erosion and sea level rise along the Pacific corridor; increased flooding and landslides in the Andean highlands; and extreme rainfall and river overflows in the Amazon basin (PNACC, 2021; Chapter 4.2.2 “Climate in Peru”). The PNACC emphasizes the need for territorially differentiated and context-based adaptation strategies that address the diverse climatic, environmental, and socioeconomic conditions of Peruvian territories, in order to reduce climate risks and strengthen the long-term resilience of urban systems.

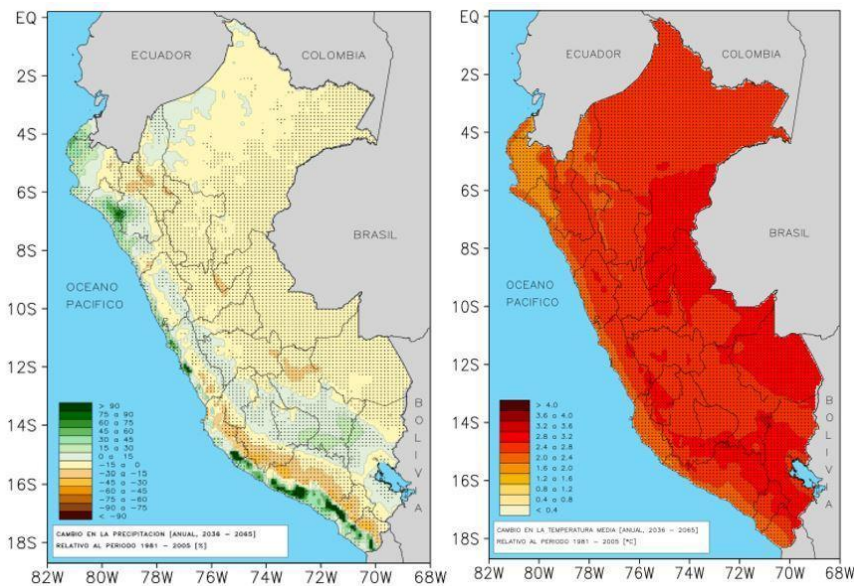


Figure 05. Peru: Projected Changes in Precipitation and Annual Mean Temperature by 2050, Compared to the 1981–2005 Baseline
Source: Climate Scenarios for Peru by 2050: Changes in Average Climate – SENAMHI

In this context, **climate change poses a serious threat to urban ecosystems, livelihoods, and public infrastructure**, with the potential to further deepen poverty and inequality—particularly among vulnerable populations such as women, Indigenous peoples, and youth. As outlined in **Peru’s Nationally Determined Contributions (NDCs)** on adaptation, urgent and sustained efforts are required to strengthen the resilience of urban systems, ensure the adaptive capacity of local institutions, and promote territorially coherent climate action.

Despite significant progress in the development of national climate change policy frameworks, Peruvian territories—particularly intermediate and rapidly growing cities—remain highly vulnerable to climate impacts. These areas face overlapping challenges such as informal urban expansion, limited institutional and technical capacities, climate-insensitive planning, and degraded ecosystems. These factors are compounded by insufficient urban infrastructure—both grey and green—which is not adequately prepared to respond effectively to climate hazards.

- One of the main structural challenges lies in the **lack of coordination and territorial integration among climate change adaptation initiatives implemented at both the sectoral and multilevel governance levels**. Although sectoral plans and national policies may incorporate climate objectives, they are often disconnected from one another and from local planning instruments. This results in fragmented efforts, policy overlaps, and critical gaps. At the same time, subnational governments often lack the technical tools, financial resources, and institutional frameworks needed to mainstream adaptation into urban development strategies.
- Additionally, provincial and district municipalities show **limited integration of climate change adaptation into their local development plans, participatory budgeting processes, and public investment portfolios**. This hinders the implementation of transformative measures and reduces their capacity to respond effectively to both extreme climate events and slow-onset threats such as water stress, glacial retreat, and rising urban temperatures.
- **The unplanned expansion of cities**, combined with weak urban planning, has led to the occupation of high-risk areas, increased pressure on fragile ecosystems, and the loss of vital ecosystem services such as water regulation, urban heat reduction, and flood mitigation. This situation is further exacerbated by internal forced migration from rural to urban areas induced by climate change (IOM, 2021), which increases the demand for housing, livelihoods, basic infrastructure, and public services—placing additional pressure on already strained urban systems.
- **Structural barriers also hinder the diversification of local livelihoods and the development of resilient economic alternatives, particularly in areas of high vulnerability**. There is limited access to technical assistance, productive development programs, and financing mechanisms for adaptation-oriented enterprises, which restricts opportunities for the most exposed populations—especially women, youth, and urban or peri-urban Indigenous communities.
- From a social perspective, **significant gaps remain in public knowledge regarding how to respond to climate-related risks**. Low levels of public awareness, limited community participation in risk management, and the absence of early warning systems and effective risk communication mechanisms exacerbate exposure and reduce the resilience of urban social systems. This situation is also reflected in the limited engagement of the private sector, which has yet to systematically prioritize or report its contributions to urban adaptation, nor invest in resilient solutions with territorial impact.

This multiplicity of challenges underscores **the urgent need to strengthen a climate change adaptation approach that is integrated into territorial development**. Such an approach would enable the alignment of planning, investment, and governance mechanisms across different levels, fostering synergies between public and private actions, and promoting effective, scalable, and sustainable solutions. **Strengthening local governance and planning capacities** for development is therefore essential to efficiently channel resources, prioritize areas most at risk from climate change impacts, and advance transformative adaptation pathways aligned with the specific needs of cities and the ecosystems that sustain them.

TARGET AREAS:

The prioritized areas have been identified based on a technical analysis that integrates multiple criteria. First, data from the climate risk **maps developed under the National Adaptation Plan to**

Climate Change (PNACC) were considered, guiding action toward territories with high climate vulnerability. In addition, geographic and ecosystem **representativeness was ensured by covering regions from the coast, highlands, and Amazon**, all of which host ecosystems particularly sensitive to climate change. These territories show high exposure to slow-onset hazards such as coastal erosion, sea level rise, and salinization in coastal zones; glacier loss, progressive water scarcity, landslides, and water stress in the Andes; as well as rising temperatures, changes in precipitation patterns, degradation of ecosystem services, and increasing pressure on peri-urban settlements in the Amazon region. Furthermore, **priority was given to the presence of key ecosystems**—such as mangroves, wetlands, natural coastal barriers, glaciers, and forests—that are critical for climate resilience. The selection also considered the existence of **urban and rural areas with active or emerging planning processes, particularly those with strong urban–rural linkages**. Finally, territories showing evidence of cumulative climate impacts or climate-induced displacement, as well as those with limited previous investment in adaptation, were also prioritized.

Based on this set of criteria, the project has prioritized a diverse group of cities **located across the country’s three main geographic regions—coast, highlands, and Amazon**—each facing distinct climate-related hazards and socio-ecological contexts. In the coastal region, selected urban areas include **Paita–Talara (Piura), Chimbote–Santa (Áncash), the mangrove zone of Tumbes (Tumbes), Chiclayo (Lambayeque), Camaná (Arequipa), and the Lima and Callao Metropolitan Area**, which concentrates nearly one-third of the national population and faces critical urban climate vulnerabilities. In the Amazon region, the prioritized cities are **Pucallpa–Yarinacocha (Ucayali), Puerto Maldonado (Madre de Dios), Satipo (Junín), and Tarapoto (San Martín)**. In the highlands, the project will focus on **Ilo (Moquegua), Huancavelica (Huancavelica), Huamanga–Quinua (Ayacucho), and Puno (Puno)**, where climate risks such as droughts, frosts, and landslides threaten infrastructure, water security, and livelihoods.

By targeting cities with diverse vulnerabilities and adaptive capacities, the project aims to develop a portfolio of territorially contextualized, scalable, and replicable pilot interventions that will enhance the adaptive capacity of Peruvian cities and contribute to shaping broader adaptation strategies for climate-resilient local development.



Figure 06: Location of the prioritized areas.
Fuente: Ecosystems Map of Peru (MINAM, 2019). Own elaboration.

A) Geographic Region: Coast (“Costa”)

1 – Tumbes (Tumbes)

The mangrove ecosystems in Tumbes are vulnerable to tidal flooding, coastal erosion, and shifts in salinity regimes, particularly during ocean–atmospheric anomalies such as El Niño. SENAMHI (2019) and MINAM (2021) have highlighted the sensitivity of the Tumbes delta to sea level rise and

sedimentation imbalances. These changes affect not only the ecological integrity of the mangroves but also the livelihoods of artisanal fishers and communities engaged in aquaculture who rely on this ecosystem. In addition, slow-onset hazards such as sea level rise and sedimentary imbalance are of particular concern. The exposed population exceeds 120,000 people, concentrated in vulnerable coastal and rural areas.

2 - Paita–Talara (Piura)

The cities of Paita and Talara, located in the northern coastal region of Peru, are highly exposed to rapid-onset climate hazards such as abnormal swells and coastal erosion, as well as slow-onset processes including sea encroachment and soil salinization. According to SENAMHI's 2019 report *"Hydrological Impact of the El Niño Phenomenon in the Piura, Chira, Tumbes, and Zarumilla River Basins,"* the Chira–Piura basin has experienced significant hydrometeorological anomalies, resulting in periodic flooding and infrastructure collapse. Informal settlements along the coastal fringe are especially vulnerable due to inadequate drainage and precarious housing structures, while saltwater intrusion threatens local aquifers and agriculture. The exposed population exceeds 180,000 people, including artisanal coastal communities and vulnerable households in seaside neighborhoods such as La Tortuga and Paita Baja.

3 - Chiclayo (Lambayeque)

Located in a flood-prone area, Chiclayo is affected by sudden urban flooding, rising temperatures, and sea level rise. According to SENAMHI's *Climate Risk Analysis for Intermediate Cities*, the city's flat topography and outdated stormwater drainage systems have intensified pluvial flooding, particularly during the rainy season. In addition to extreme precipitation and mass movements, Chiclayo also faces slow-onset hazards such as water stress, soil erosion, and salinization. Climate projections indicate a growing incidence of heatwaves, exacerbating health risks in densely populated areas with limited vegetation cover. With an exposed population of more than 400,000 people, high vulnerability is observed in urban and peri-urban areas near the coast.

4 - Chimbote–Santa (Áncash)

Chimbote, an industrial and port city on the north-central coast, along with the neighboring province of Santa, is exposed to coastal retreat, marine flooding, and extreme rainfall events. SENAMHI has reported increased wave activity and storm surges in these areas during El Niño episodes, leading to recurrent coastal flooding and the degradation of protective ecosystems (*Climate Change Scenarios for the Northern and Central Coast of Peru*, SENAMHI, 2020). The exposed population exceeds 350,000 people, with at least 100,000 residing in high-risk zones—particularly in Puerto Chimbote, Nuevo Chimbote, and Vichayal—where informal settlements and urban pressure converge.

5- Lima y Callao Metropolitan Area

The Metropolitan Area, home to nearly 10 million people, is subject to a wide range of climate hazards, including urban heat island effects, storm surges, and extreme hydrometeorological events. SENAMHI (2022) reports a sustained upward trend in maximum temperatures, with the urban heat island effect exacerbated by impervious surfaces and a lack of vegetation (*Monthly Climatological Bulletin*, SENAMHI, 2022). In addition, the Metropolitan Area faces abnormal swells and flash floods (*huaycos*) as rapid-onset hazards, along with high vulnerability to water stress. In the city's coastal zone, more than one million people are considered highly exposed, with critical areas including Ventanilla, Chorrillos, Lurín, and La Punta.

6 - Camaná (Arequipa)

Camaná, located on the southern coast of Peru, is exposed to multiple climate-related threats, including riverine flooding, prolonged droughts, and sea level rise. Its location at the mouth of the Camaná River makes it particularly vulnerable to flood events during periods of intense rainfall, which are intensified by phenomena such as El Niño. According to projections by SENAMHI and regional studies, an increase in extreme precipitation events is expected in the upper basin, placing additional pressure on drainage and flood control infrastructure. Among the slow-onset processes, variability in precipitation and strain on drainage systems are particularly noteworthy. The exposed population is estimated at over 50,000 people, especially in the river mouth area and adjacent agricultural zones.

7 - Ilo (Moquegua)

Ilo, a city located in an arid Andean coastal zone, is exposed to water scarcity, temperature extremes, and coastal threats. According to SENAMHI's *Regionalized Climate Scenarios to 2030*, the area is likely to experience more intense droughts, decreased precipitation, and increased thermal stress. These trends place municipal water supply systems at risk and exacerbate vulnerabilities in the urban–rural interface zones, where agricultural livelihoods are predominant. The exposed population

exceeds 60,000 people, with particular vulnerability in peri-urban areas dependent on agricultural activities.

B) Geographic Region: “Highlands” (“Sierra”)

8 – Huancavelica (Huancavelica)

This high Andean region is characterized by frost events, droughts, and landslides, which particularly affect communities located on steep terrain. SENAMHI (2021) highlights that increasing precipitation variability and episodes of extreme cold threaten subsistence agriculture and basic infrastructure. Limited road connectivity and low institutional presence reduce the capacity of local governments to respond to climate-induced emergencies. The city is highly vulnerable to mass movement hazards and also faces slow-onset processes such as glacier loss and chronic water stress. The exposed population exceeds 100,000 people, particularly in rural high-Andean communities.

9 - Huamanga–Quinoa (Ayacucho)

Located in a transitional Andean region, Huamanga and Quinoa are vulnerable to prolonged droughts, slope instability, and flash floods during periods of intense rainfall. Projections by SENAMHI (2020) indicate a 10–20% decrease in water availability under certain climate scenarios. Soil degradation and loss of vegetative cover increase the risk of runoff and erosion in peri-urban and rural landscapes. Among the slow-onset processes are soil degradation and declining water availability. The exposed population is approximately 250,000 people.

10 – Puno (Puno)

Located on the Altiplano, Puno is exposed to severe frosts, prolonged droughts, and glacial retreat, all of which affect high-altitude agriculture and water availability. SENAMHI (2019) notes that climate variability has significantly altered precipitation cycles, impacting the hydrological balance of Lake Titicaca. Vulnerable communities—especially those reliant on pastoralism—face increasing food insecurity and the loss of critical ecosystem services. The affected population exceeds 250,000 people, including rural and lakeside Aymara communities.

C) Geographic Region: Amazon Rainforest (“Selva”)

11 - Tarapoto (San Martín)

Tarapoto is subject to seasonal flooding, urban runoff, and river overflows. SENAMHI (2022) reports an increase in rainfall intensity in the Huallaga River basin, exceeding the capacity of drainage systems in critical neighborhoods. Urban development along riverbanks has expanded rapidly, increasing flood exposure and limiting the effectiveness of natural retention systems. Slow-onset processes include rising temperatures and growing agricultural pressure on surrounding forests. The exposed population exceeds 130,000 people, particularly in unplanned urban expansion areas at the urban–rural interface.

12 - Pucallpa–Yarinacocha (Ucayali)

These cities are increasingly affected by riverine flooding, extreme rainfall, and thermal stress. According to SENAMHI’s *Monthly Hydrological Bulletin – Ucayali Region*, the Ucayali River regularly overflows during the rainy season, impacting informal settlements located in floodplain zones. Deforestation and urban expansion further reduce the natural absorption capacity of runoff. The exposed population exceeds 300,000 people, with approximately 40% living in areas highly sensitive to flooding, including internal migrants and Amazonian communities.

13 - Satipo (Junín)

Located in the transitional zone between the Andes and the Amazon, Satipo is affected by landslides, flooding, and soil instability. Data from SENAMHI (2021) highlight the increasing frequency of extreme rainfall events, which overwhelm drainage systems and increase sedimentation in local rivers. Satipo also faces slow-onset processes such as deforestation and socio-environmental conflicts. The exposed population is approximately 150,000 people, including Asháninka communities and other Indigenous and rural populations.

14 - Puerto Maldonado (Madre de Dios)

Puerto Maldonado, located in the Amazon basin, is exposed to intense rainfall, river overflows, and riverbank erosion. Hydrological models from SENAMHI (2020) indicate an increase in peak flow events of the Madre de Dios River, frequently surpassing historical levels. Vulnerability is exacerbated by deforestation and illegal mining, which reduce forest cover and increase the exposure of nearby communities. With an exposed population of 140,000 people, the most vulnerable areas include Tambopata, La Joya, and settlements near the Madre de Dios River.

Geographic Region	Target Area	Target Hazards / <u>Vulnerable groups</u>	Exposed population
COAST ("COSTA")	Palta-Talara (Piura)	Abnormal swells, coastal erosion; slow-onset hazards: sea encroachment and soil salinization. <u>Artisanal fishermen; households in informal settlements; female heads of household; small-scale peri-urban farmers</u>	180,000 people <u>Women 91,440</u> <u>Men 88,560</u> <u>Children <15 34,740</u>
	Chimbote-Santa (Ancash)	Coastal flooding, storm surges. Degradation of the coastal edge, marine pollution (anthropogenic). <u>Port/industrial workers; informal settlements; people in flood-prone areas</u>	350,000 people <u>Women 177,800</u> <u>Men 172,200</u> <u>Children <15 67,550</u>
	Tumbes (Tumbes)	Tidal flooding, coastal erosion, changes in salinity regimes. <u>Coastal and mangrove communities; fishermen; rural coastal communities</u>	120,000 people <u>Women 60,960</u> <u>Men 59,040</u> <u>Children <15 23,160</u>
	Chiclayo (Lambayeque)	Extreme precipitation and mass movements. Water stress, soil erosion, salinization. <u>Peri-urban settlements; small producers; population at risk from flooding</u>	400,000 people <u>Women 203,200</u> <u>Men 196,800</u> <u>Children <15 77,200</u>
	Camaná (Arequipa)	Riverine flooding, prolonged droughts, and sea level rise. <u>Riverside farmers; coastal farming communities</u>	50,000 people <u>Women 25,400</u> <u>Men 24,600</u> <u>Children <15 9,650</u>
	<u>Área Metropolitana Area de Lima y Callao</u>	Swells, "huaycos" (flash floods and landslides). Water stress, urban heat island effect. <u>Informal coastal settlements; fishermen; vulnerable urban population</u>	>1,000,000 people <u>Women 508,000</u> <u>Men 492,000</u> <u>Children <15 193,000</u>
	Ilo (Moquegua)	Water scarcity, temperature extremes, and coastal threats. <u>Fishermen and port workers; peri-urban residents dependent on the sea</u>	60,000 people <u>Women 30,480</u> <u>Men 29,520</u> <u>Children <15 11,580</u>
HIGHLAND ("SIERRA")	Huancavelica (Huancavelica)	Mass movements due to soil saturation. Glacial loss, chronic water stress. <u>Rural Andean communities; small farmers; older adults</u>	> 120,000 people <u>Women 60,960</u> <u>Men 59,040</u> <u>Children <15 23,160</u>

	Huamanga.Quinua (Ayacucho)	Prolonged droughts, slope instability, and flash floods during intense rainfall events. Rural and peri-urban communities; high-altitude farmers	250,000 people Women 127,000 Men 123,000 Children <15 48,250
	Puno (Puno)	Extreme frosts, water deficit. Glacial retreat, lake pollution. Aymara indigenous communities; highland shepherds and farmers	180,000 people Women 91,440 Men 88,560 Children <15 34,740
AMAZONIAN RAINFOREST ("SELVA")	Pucallpa Yarinaochoa (Ucayali)	Urban flooding. Deforestation, increase in extreme temperatures, dengue. Internal migrants; peri-urban Amazonian communities; river fishermen	> 300,000 people Women 152,400 Men 147,600 Children <15 57,900
	Puerto Maldonado (Madre de Dios)	Irregular flooding. Accelerated deforestation, heatwaves. Affected peri-urban communities; coastal fishermen	140,000 people Women 71,120 Men 68,880 Children <15 27,020
	Satipo (Junín)	Intense rainfall. Deforestation, socio-environmental conflicts. Amazonian indigenous communities; peasants and small farmers	150,000 people Women 76,200 Men 73,800 Children <15 28,950
	Tarapoto (San Martin)	Seasonal flooding, urban runoff, and river overflows. Peri-urban riverside dwellers; migrant population; vulnerable youth	130,000 people Women 66,040 Men 63,960 Children <15 25,090
Total prioritized exposed population:			3,430,000 people

Table 01. Summary of Prioritized Areas.
Climate Change-Related Hazards and Prioritized Exposed Population.

() Disaggregated figures by sex and age group were estimated by applying official proportions from the 2017 Census and INEI population projections to the total exposed population included in the Concept Note. These values are approximate and do not replace official district-level data. During the Full Proposal preparation stage, disaggregated district-level projections from INEI and sectoral administrative records will be obtained and processed using the most up-to-date official information available, in order to refine the figures and segmentations of the vulnerable population).*

Author's elaboration.

Project/Programme Objectives:

The initiative seeks to strengthen the adaptive capacity and climate resilience of Peruvian cities by effectively integrating climate change adaptation into governance, planning, financial management, and territorial action processes led by local governments.

The project promotes a territorial approach as a strategic axis to coordinate and generate synergies among the

various climate change adaptation actions undertaken by different sectors and levels of government in both urban and territorial contexts. This approach, aligned with the country's Nationally Determined Contributions (NDCs) on adaptation, aims to enhance the coherence and complementarity of public policies, while increasing the effectiveness of interventions by anchoring them in a comprehensive understanding and explicit recognition of the specific dynamics of each territory.

The project is grounded in the recognition of Peru's high territorial diversity, reflected in the biophysical, sociocultural, and economic conditions that characterize the country's three main geographic regions: coast, highlands, and Amazon. Accordingly, differentiated strategies and territorially contextualized pilot interventions will be designed and implemented in each of these regions, laying the foundation for an integrated, effective, scalable, and replicable territorial adaptation model.

The specific objectives and project outcome are as follows:

- **Objective 1:** Strengthen the integration of climate change adaptation into the governance and planning systems of local governments through territorial approaches, ensuring alignment with the National Adaptation Plan (NAP), the Nationally Determined Contributions (NDCs), and local development policies.
In this regard, **Outcome 1** focuses on enabling local governments to integrate climate change adaptation, using a territorial approach, into local governance and development planning processes—thereby reducing climate-related risks and enhancing resilience to climate change hazards.
- **Objective 2:** Strengthen the financial preparedness of subnational governments and key stakeholders to plan for, access, leverage, and/or manage financing that contributes to climate change adaptation, promoting the inclusion of adaptation criteria within territorial financial management systems.
Accordingly, **Outcome 2** supports the integration of adaptation into the economic and financial management of local development by strengthening budgetary instruments and investment regulations that promote resilient, sustainable, and results-oriented interventions in the face of climate change risks.
- **Objective 3:** Implement pilot interventions involving Nature-based Solutions (NbS) and hybrid measures in prioritized cities across Peru's coast, highlands, and Amazon regions. These interventions will be linked to local planning processes and follow a territorial approach to strengthen ecological, urban, and social resilience to the impacts of climate change.
In this regard, **Outcome 3** enables the implementation of Nature-based Solutions (NbS) and hybrid measures by vulnerable cities and communities as strategic adaptation actions, aligned with local planning and management frameworks, to enhance environmental, social, and economic resilience to climate-related hazards.
- **Objective 4:** Diversify and strengthen the livelihoods of vulnerable communities through climate-resilient economic options, promoting green and sustainable enterprises while reducing their exposure to and dependence on systems sensitive to climate change
Accordingly, **Outcome 4** empowers vulnerable communities to diversify and strengthen their livelihoods through climate-resilient economic opportunities, thereby reducing their exposure to and reliance on climate-sensitive systems.
- **Objective 5:** Strengthen knowledge management and monitoring and evaluation (M&E) systems for climate change adaptation, promoting evidence-based decision-making at both local and national levels, and facilitating learning, continuous improvement, transparency, and the replicability of adaptation actions.
Accordingly, **Outcome 5** ensures that local decision-making processes are grounded in evidence, supported by knowledge management and robust monitoring and evaluation systems—thereby enhancing the capacity of local governments and key stakeholders to effectively manage climate change adaptation.

The project places strong emphasis on the implementation of pilot interventions involving Nature-based Solutions (NbS) and hybrid measures, conceived as multifunctional and cost-effective adaptation strategies aimed at reducing climate vulnerability and protecting strategic ecosystems. These interventions are aligned with the implementation of Peru's Nationally Determined Contribution (NDC) under the adaptation component.

Alignment with the Strategic Objectives of the Adaptation Fund

The project directly supports multiple Adaptation Fund Strategic Objectives, particularly:

- SO1: Reduce exposure to climate-related hazards and threats – By integrating climate change adaptation into governance, planning, and investment processes (Component 1 and 2) and implementing pilot interventions of Nature-based Solutions (NbS) and hybrid measures to address specific climate hazards in prioritized cities (Component 3), the project reduces communities' exposure and vulnerability.
- SO2: Strengthen institutional and regulatory systems for climate-responsive planning and development – Through the development and/or update of local climate change plans, regulatory frameworks, and climate risk analysis tools (Outputs 1.1–1.4), as well as the creation of financial mechanisms and resource mobilization strategies (Output 2.1–2.5), the project builds the institutional capacity necessary to integrate adaptation into local and national systems.
- SO3: Strengthen awareness of climate threats and risk reduction processes – By implementing capacity-building programs for government officials, local stakeholders, and communities (Outputs 1.2, 3.5, 4.2, and 5.3) and promoting knowledge management and participatory monitoring (Component 5), the project fosters climate literacy and empowers stakeholders to act.
- SO4: Increase adaptive capacity within relevant development and natural resource sectors – Through livelihood diversification programs with a climate adaptation approach (Component 4) and the sustainable use of NbS (Outputs 4.1–4.5), the project strengthens the resilience of socio-economic systems dependent on climate-sensitive resources.
- SO6: Support the scaling up of effective climate change adaptation actions – By designing replication and scaling strategies for pilot NbS interventions (Output 3.3) and linking them to financial and governance instruments, the project ensures long-term sustainability and expansion of adaptation measures.

Project/Programme Components and Financing:

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Governance and Planning for Climate Change Adaptation	<p><u>Framework package and toolkit for multilevel, multisectoral, and multi-stakeholder governance to integrate climate change adaptation into urban management. Includes:</u></p> <ul style="list-style-type: none"> - <u>Participatory institutional framework document.</u> - <u>Technical tools for incorporating climate adaptation into local planning (based on climate scenarios and risk analysis).</u> - <u>Training modules and delivery of X capacity-building workshops for local actors on identifying, prioritizing, and managing climate risks using NbS, aligned with NAP and NDC adaptation components.</u> <p>Institutional and participatory frameworks for multilevel, multisectoral, and multi-stakeholder governance are strengthened to incorporate and/or reinforce climate change adaptation within local management processes of cities, using a territorial approach. Enabling conditions are also promoted to support the integration of climate change adaptation into local planning instruments, including the application of technical tools based on climate scenarios and risk analyses related to climate change impacts. In parallel, local capacities are developed to identify, prioritize, and manage risks associated with the effects of climate change, addressing them through nature-based approaches for integrated territorial adaptation, in line with the National Adaptation Plan (NAP) and the country's adaptation-related Nationally Determined Contributions (NDCs).</p>	Local governments integrate climate change adaptation, using a territorial approach, into local governance and development planning processes to reduce risks associated with climate change and to strengthen the resilience of cities to climate-related hazards.	\$ 841,698,70

<p>2. Financial Management for Climate Change Adaptation</p>	<p><u>Set of technical, regulatory, and financial instruments developed to integrate climate change adaptation into planning, investment, and budgeting at national and subnational levels. Includes:</u> <u>Adaptation integration guidelines for public investment projects.</u> - <u>Capacity-building program for municipal staff (X workshops / Y officials trained).</u> - <u>Climate finance access mechanism with mapping of funding windows (public, private, international, multilateral).</u> - <u>Toolkit for NbS-based investment proposal preparation</u> Technical, regulatory, and financial tools are strengthened to facilitate the integration of climate change adaptation into public investment and budgeting instruments at both national and subnational levels. This includes the training of municipal technical staff in the formulation of projects with a climate adaptation focus. In addition, coordinated access to climate finance mechanisms is promoted through funding windows from various available sources—public, private, international cooperation, and multilateral funds—focused on the implementation of Nature-based Solutions (NbS) to enhance the resilience of prioritized cities across Peru’s diverse geographic regions.</p>	<p>Local governments integrate climate change adaptation into the economic and financial management of local development by strengthening budgetary tools and investment regulations that promote resilient, sustainable, and results-oriented interventions in response to climate change risks.</p>	<p>\$673,358,16</p>
<p>3. Pilot Interventions for Climate Resilience</p>	<p><u>Pilot portfolio of NbS and hybrid measures implemented in prioritized cities (coast, highlands, Amazon) as part of local adaptation strategies. Includes:</u> - <u>Engineering and design packages for each pilot.</u> - <u>Implementation reports with georeferenced maps.</u> - <u>Replication and scaling strategy document integrated into local planning instruments.</u> Pilot interventions involving Nature-based Solutions (NbS) and hybrid measures are implemented in prioritized cities across Peru’s diverse geographic regions—coast, highlands, and Amazon—as part of their climate change adaptation strategies. These interventions are integrated into local planning through a territorial approach and are accompanied by strategies for their replication and scaling.</p>	<p>Vulnerable cities and communities implement Nature-based Solutions (NbS) and hybrid measures as part of their climate change adaptation strategies, in alignment with local planning and management processes. These actions strengthen their environmental, economic, and social resilience to climate-related hazards.</p>	<p>\$5,050,186,22</p>
<p>4. Diversification and Protection of Livelihoods</p>	<p><u>Updated guidelines and training package for national/subnational livelihood diversification programs to integrate climate adaptation. Includes:</u> - <u>Revised criteria and strategies incorporating adaptation into sectoral programs.</u> - <u>Intersectoral coordination mechanism for technical assistance to local enterprises.</u> - <u>Business model guide for NbS-based economic activities, integrating environmental, social, and economic co-benefits.</u> National and/or subnational sectoral programs for livelihood diversification have incorporated a climate change adaptation approach into their guidelines, criteria, and strategies, promoting more resilient livelihoods in vulnerable communities. In addition, coordination between sectors and local governments has been strengthened to provide technical assistance to local enterprises with adaptation potential.</p>	<p>Vulnerable communities diversify and strengthen their livelihoods through climate-resilient economic options, reducing their exposure to and dependence on systems that are sensitive to climate change.</p>	<p>\$1,010,037,24</p>

5. Knowledge Management and M&E in Adaptation	<p><u>Knowledge management and M&E system package for urban climate adaptation. Includes:</u></p> <ul style="list-style-type: none"> - <u>Strengthened M&E protocols aligned with MINAM's national system.</u> - <u>Repository of lessons learned, good practices, and technical evidence.</u> - <u>Communication products (policy briefs, case studies, and guidelines) to inform local adaptation planning.</u> <p>Knowledge management and adaptation monitoring have been strengthened, with clear linkages to the National System for Monitoring and Evaluation of Adaptation Measures administered by the Ministry of the Environment (MINAM). In addition, knowledge management processes have been implemented to promote the documentation, analysis, and dissemination of lessons learned, good practices, and relevant technical evidence to support local climate change adaptation efforts in cities.</p>	Local decision-making processes are based on evidence, knowledge management, and monitoring and evaluation (M&E) systems that guide climate policies and actions, thereby strengthening the capacity of local governments and relevant stakeholders to effectively manage climate change adaptation.	\$ 841,698,70
6. Project/Programme Execution cost (direct cost)*			\$799,613,82
7. Total Project/Programme Cost (direct cost+project execution cost) (A)			\$9,216,590,89,86
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (B)			\$ 783,410,14
Amount of Financing Requested (A+B)			\$10,000,000,00

***Note:** Project execution costs refer to costs which may include the salaries of professionals, including one (1) General Coordinator, technical specialists for component implementation, one (1) Monitoring and Evaluation Officer, one (1) Environmental and Social Safeguards Specialist, and one (1) Administrative and Financial Support Assistant.

Also included are: Annual plans for environmental and social management monitoring, Annual external audits, Mid-term report, Project completion report, Systematization document on results and lessons learned, Communication tools such as videos and infographics to share and disseminate the project, Travel and per diem expenses, Administrative and banking costs

Projected Calendar:

Milestones	Expected Dates
Start of Project/Programme Implementation	2026
Mid-term Review (if planned)	2029
Project/Programme Closing	2031
Terminal Evaluation	2032

PART II: PROJECT / PROGRAMME JUSTIFICATION

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 project is structured around five interconnected components, each comprising a set of concrete adaptation activities that directly contribute to strengthening climate resilience in cities across Peru. It adopts an integrated territorial approach that promotes coordination and synergies among climate adaptation actions implemented by various sectors and levels of government within urban areas. Furthermore, the project acknowledges the geographic, ecological, and socioeconomic diversity of the country's three main geographic regions: coast, highlands, and Amazon. This diversity is addressed through differentiated strategies and pilot NbS interventions for adaptation, tailored to the specific climate hazards and territorial characteristics of each region.

Component 1: Governance and Planning for Climate Change Adaptation

This component is aimed at integrating climate change adaptation into the governance and planning systems of local governments through territorial approaches. It strengthens the incorporation of climate change adaptation, with a territorial focus, into local governance, planning, and decision-making processes, ensuring alignment with the National Adaptation Plan (NAP), the adaptation-related Nationally Determined Contributions (NDCs), and local development policies.

Outcome 1: Local governments integrate climate change adaptation, using a territorial approach, into local development governance and planning processes, in order to reduce risks associated with climate change and strengthen the resilience of cities to climate-related hazards.

Outputs 1: Institutional and participatory frameworks for multilevel, multisectoral, and multi-stakeholder governance ~~established and/or are~~ strengthened to incorporate and/or reinforce climate change adaptation in urban management through a territorial approach. Enabling conditions ~~are also~~ developed ~~for integrating to integrate~~ climate change adaptation into local planning instruments, including the use of technical tools based on climate scenarios and risk analyses related to climate impacts.

At the same time, local capacities ~~enhanced are developed~~ to identify, prioritize, and manage risks associated with the effects of climate change, addressing them through Nature-based approaches as part of an integrated territorial adaptation strategy, in line with the National Adaptation Plan (NAP) and Peru's adaptation-related Nationally Determined Contributions (NDCs). The following outputs are foreseen:

- **Output 1.1:** Regional and local planning and investment instruments, as well as regulatory frameworks, developed and/or updated to integrate climate change adaptation.
- **Output 1.2:** Strengthened capacities in local governments and key stakeholders to integrate climate change adaptation into local planning and governance.
- **Output 1.3:** Local Climate Change Plans (PLCCs) and Regional Climate Change Strategies (ERCCs) formulated and/or updated, and integrated into territorial planning.
- **Output 1.4:** Climate risk analyses developed or updated using localized and district-level climate change scenarios.
- **Output 1.5:** Strengthened climate governance mechanisms and territorial coordination platforms for the implementation of adaptation measures.
- **Output 1.6:** Participatory and community-based processes implemented to integrate local knowledge into adaptation planning.

To achieve the above, the following activities are proposed:

Activity 1.1: Development and/or updating ~~of~~ ~~technical~~ instruments (plans and/or investment programs, guidelines, manuals, sectoral programming, among others) and regulatory frameworks (ordinances, directives, etc.) ~~that~~ promote the incorporation of adaptation measures into local development, including:

- Formulation and/or updating of enabling instruments (plans, programs, guidelines, manuals, sectoral programming, among others) to integrate climate change adaptation criteria into planning, infrastructure, public services, and other areas, aligned with the National Adaptation Plan (NAP) and the adaptation-related NDCs.
- Formulation and/or updating of regional and local regulatory frameworks (ordinances, regulations, administrative procedures, and other internal instruments) that institutionalize adaptation measures within regional and local public management.
- Support for the approval, publication, and/or dissemination of the instruments developed.

This Activity 1.1 establishes the normative and technical foundations for institutionalizing climate change adaptation in local planning. The formulation of plans, programs, guidelines, and ordinances enables local governments to formally incorporate adaptation criteria into their investment, infrastructure, public service, and land-use planning decisions. This is essential to ensure alignment with the National Adaptation Plan (NAP) and the Nationally Determined Contributions (NDCs), and to guarantee the long-term sustainability of adopted measures. In summary, it directly contributes to the integration of adaptation into local public planning and management.

Activity 1.2 – Design and implementation of training programs and technical assistance for government actors in prioritized local governments to support the integration of climate change adaptation into local planning and governance instruments, including Local Climate Change Plans and tools for climate risk analysis.

- Design of training and capacity-building modules for the integration of climate change adaptation into planning, management, and governance instruments, including Local Climate Change Plans and related adaptation tools, with the inclusion of cross-cutting approaches.
- Development and implementation of a virtual diploma program in partnership with a university or training center, focused on Climate Change Adaptation Planning.
- Delivery of training workshops and continuous technical assistance to local governments and other key stakeholders for the integration of adaptation into planning and management instruments, including those related to Local Climate Change Plans.
- Systematization of good practices and lessons learned.

Through Activity 1.2, training and technical assistance strengthen the institutional capacities of local officials and key stakeholders, enabling them to understand, apply, and monitor adaptation measures within planning and governance instruments. The design of modules, diploma programs, and workshops ensures progressive and context-relevant learning. This fosters more informed, evidence-based local decision-making, incorporating cross-cutting approaches such as gender, interculturality, and risk management. In summary, it ensures that local actors have the necessary tools to implement adaptation measures autonomously and effectively.

Activity 1.3 – ~~Prepare, update and validate~~ ~~Development and/or updating of~~ Local Climate Change Plans and Regional Climate Change Strategies

- Formulation and/or updating of Local Climate Change Plans (PLCCs).
- Technical support and assistance for the updating of Regional Climate Change Strategies (ERCCs).
- Workshops for the dissemination, feedback, and validation of adaptation measures included in the PLCCs and ERCCs.
- Support for the integration of adaptation measures from PLCCs and ERCCs into regional and local planning, management, and investment instruments.
- Support for the approval, publication, and dissemination of the instruments developed.

In line with Activity 1.3, the development and/or updating of these plans and strategies enables local and regional governments to have a clear, participatory, and context-specific roadmap to address climate change. The alignment of these adaptation measures with development and investment plans ensures their practical and effective implementation, promoting coherence and synergy in territorial management. In summary, this activity generates specific adaptation instruments that are integrated into local and regional planning and management processes.

Activity 1.4 – Development and/or updating of climate risk analyses, including district-level climate change scenarios

- Development and/or updating of climate risk analyses incorporating climate change scenarios at the local level.
- Workshops for dissemination, validation, and use of results to promote local adaptation measures aligned with the NDCs and the National Adaptation Plan (NAP).
- Support for the publication and dissemination of the studies produced.

In Activity 1.4, risk analyses provide essential technical and geographic information on current and future climate hazards, which is fundamental for informed decision-making in territorial planning, infrastructure, public services, and the protection of vulnerable populations. Moreover, these studies enable the prioritization of adaptation measures based on local context. In summary, the activity supports evidence-based adaptive planning grounded in technical data and future climate scenarios.

Activity 1.5 – Development and/or strengthening of governance mechanisms and territorial coordination platforms to promote synergies among adaptation measures within the framework of the NDCs, using a multilevel approach for the management of prioritized cities

- Design and/or strengthening of coordination and territorial sustainability mechanisms to support the implementation of adaptation measures.
- Promotion of synergies, multisectoral, multilevel, and multi-stakeholder coordination, and/or agreements to foster interoperability between adaptation policies and various development instruments, ensuring the scaling-up of adaptation actions.
- Systematization of successful pilot experiences in local–regional climate governance for replication in other cities across the country.

The design and strengthening of these mechanisms under Activity 1.5 promote effective coordination

across levels of government, sectors, and key stakeholders, fostering the interoperability of public policies and the synergistic implementation of adaptation measures. This also reinforces the institutional sustainability of actions, ensuring that adopted measures are sustained over time and scaled to other cities or regions. In summary, it strengthens climate governance and coordinated action among actors, enabling more robust and sustainable implementation.

Activity 1.6 – Design and implementation of participatory engagement strategies and community empowerment processes to integrate local knowledge and key stakeholders into climate change adaptation planning

- Design of participatory strategies and tools that are culturally appropriate and context-specific.
- Implementation of on-the-ground participatory processes such as workshops, dialogue roundtables, farmer field schools, community assemblies, among others.
- Capacity-building and awareness workshops for community actors on climate change adaptation.
- Workshops to integrate traditional and ancestral knowledge into local adaptation planning.
- Systematization and publication of good practices and lessons learned on local co-management of adaptation.
- Development of policy and institutional proposals to ensure the continuity of these processes by local governments.

The active participation of communities and the recognition of local knowledge, as outlined in Activity 1.6, are essential to achieving effective, legitimate, and culturally appropriate adaptation. This activity ensures that proposed solutions are responsive to local realities, promotes the empowerment of vulnerable communities, and strengthens social ownership of adaptation strategies. In summary, it incorporates an inclusive and territorial approach that enhances the legitimacy and effectiveness of the measures adopted.

The set of activities under Component 1 enables local authorities to institutionalize climate change adaptation within the framework of Peru's Framework Law on Climate Change and its Regulation, using an integrated territorial approach as a central pillar of climate-resilient development. These activities contribute to mainstreaming climate adaptation into public decision-making, improving inter-institutional coordination, and empowering local communities. As a result, adaptive capacity to climate-related hazards is strengthened, planning practices are optimized, and greater local ownership of adaptation strategies is promoted.

Component 2: Financial Management for Climate Change Adaptation

This component aims to strengthen the financial preparedness of subnational governments and key stakeholders to plan for, access, leverage, and/or manage financing that contributes to climate change adaptation. It promotes the integration of climate change adaptation—based on territorial approaches—into the financial management systems of local governments and other strategic actors, with the goal of mobilizing, allocating, managing, and/or monitoring public and/or private resources. This ensures transparency, efficiency, and the long-term sustainability of investments aimed at strengthening climate resilience.

Outcome 2: Local governments integrate climate change adaptation into the economic and financial management of local development through the strengthening of budgetary tools and investment regulations that promote resilient, sustainable, and results-oriented interventions in response to climate-related risks.

Outputs 2: Technical, regulatory, and financial tools developed, updated and or consolidated are consolidated to facilitate the integration of climate change adaptation into planning, investment, and public budgeting instruments at the national and subnational levels, with targeted alongside capacity-building of municipal staff for the design of adaptation-focused projects.

In addition, coordinated access to climate finance mechanisms is promoted through financing windows from diverse sources—public, private, international cooperation, and multilateral funds—focusing on the implementation of Nature-based Solutions (NbS) to enhance resilience in the prioritized cities across the country's distinct geographic regions. The following outputs are included:

- **Output 2.1:** Financial and regulatory tools designed, updated, or strengthened to integrate climate change adaptation into public planning, investment, and budgeting systems.
- **Output 2.2:** Concept notes developed and validated to access national or international climate

finance for the implementation of Nature-based Solutions (NbS) in prioritized cities.

- **Output 2.3:** Public-private partnerships promoted to co-finance and facilitate climate change adaptation interventions.
- **Output 2.4:** Capacities of local governments strengthened to formulate investment and cooperation projects that incorporate adaptation to climate change.
- **Output 2.5:** Private sector capacities strengthened to identify, mobilize resources, and apply the *AdaptAcción* tool within value chains.

To achieve the above, the following activities are proposed:

Activity 2.1: Design, update and/or strengthening of public and cooperation-based financial mechanisms for climate change adaptation at the territorial level, including:

- Design and/or update of financial mechanisms with a territorial approach (such as municipal funds, trust funds, etc.), including institutional arrangements to integrate climate change adaptation.
- Integration of adaptation criteria into public budgeting and programming processes of subnational governments.
- Development and/or strengthening of ordinances, directives, incentives, or guidelines that promote the prioritization of adaptive investments at the local level.
- Monitoring and reporting of adaptation finance to ensure climate expenditure traceability, aligned with the National System for Monitoring and Evaluation of Adaptation and Mitigation Measures of the Ministry of Environment (MINAM)..

This activity (2.1) seeks to create or strengthen financial and regulatory tools that enable local governments and key stakeholders to incorporate climate adaptation criteria into their programming, investment, and public budgeting systems—both at the institutional and operational levels. By mainstreaming adaptation into budget formulation processes, this activity ensures the allocation of adequate resources, promotes efficiency and traceability in climate-related spending, and fosters an enabling regulatory environment for sustainable investments. In summary, it directly contributes to Outputs 2.1 (financial and regulatory tools) and 2.4 (technical capacity-building for local governments).

Activity 2.2: ~~Develop~~Preparation of three (03) concept notes—one per geographical region—to access available national and/or international financing windows for the implementation of Nature-based Solutions (NbS) for climate change adaptation in each of the prioritized cities.

- Identification of available national and/or international financing windows.
- Identification and prioritization of NbS measures by city.
- Preparation and validation of region-specific concept notes.
- Submission or inclusion in identified funding portfolios or investment pipelines.

The formulation of regionally differentiated concept notes enables prioritized cities to access national or international climate finance for the implementation of Nature-based Solutions (NbS) as an adaptation strategy. **This activity (2.2) strengthens the capacity of local governments to prepare technically sound proposals aligned with regional priorities and the requirements of identified funding mechanisms.** In summary, it contributes directly to Output 2.2 (access to climate finance for NbS).

Activity 2.3: ~~Facilitated the P~~romotion of resource mobilization and public-private partnerships, including:

- Promotion of alliances with the private sector to co-finance adaptation measures (e.g., through Public-Private Partnerships or Corporate Social Responsibility initiatives);
- Establishment of dialogue platforms to identify risks, opportunities, and collaboration frameworks that enable the application of economic instruments to incentivize adaptive practices in productive sectors;
- Partnerships with the private sector to complement or support adaptation interventions in prioritized urban areas;
- Monitoring and systematization of good practices.

This activity facilitates the engagement of the private sector as a key actor in climate resilience, encouraging their participation in financing and implementing adaptation actions. It also promotes cross-sectoral synergies and the application of economic incentives to scale up adaptive practices, contributing directly to **Output 2.3** (promotion of public-private partnerships for climate change adaptation).

Activity 2.4: Provide training Capacity and building for technical assistance to municipal technical staff of prioritized local governments and key stakeholders in the identification, formulation, and evaluation of investment and cooperation projects that incorporate climate change adaptation to enhance urban resilience, in alignment with the implementation of the adaptation component of the NDCs.

- Design of training programs and tools for project formulation with an adaptation focus.
- Training workshops and ongoing technical assistance for the formulation of investment and/or cooperation projects.
- Systematization of results and development of a practical toolkit.

Through structured training programs and continuous technical assistance, this activity (2.4) strengthens the capacities of municipal technicians and local stakeholders in preparing public investment and international cooperation projects that integrate climate change adaptation. This improves the technical quality and viability of proposals while ensuring alignment with national adaptation priorities under the NDCs. In summary, this activity contributes directly to **Output 2.4** (strengthened capacities for adaptive project formulation).

Activity 2.5: Design and deliver implementation of three (03) pilot training and technical assistance programs for the private sector — one (01) per geographic region — to apply the AdaptAcción tool. This activity aims to identify and recognize adaptation actions and mobilize resources for climate resilience within private sector value chains.

- Diagnosis, prioritization, and engagement of key private sector actors.
- Technical assistance and training for the private sector on the application of the AdaptAcción tool.
- Promotion of recognition mechanisms for private sector adaptation actions through the tool.
- Systematization of good practices related to private sector engagement through the AdaptAcción tool.

This activity (2.5) encourages the private sector to identify and recognize adaptation actions within their value chains by applying the AdaptAcción tool. It fosters their direct involvement in resource mobilization, implementation of adaptive measures, and reporting of results, thereby improving alignment with public climate governance systems. In summary, this activity directly contributes to Output 2.5 (strengthening private sector capacities) and promotes shared, multisectoral climate governance.

By strengthening the capacity of local governments to generate and manage financial resources for adaptation, **Component 2** ensures the sustainability and scaling-up of climate actions. It promotes the integration of climate change adaptation into public spending priorities and facilitates access to co-financing opportunities, particularly for **Nature-based Solutions (NbS)**. The active involvement of the private sector expands ownership and enhances the replicability and impact of interventions, fostering a more resilient and inclusive local development pathway.

Component 3: Pilot Interventions for Climate Resilience

This component implements localized adaptation measures through Nature-based Solutions (NbS) and hybrid interventions in fourteen (14) pilot sites distributed across Peru's three main geographical regions: coast, highlands, and rainforest. The design and implementation of these adaptation measures—both NbS and hybrid—are promoted as cost-effective and multifunctional strategies, integrated into the planning and management processes of cities. These interventions aim to reduce climate vulnerability by lowering exposure to hazards and enhancing adaptive capacity of both strategic ecosystems and vulnerable communities.

The portfolio of pilot interventions under Component 3 is classified, in accordance with the Adaptation Fund's Guidance Document for Project/Programme with Unidentified Sub-Projects (USPs), as "Partially unidentified: specific activity identified, location to be determined". While the nature and scope of the interventions—comprising Nature-based Solutions (NbS) and hybrid measures such as Multi-Hazard Early Warning Systems (MHEWS)—are defined, their specific locations and technical designs will be determined during the project's implementation phase, following participatory climate risk assessments and local validation processes. An Environmental and Social Management Plan (ESMP) will guide the identification, screening, and risk categorization of each USP, ensuring compliance with the Fund's Environmental and Social Policy (ESP) and associated 15 principles. The executing entity has the institutional capacity, technical expertise, and operational procedures to manage these processes, including mechanisms for stakeholder engagement, grievance redress, and

[transparent reporting in the annual Project Performance Reports \(PPRs\).](#)

Outcome 3: Vulnerable cities and communities implement **Nature-based Solutions (NbS)** and hybrid measures as strategic approaches for climate change adaptation, in alignment with their local planning and management frameworks. These interventions strengthen their **ecological, urban, and social resilience** to climate-related hazards.

Output 3: Pilot ~~portfolio of interventions involving~~ **Nature-based Solutions (NbS)** and hybrid approaches ~~are~~ implemented in prioritized cities across Peru's diverse geographical regions—**coast, highlands, and rainforest**—as part of localized climate adaptation efforts. These interventions are integrated into local planning through a **territorial approach** and are accompanied by strategies to ensure their **replicability and scalability**. The specific outputs are detailed below:

- **Output 3.1:** Participatory assessments of climate risks conducted at the community level, identifying Nature-based and hybrid adaptation measures.
- **Output 3.2:** Pilot NbS and hybrid interventions **designed through participatory processes** and implemented in **prioritized cities** across the coastal, highland, and rainforest regions.
- **Output 3.3:** Strategies for the **sustainability, replicability, and scaling-up** of pilot measures **developed and integrated** into local governance and planning frameworks.
- **Output 3.4:** **Participatory monitoring mechanisms** designed and implemented, aligned with the **national Monitoring & Evaluation (M&E) system** led by the Ministry of Environment (MINAM).
- **Output 3.5:** **Inclusive training programs** implemented on **Ecosystem-based Adaptation (EbA)** and its integration into local planning and management systems.

To achieve the expected results, the following activities are proposed:

Activity 3.1: ~~Facilitate P~~participatory ~~development of~~ climate risk assessments in prioritized communities to identify Nature-based and hybrid adaptation measures in urban areas.

- Design and application of participatory tools for identifying climate-related risks at the community level in prioritized areas.
- Community workshops with diverse participation (including women, youth, and older adults) to identify risks and appropriate adaptation measures.
- Development and dissemination of climate risk studies at the community level, ensuring alignment with Local Climate Change Plans (PLCC) and/or local investment planning.

This activity promotes the identification of major climate risks and context-specific adaptation measures—particularly Nature-based and hybrid solutions—through a participatory and territory-based approach. It engages diverse social groups in generating inputs to design legitimate, appropriate, and feasible solutions, strengthening community ownership while aligning outcomes with local planning frameworks. In summary, this activity contributes directly to **Output 3.1** (participatory risk assessments) and lays the foundation for the **contextualized design of pilot measures**.

Activity 3.2: ~~Co-Participatory~~ design and implementation of fourteen (14) pilot interventions ~~involving~~ Nature-based Solutions (NbS) and hybrid measures (such as Multi-Hazard Early Warning Systems – MHEWS), jointly developed with local stakeholders. These interventions aim to reduce the climate vulnerability of prioritized communities across Peru's three main geographical regions—coast, highlands, and rainforest—according to the specific climate hazards identified in each area.

- **Technical design of the pilot measures** to be implemented, with community participation.
- Implementation of the pilot adaptation interventions.
- **Development of local capacities** for the management and sustainability of the pilot initiatives.
- Monitoring, reporting, and systematization of good practices.

The Nature-based Solutions (NbS) to be implemented under the project do not constitute a single or uniform package, but rather are diverse and heterogeneous, as they respond to the specific characteristics of each territory. Their design and implementation are tailored to the biophysical matrix of the environment, taking into account factors such as ecosystem type, vegetation cover, local hydrology, and environmental fragility.

Furthermore, NbS vary according to the scale of intervention, which may be territorial (e.g., ecological

corridors or watershed restoration), urban (e.g., multifunctional urban parks, green infrastructure for stormwater management, or public space revegetation), or even architectural (e.g., green roofs and walls, rain gardens, or water harvesting systems in buildings). Spatial location also plays a key role in their design, differentiating interventions located within the consolidated urban core, in peri-urban areas, or in other strategic sectors of the territorial unit, such as hillsides, riverbanks, or agricultural borders.

This diversity enables NbS to effectively address the specific climate risks of each location (such as flooding, urban heat islands, or soil degradation), while simultaneously generating social, environmental, and economic co-benefits adapted to local needs and capacities.

The following section presents potential Nature-based and hybrid measures identified during this exploratory phase:

Nature based Solution	Territorial NbS				Urban NbS			
	Reforestation	Amunas Qochas	Mangroves Wetlands	Multi-Hazard Early Warning Systems (MHEWS)	Green corridors and urban forests	Sustainable Urban Drainage Systems (SUDS)	Green roofs	Slope vegetation and living barriers
Paíta Talara Piura				X	X	X		X
Chimbote Santa			X		X	X		X
Camana						X		X
Tumbes			X		X	X		
Lima Callao					X	X		X
Chiclayo					X	X		
Pucallpa	X			X	X	X		
Puerto Maldonado	X			X		X		
Satipo				X	X			X
San Martín Tarapoto	X			X				X
Ilo			X			X		
Huancavelica	X	X						
Huamanga Quinoa						X		X
Puno	X					X		X

Table 01: Summary of the prioritized Nature-based Solutions (NbS) by intervention area. Own elaboration.

The project will also take into account existing conservation activities and initiatives in the prioritized

areas. Along the coast, this includes the **National Wetlands Plan** led by the Ministry of the Environment (MINAM), which promotes conservation actions in Tumbes, Piura, Lima, and Arequipa, targeting mangroves, coastal lagoons, and urban wetlands. Additionally, it encompasses ecological restoration efforts of beaches and coastal edges promoted by local governments with support from MINAM, such as in Chorrillos (Lima) and Paita (Piura); and the management of the **Regional Conservation Area "Los Manglares de Tumbes"**, under the responsibility of the Regional Government and the National Service of Natural Protected Areas (SERNANP).

In the highlands, notable initiatives include the conservation of **bofedales** (high Andean wetlands), alpine grasslands, and groundwater recharge zones through projects such as *"Agua para Abancay"* (with the participation of ANA and MINAM), regional efforts in Cusco, Ayacucho, and Huancavelica to protect natural springs, and the management of **Landscape Reserves** like *Nor Yauyos Cochabambas*, which play a key role in hydrological regulation.

In the Amazon region, important initiatives include the conservation plans for **community-managed forests** in Ucayali and Madre de Dios, linked to **REDD+ mechanisms** and the **National Forest Conservation Program**; **Protected Natural Areas** such as Tambopata, Purús, and Imiría, which interact with peri-urban zones; as well as local efforts to restore soils degraded by extractive activities.

These experiences provide a valuable foundation that the project may build upon, scale up, or strengthen through the application of **Nature-based Solutions**, generating comprehensive impacts in both urban and rural contexts.

This activity constitutes the operational core of the component, as it initiates concrete adaptation actions built on evidence and participatory processes. The pilot measures are technically designed, validated with the community, and implemented on the ground to reduce the climate vulnerability of ecosystems and communities. Moreover, this activity strengthens local capacities for the management and long-term sustainability of the interventions. In summary, it contributes directly to **Output 3.2 (implemented pilot interventions)** and enhances territorial and social resilience to the impacts of climate change.

Activity 3.3: Development and validate of strategies for the design, operation, and maintenance of pilot measures by key stakeholders to ensure their sustainability, including mechanisms for the replicability and scaling-up of pilots by integrating these initiatives into local management through various instruments.

- Capacity-building for community actors to ensure the sustainability of pilot initiatives.
- Development of a practical toolkit for the operation and maintenance of the pilots.
- Design, promotion, and/or implementation of sustainability, institutionalization, scaling-up, and/or replication mechanisms.

This activity aims to ensure the continuity of the pilot measures beyond the implementation period by establishing institutional, financial, and social mechanisms that integrate them into local and regional planning. It also promotes the potential replication of these measures in other contexts, thereby multiplying their impact. Community training and the development of operation and maintenance tools help ensure the technical and social sustainability of the actions. In summary, this activity contributes directly to **Output 3.3 (sustainability and scaling strategies)**, ensuring that the measures are durable, replicable, and embedded within local development processes.

Activity 3.4: Establish and implement ~~Design and implementation of~~ local monitoring mechanisms, differentiated and tailored to the capacities and roles of the various stakeholders involved (public authorities, private sector, civil society, communities), to ensure the sustainability and participatory evaluation of the implemented measures, linking them to the progress reporting framework of the National Monitoring and Evaluation System for Adaptation Measures administered by MINAM.

- Development and implementation of participatory monitoring mechanisms and the use of basic tools.
- Alignment with the National M&E System at regional and national levels.

This activity strengthens local monitoring of implemented measures through participatory mechanisms adapted to the diverse capacities and roles of stakeholders. It is aligned with the National Monitoring and Evaluation (M&E) System of MINAM, reinforcing transparency, accountability, and the evaluation of outcomes across different scales. In summary, it contributes directly to **Output 3.4 (participatory monitoring)** and connects local actions to the national adaptation evaluation system.

Activity 3.5: Deliver Capacity-building programs with cross-cutting approaches (gender, interculturality, and intergenerational equity) targeting municipal officials, public service operators, community leaders, youth, and other relevant stakeholders on Ecosystem-based Adaptation (EbA) and its role in local climate adaptation governance, including exchange platforms between pilot cities and other interested municipalities (networks of climate-resilient cities).

- Design of an inclusive training program on adaptation-related topics (concepts, practices, integration into planning and budgeting, cross-cutting approaches, community-based monitoring, among others).
- Participatory workshops for the implementation of community-based training programs.
- Establishment of a Community of Practice (CoP) and facilitation of inter-municipal exchange events to promote local adaptation.
- Systematization of best practices.

This activity fosters capacity-building among diverse social and governmental actors on the role of Nature-based Solutions (NbS) in local climate change governance. It adopts an inclusive and cross-cutting approach—addressing gender, interculturality, and intergenerational equity—promoting an active and informed citizenry empowered to participate in adaptation processes, while encouraging the development of peer-to-peer networks between municipalities and communities. In summary, it directly contributes to **Output 3.5** (*inclusive training*), consolidating a Community of Practice (CoP) for Ecosystem-based Adaptation at the local level.

Under Component 3, the pilot interventions provide concrete and operational responses to climate hazards such as floods, droughts, and heatwaves. These actions reduce physical and ecosystem vulnerabilities and exposure, while simultaneously enhancing adaptive capacity through co-benefits such as improved water regulation, temperature reduction, and increased social cohesion. These experiences serve as real-world models that can be replicated and scaled up in other urban areas.

Component 4: Livelihood Diversification and Protection

This component supports the transformation of local economies to reduce dependence on climate-sensitive systems and promote resilient livelihoods. It fosters the strengthening and diversification of livelihoods with a climate change adaptation approach, aiming to reduce vulnerability and increase adaptive capacity, with particular emphasis on the economic dimension. The project will consider, though not be limited to, existing activities in the prioritized areas, such as artisanal fishing, small-scale aquaculture, tourism, and ecotourism.

Outcome 4: Vulnerable communities diversify and strengthen their livelihoods through climate-resilient economic options, reducing their exposure to and dependence on climate-sensitive systems.

Output 4: National and/or subnational sectoral livelihood diversification programs ~~have incorporated a climate change adaptation perspective into their~~ guidelines, criteria, and strategies ~~updated to integrate a climate change adaptation perspective, including the development of reference materials and technical tools,~~ thereby ~~promoting more resilient livelihoods among vulnerable communities.~~ Moreover, formal coordination mechanisms between sectors and local governments are established ~~has been strengthened~~ to provide technical assistance to local enterprises with adaptation potential.

In parallel, specific guidelines and capacities ~~have been~~ developed to harness the economic value of Nature-based Solutions (NbS), incorporating environmental, social, and economic co-benefits that foster sustainable business models compatible with climate resilience.

The outputs are detailed as follows:

- **Output 4.1:** Technical guidelines and tools developed to integrate climate adaptation into productive diversification programs and green entrepreneurship initiatives.
- **Output 4.2:** Training modules and materials developed and delivered to ~~Strengthened~~ the capacities of technicians, professionals, and local actors for the development of climate-resilient livelihoods and enterprises.
- **Output 4.3:** Operational ~~M~~multi-stakeholder and multisectoral coordination platforms established or strengthened to promote adaptive livelihoods.
- **Output 4.4:** Six pilot business models designed and supported to demonstrate adaptive livelihoods linked to Nature-based Solutions (NbS).

- **Output 4.5:** Participatory monitoring mechanisms designed and implemented to track strengthened livelihoods, aligned with the National Monitoring and Evaluation System.

In order to achieve these results, the following activities are proposed:

Activity 4.1: - Development of guidelines and/or tools for the integration of climate adaptation into productive diversification programs related to climate-sensitive sectors in the prioritized cities, including the sustainable use of Nature-based Solutions (NbS).

- Identification of productive models compatible with already implemented NbS measures.
- Design and/or refinement of technical guidelines to incorporate climate adaptation in climate-sensitive productive sectors.
- Promotion of pilot green entrepreneurship initiatives in coordination with incubators, local employment programs, or international cooperation.
- Systematization of best practices.

This activity establishes the necessary technical and methodological framework to guide climate-sensitive productive programs toward adaptive models, prioritizing those linked to NbS measures. By developing specific guidelines and tools, it enables productive sectors to incorporate adaptation and resilience criteria in a clear, operational, and context-sensitive manner. In summary, it directly contributes to Output 4.1 (technical guidelines developed) and lays the normative foundation for adaptive action in livelihoods.

Activity 4.2: Design and ~~deliver implementation of~~ training processes for technicians, professionals, and local stakeholders in climate-resilient productive activities and/or the promotion of adaptation-oriented entrepreneurship.

- Design and implementation of training and capacity-building programs in climate-sensitive value chains, adaptation-focused entrepreneurship, and/or access to financing mechanisms.
- Technical assistance and mentorship to support the development of adaptive business ideas.
- Support for linkages and synergies with existing programs and funding sources.
- Systematization of best practices.

This activity strengthens the capacities of local stakeholders, technicians, and entrepreneurs to develop livelihoods that respond to climate challenges, including opportunities for accessing financing or aligning with existing support programs. The combination of training, mentorship, and technical assistance enables the transition from knowledge to adaptive entrepreneurial action. In summary, it contributes directly to Output 4.2 (capacities strengthened) and promotes climate-resilient economic autonomy within communities.

Activity 4.3: Establishment of multisectoral, multi-actor, and multilevel coordination spaces to provide technical assistance for the promotion of local entrepreneurship with a climate adaptation approach, including support for the design of resilient business models.

- Design, strengthening, and promotion of coordination platforms through events such as fairs, business roundtables, and meetings between investors and green entrepreneurs.
- Collaborative technical assistance for the design of adaptive business models.

Through the creation of coordination spaces among sectors, levels of government, and local stakeholders, this activity fosters an enabling environment to support adaptive entrepreneurship. Fairs, business matchmaking events, and encounters with investors offer real opportunities for the development and scaling-up of climate-resilient productive models, facilitating the flow of technical assistance and resources. In summary, it contributes directly to Output 4.3 (coordination platforms established) and strengthens key partnerships for the success of resilient livelihoods.

Activity 4.4: ~~Development~~ Design and implement of six (6) demonstrative pilot business models — two (2) in each geographic region — that incorporate an ecosystem-based adaptation approach. These models will be linked either to the project's pilot interventions (Component 3) or to pre-existing local initiatives and enterprises.

- Technical assistance for the design of six prioritized climate-resilient business models.
- Support through provision of inputs, training, incubation services, and/or linkages with programs or co-financing mechanisms.
- Systematization of best practices.

This activity translates conceptual frameworks into practical and replicable examples. By developing six pilot business models (two per region), it demonstrates in the field how it is possible to generate

sustainable income based on the economic valorization of Nature-based Solutions (NbS) or existing local initiatives. These pilots strengthen resilience while generating social, economic, and environmental co-benefits. In summary, it contributes directly to Output 4.4 (pilot business models designed) and highlights the potential of NbS as a foundation for sustainable economic development.

Activity 4.5: Develop and operationalize Design and implementation of local monitoring mechanisms for strengthened livelihoods, linked to progress reporting under the Monitoring and Evaluation System for Adaptation Measures administered by MINAM.

- Design and implementation of participatory monitoring and tracking tools.
- Development of reports aligned with the National Monitoring and Evaluation System for climate change adaptation measures managed by MINAM.

The participatory monitoring of strengthened livelihoods enables transparent and continuous evaluation of outcomes, while empowering communities and reinforcing accountability. Its alignment with the National Monitoring and Evaluation System led by MINAM ensures that progress contributes to collective learning and informs the design of effective public policies. In summary, this activity contributes directly to Output 4.5 (participatory monitoring implemented) and strengthens both the technical and social sustainability of adaptive livelihood models.

By diversifying income sources and promoting business models aligned with climate adaptation, **Component 4** reduces socioeconomic vulnerability and strengthens community resilience. It enables populations to withstand and recover from climate impacts while supporting ecosystem conservation and the sustainable use of natural resources.

Component 5: Knowledge Management and Monitoring & Evaluation (M&E) in Adaptation

This component ensures that adaptation processes are evidence-based, systematically monitored, and continuously improved through participatory knowledge generation. It establishes and utilizes enabling conditions to strengthen knowledge management and monitoring tools that support informed decision-making and assess the effectiveness of climate change adaptation actions.

Outcome 5: Local decision-making is informed by evidence, knowledge management, and M&E processes that guide climate policies and actions, thereby enhancing the capacity of local governments and relevant stakeholders to manage climate change adaptation.

Output 5: Tools, mechanisms and institutional arrangements for knowledge management and adaptation monitoring developed have been strengthened and are effectively linked ensuring alignment with the to the National Monitoring and Evaluation System for Adaptation Measures administered by MINAM.

In addition, knowledge management processes created have been implemented to promote the documentation, analysis, and dissemination of lessons learned, best practices, and relevant technical evidence to support local management in cities for the purpose of climate change adaptation. The following outputs are proposed:

- **Output 5.1:** The national adaptation M&E system is strengthened with disaggregated LLocal-level disaggregated data sets and information products incorporated into the national adaptation M&E system to support that is useful for decision-making.
- **Output 5.2:** Participatory monitoring tools are designed and implemented to evaluate adaptation measures at the local level.
- **Output 5.3:** Training materials and programs are developed to strengthen the Ccapacities of local governments and key stakeholders are strengthened to make informed decisions on adaptation based on climate data and effectiveness assessments
- **Output 5.4:** Formal collaboration agreements and joint work plans Partnerships are established between technical-scientific entities, academia, and public institutions to generate strategic inputs and integrate science into local planning.
- **Output 5.5:** Knowledge products are is-systematized, disseminated, and leveraged to facilitate horizontal learning, replicability, and scaling-up of adaptation measures.

To achieve the above, the following activities are proposed:

Activity 5.1: Strengthening the National Monitoring and Evaluation System for Climate Change Adaptation with disaggregated information (climate hazard risk assessments, implementation of pilot

measures, implementation of planning actions, management and protection of livelihoods, including cross-cutting approaches) at the local level, to support decision-making in adaptation management.

This activity seeks to connect local actions with national policy by strengthening the National M&E System through the incorporation of territorialized and decision-relevant information. By integrating data on climate risks, implemented measures, planning processes, and livelihood strategies—including gender, intercultural, and intergenerational perspectives—the quality and utility of the system are improved for monitoring adaptation progress and informing necessary adjustments. In summary, this activity contributes directly to **Output 5.1** (Strengthened national M&E system), enhancing it with useful and contextualized local evidence.

Activity 5.2: Design and implementation of local participatory local monitoring tools for the pilot adaptation measures implemented.

- Design and implementation of participatory monitoring tools for adaptation measures.
- Development of regional and local-level reporting formats aligned with the National Monitoring and Evaluation System for Adaptation Measures administered by MINAM.

This activity enables communities, local governments, and other stakeholders to actively engage in the monitoring of adaptation measures through simple, accessible, and context-sensitive tools. When aligned with the national system, these tools enhance transparency, local ownership, and adaptive learning within the territory. In summary, this activity directly contributes to **Output 5.2** (Participatory monitoring tools implemented), and strengthens monitoring and evaluation capacities at the local level.

Activity 5.3: Develop and deliver capacity building modules for Training of local governments and key stakeholders through capacity-building modules on climate change scenarios, risks associated with climate impacts, integration of information into local management for adaptation purposes, evaluation of the effectiveness of adaptation measures, among other related topics.

- Development of training modules on climate change scenarios, climate risks, and related subjects.
- Training of local officials and technical personnel through these modules to support evidence-based decision-making in adaptation.

This activity strengthens the capacities of municipal officials and technical staff to understand and apply climate information, risk analyses, and evaluations of adaptation effectiveness. Through structured training modules, the activity fosters informed and strategic decision-making—essential for integrating adaptation into local development management. In summary, it contributes directly to **Output 5.3** (strengthened capacities for evidence-based decision-making), enhancing the technical autonomy of local governments.

Activity 5.4: Establishment of agreements and partnerships between academic institutions, public entities, and technical-scientific organizations (e.g., SENAMHI, IGP, among others) aimed at developing training programs and generating strategic inputs for local planning (e.g., climate scenarios), incorporating participatory tools with a territorial focus.

- Joint development of climate training programs.
- Generation of science-based inputs for adaptation and their integration into decision-making processes.

This activity establishes strategic partnerships with scientific institutions (such as SENAMHI, IGP, and universities) to produce key inputs, including climate scenarios, training programs, and vulnerability analyses. These alliances foster the incorporation of scientific evidence and participatory tools into local planning processes, ensuring a territorially grounded, up-to-date, and technically validated approach. In summary, it contributes directly to **Output 5.4** (established partnerships for scientific inputs), linking technical knowledge with local public action.

Activity 5.5: Implement knowledge management processes to document, analyze and disseminate lessons learned, good practices and technical evidences from project implementation to inform climate adaptation planning, for climate change adaptation in the local governance of cities through:

- Organization of forums, fairs, exchange visits, internships, and participation in international events.
- Systematization of experiences and lessons learned from the pilot interventions implemented under the project, to facilitate their scaling up and replication.
- Publication of case studies, lessons learned, guidelines, fact sheets, policy briefs, and other materials to promote horizontal learning and replicability.

This activity enables the documentation, analysis, publication, and dissemination of the project's

experiences, insights, innovations, and lessons—particularly those emerging from pilot interventions—to foster their replication and scaling. It also promotes knowledge-sharing platforms (such as forums, fairs, and internships) that strengthen horizontal learning and the development of a community of practice on adaptation. In summary, it contributes directly to **Output 5.5** (systematized and disseminated knowledge), promoting continuous improvement, adaptive innovation, and territorial replicability.

The activities under **Component 5** institutionalize learning, knowledge exchange, and accountability throughout the project cycle. They strengthen feedback mechanisms between local actions and national policies, facilitate peer-to-peer learning among cities, and ensure that decision-making is grounded in robust and context-specific evidence. Altogether, these efforts enhance the replicability, transparency, and long-term impact of adaptation measures.

The integration of these components constitutes a comprehensive and systemic approach to strengthening climate resilience in urban environments. Rather than promoting isolated interventions, the project adopts a programmatic model that reinforces governance, financial preparedness, territorial adaptation, economic resilience, and learning mechanisms. By focusing on cities across Peru's three main geographic regions—coast, highlands, and Amazon—the program builds a diversified portfolio of adaptation strategies tailored to different risk profiles. This territorial integration creates synergies among actions and enhances the scalability and sustainability of adaptation efforts at the national level.

Theory of Change

IF cities in Peru effectively integrate climate change adaptation into their governance, planning, investment, and territorial action processes; strengthen their institutional, technical, and economic capacities to direct resources toward resilience-building; promote sustainable and inclusive productive alternatives; and prioritize the implementation of Nature-based Solutions (NbS) as the foundation for integrated territorial adaptation,

THEN Peruvian cities will be able to transition toward a climate-resilient, multi-level, and inclusive development model that protects and restores strategic ecosystems sustaining key ecosystem services, diversifies and strengthens the livelihoods of vulnerable populations, and ensures decision-making processes that are evidence-based, participatory, and sustainable in the face of the adverse effects of climate change.

The proposed interventions will drive the intended long-term change by strengthening governance, financial systems, technical capacities, and community resilience to integrate climate change adaptation into urban management, thereby aligning local actions with national commitments such as the NAP and NDCs. Through the combined implementation of Components 1–5, the project will enhance institutional coordination, mobilize resources, implement cost-effective Nature-based Solutions (NbS) and hybrid measures, diversify livelihoods, and improve knowledge management and monitoring systems. These actions are based on key assumptions, including sustained political will, stakeholder engagement, and the availability of reliable climate data and financing. Required inputs include technical expertise, institutional frameworks, participatory processes, funding for pilot interventions, and tools for climate risk analysis. Possible constraints, such as political changes, data gaps, funding delays, and climate-related disruptions, are acknowledged and addressed through flexible planning and multi-stakeholder engagement. Together, these components form a coherent pathway to achieve the IF–THEN paradigm shift toward climate-resilient, inclusive, and sustainable urban development in Peru.

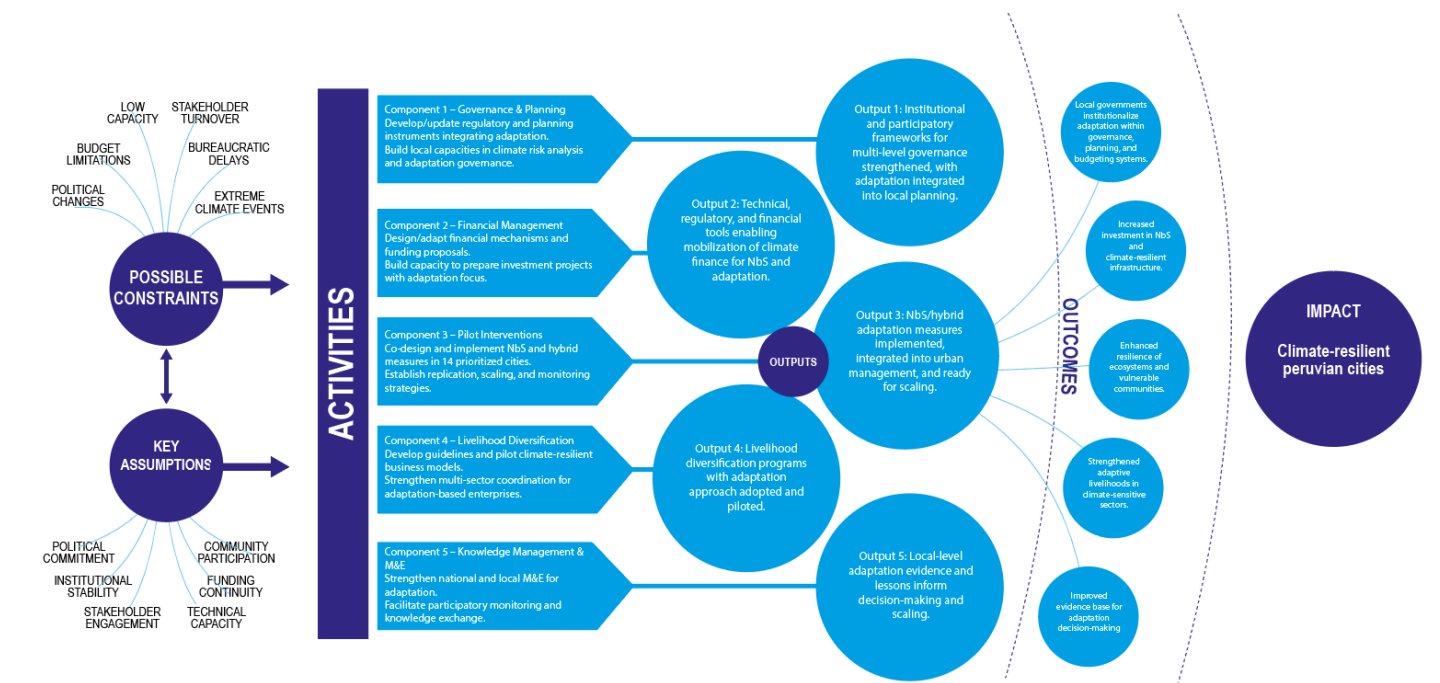


Figure 07: Theory of Change diagram
Own elaboration

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 proposed project will deliver significant economic, social, and environmental benefits, leveraging Nature-based Solutions (NbS) and hybrid measures to strengthen climate resilience in Peru's urban, peri-urban, and surrounding ecosystems. The benefits are based on:

- Regional and national case studies on NbS cost-effectiveness, disaster risk reduction, and livelihood diversification (WWF, 2021; Forest Trends, 2020; MINAM, 2022).
- Proxies based on literature and empirical studies from Latin America on the economic, social, and environmental impacts of NbS (UNEP, 2022; IDB, 2022).
- National datasets on ecosystem service values, property market impacts, and carbon sequestration potential (SERFOR, 2020; GGGI, 2021).. project is designed to generate strong and inclusive benefits in climate change adaptation, encompassing economic, social, and environmental dimensions. It adopts a robust territorial approach that responds to the specific needs of vulnerable communities across Peru's diverse geographic regions—coast, highlands, and Amazonian rainforest.

B1. Economic benefits

By integrating climate change adaptation into governance, planning, and investment processes, the project will generate cost savings and economic opportunities:

- Cost-effective adaptation: NbS are, on average, 2–5 times more cost-effective than traditional grey infrastructure for climate risk management in Latin America (WWF, 2021). For instance, urban green corridors reduce stormwater runoff management costs by up to 30% (UNEP, 2022).
- Increased property and land values: Urban greening interventions can increase adjacent property values by 5–20%, generating additional municipal tax revenues (IDB, 2022).
- Strengthening sustainable green businesses: Through Component 4, the project will enhance

economic resilience by supporting climate-resilient enterprises, promoting ecosystem-based business models, and diversifying livelihoods in climate-sensitive sectors. This is expected to generate new income streams for vulnerable populations and improve adaptive capacity, consistent with evidence from NbS-linked productive diversification in Peru's Andean and Amazonian cities (MINAM, 2022; GGGI, 2021).

- Reduced disaster losses: Ecosystem restoration and hybrid measures such as Multi-Hazard Early Warning Systems can reduce economic losses from floods and landslides by 15–35% (Forest Trends, 2020).

~~The program enhances economic resilience by promoting climate-resilient livelihoods, particularly in territories where poverty and climate vulnerability intersect. Through Component 4, targeted technical training, advisory support, and the development of six pilot climate-resilient business models will be provided to foster income diversification.~~

~~By strengthening financial management capacities at the subnational level (Component 2) and improving access to climate finance, the program also contributes to greater efficiency in public investment and the mobilization of resources, especially in districts with limited fiscal capacity. The integration of adaptation criteria into budgetary planning and tagging systems will ensure that public expenditure directly supports adaptive economic development.~~

B2. Social benefits

The project will strengthen community resilience, equity, and wellbeing through participatory governance, capacity-building, and improved local services:

- Inclusive governance and empowerment: By integrating gender, intercultural, and intergenerational approaches, the project ensures that adaptation processes benefit all population groups. Participatory governance has been shown to increase adaptation uptake and effectiveness by 20–40% (IUCN, 2020; UN Women, 2021).
- Health and wellbeing: Urban vegetation and green infrastructure reduce heat stress, improve air quality, and provide recreational spaces, contributing to reduced morbidity and mortality during heat events (WHO, 2023).
- Capacity retention in territories: Training programs for municipal authorities, the private sector, and community leaders ensure that technical and governance capacities remain within local territories beyond the project's duration, aligning with successful experiences in Peru's climate adaptation programs (MINAM, 2022).

~~The project generates significant social co-benefits by strengthening capacities and fostering inclusive participation. Component 1 enhances adaptive governance by institutionalizing participatory planning processes and empowering local actors to influence decision-making affecting their territories. This includes participatory consultations, localized risk assessments, and monitoring mechanisms (Component 5).~~

~~The project directly contributes to improving the adaptive capacity of the most socially vulnerable groups. Through the cross-cutting integration of gender and intercultural approaches, training modules, support for entrepreneurship, and public services will be designed to reduce structural barriers faced by women and marginalized groups.~~

B3. Environmental benefits

Through the restoration and conservation of strategic ecosystems, the project will deliver multiple environmental co-benefits:

- Ecosystem services enhancement: Riparian restoration, wetland conservation, and urban green infrastructure increase water retention, regulate microclimates, and reduce soil erosion (WWF, 2021). In Peru's diverse regions, NbS have reduced flood peaks by up to 20% and increased dry-season water availability (Forest Trends, 2020).
- Biodiversity conservation: Restoration of native vegetation increases native species richness by up to 40% over a decade (Nature Conservancy, 2021), while maintaining habitat connectivity essential for ecosystem health.
- Carbon sequestration: Urban and peri-urban tree planting can sequester between 5–20 kg of CO₂ per tree annually, while reducing ambient temperatures by up to 2°C (SERFOR, 2020).
- Water quality improvement: Vegetative buffers and wetland restoration filter pollutants and sediments, improving downstream water quality and reducing treatment costs (IDB, 2022).

~~The implementation of Nature-based Solutions (NbS) and hybrid measures (Component 3) will directly~~

~~contribute to the restoration, conservation, and sustainable management of key ecosystems essential for climate resilience. The pilot interventions in urban and peri-urban areas will reduce vulnerability to climate hazards such as floods, heatwaves, and droughts, while simultaneously enhancing ecosystem services such as water regulation, carbon sequestration, and biodiversity conservation. These measures will also strengthen the ecological integrity of strategic ecosystems that provide essential livelihoods and protection for local populations.~~

Initial Gender Analysis in compliance with the Gender Policy requirements

Peru's cities face differentiated climate change impacts based on gender, intersecting with age, ethnicity, disability, and socio-economic status. Women—particularly those in informal urban settlements—are disproportionately affected due to structural inequalities in access to resources, decision-making spaces, secure employment, and climate-resilient infrastructure (MINAM & UN Women, 2021). Climate hazards such as flooding, heatwaves, and droughts exacerbate existing gender gaps in livelihoods, care responsibilities, and personal security.

Women in urban and peri-urban vulnerable areas often carry the primary responsibility for water and energy provision at the household level, making them key actors in managing adaptation measures related to water security, urban greening, and heat mitigation (UN Women, 2022). Women's participation in formal decision-making remains low: in Peru, only 30% of municipal council members are women (JNE, 2023), and they are underrepresented in technical positions in climate governance. Men, particularly in informal labor sectors, may face high exposure to heat stress and occupational hazards during extreme climate events (MINAM & UN Women, 2021). Youth and elderly populations, including both women and men, have distinct needs—youth as innovation drivers and elderly as vulnerable groups needing targeted adaptation support (UN Women, 2022). Women bring valuable local and traditional ecological knowledge regarding biodiversity, food security, and community-based natural resource management, often gained through informal networks (MINAM & UN Women, 2021).

The project's components will integrate gender-responsive actions as follows:

- Component 1: Establish gender quotas and safe participation spaces in governance and planning processes; ensure training materials use inclusive language and address gender-specific climate risks (MINAM & UN Women, 2021).
- Component 2: Support women-led enterprises in accessing adaptation finance and promote financial literacy programs tailored to women's needs (UN Women, 2022).
- Component 3: Engage women and men equally in the design, implementation, and maintenance of NbS pilots; apply participatory methods that value women's local knowledge (Adaptation Fund, 2017).
- Component 4: Promote climate-resilient livelihoods with a focus on women's economic empowerment, e.g., green businesses, sustainable agriculture, and ecotourism (UN Women, 2022).
- Component 5: Disaggregate monitoring data by gender and other social variables; include gender indicators in the adaptation M&E framework (Adaptation Fund, 2017).

Some Preliminary Gender Indicators:

- % of women and men participating in decision-making and capacity-building activities.
- Number of women-led enterprises supported in climate adaptation.
- % of project outputs that include gender-responsive design elements.

Benefits will be equitably distributed through a territorial approach that ensures balanced access to project resources, capacity-building, and decision-making spaces for all stakeholders, with a strong emphasis on gender equality and inclusion of vulnerable groups. Gender considerations are integrated across all components by ensuring women's and men's specific needs, roles, and knowledge systems are addressed in the design, implementation, and monitoring of activities. This includes targeted capacity-building for women in leadership and technical roles, promoting their participation in governance mechanisms, and supporting climate-resilient livelihoods that reduce gender gaps in income and resource access. Vulnerable groups such as youth, elderly, and indigenous peoples will receive tailored support to address their distinct adaptation needs, ensuring that project benefits are

both inclusive and sustainable.

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

The project is designed to maximize its impact by combining cost-effective climate change adaptation strategies with multi-benefit interventions that address both the direct and structural drivers of climate vulnerability. It adopts a territorial, multi-level, and multi-sectoral approach, prioritizing interventions in cities where climate hazards, ecosystem degradation, and socioeconomic vulnerability converge. This ensures that resources are directed toward territories with the greatest adaptation needs.

a) Representation of the country's territorial diversity

The project focuses on fourteen (14) prioritized cities and their surrounding areas, distributed across the three main geographic regions of Peru—coast, highlands, and Amazon rainforest—each of which exhibits distinct climate risk profiles. These territories were selected based on composite vulnerability criteria, including exposure to climate hazards (such as floods, heatwaves, landslides, and sea level rise), ecological degradation, poverty levels, informal urban development, and institutional capacity gaps.

By enabling context-specific interventions tailored to the vulnerabilities and assets of each territory, the project promotes regionally grounded pilot initiatives designed for replication and scalability, generating valuable lessons that may be integrated into future public investment programs.

b) Implementation of Nature-based and Hybrid Solutions

One of the program's core pillars of cost-effectiveness lies in the implementation of Nature-based Solutions (NbS) and hybrid approaches (Component 3), which provide multifunctional and cost-competitive alternatives to conventional grey infrastructure. NbS reduce vulnerability to climate impacts while simultaneously delivering co-benefits related to biodiversity, air and water quality, and local livelihoods.

Evidence from international and national studies (MINAM 2021, IUCN 2020) indicates that NbS can yield returns of between 2 and 10 times their cost, when accounting for avoided losses and the benefits derived from ecosystem services. By integrating NbS into public planning and investment frameworks, the project fosters long-term sustainability and contributes to reducing the overall cost of adaptation.

c) Leveraging Existing Institutional Frameworks and Capacities

The project strategically builds upon existing institutional and regulatory frameworks. One key example of this synergy is the integration of climate adaptation criteria into existing public planning and investment tools (Component 2), capitalizing on the National System for Multiannual Programming and Investment Management (Invierte.pe) and budget tagging mechanisms—thereby promoting systemic change without duplicating structures.

Similarly, adaptation planning and governance activities (Component 1) will be embedded within local planning processes (e.g., Concerted Development Plans—PDCs and Local Climate Change Plans—PLCCs), strengthening institutional ownership while reducing transaction costs.

d) Capacity Building and Knowledge Transfer

The project's cost-effectiveness is further reinforced through robust capacity strengthening, institutional learning, and knowledge management (Components 1, 4, and 5). The project emphasizes horizontal learning exchanges and participatory monitoring mechanisms that empower local governments to lead their own adaptation processes. This reduces long-term dependence on external support and fosters decentralized resilience pathways.

e) Adaptive Governance and Management

The project's structure and the integration of its five components enable efficient implementation

while maintaining flexibility to adapt to local dynamics. Pilot interventions are designed with clear criteria for scaling, and the project incorporates strong monitoring and adaptive management mechanisms.

f) ~~Avoided Costs and Cost-Benefit Ratio~~

~~Lastly, the project significantly reduces future economic burdens associated with losses and damages from climate change. In recent years, Peru has experienced increasing economic losses caused by floods, droughts, and heatwaves, particularly in urban areas (SENAMHI, 2023; MEF, 2022). Through the implementation of proactive measures in high-risk areas, the program contributes to avoiding substantial damages to infrastructure, livelihoods, and ecosystems—representing a high return on adaptation investments.~~

~~In summary, the project delivers inclusive and replicable adaptation outcomes through a cost-effective approach that maximizes synergies with existing institutional capacities and frameworks, avoids redundancies, and promotes long-term climate resilience with a strong territorial focus.~~

The proposed Nature-based Solutions (NbS) and hybrid measures under Component 3 are cost-effective compared to conventional grey infrastructure and a business-as-usual (BAU) approach. NbS are, on average, 2–5 times more cost-effective than traditional grey infrastructure for climate risk management in Latin America (WWF, 2021), delivering multifunctional benefits such as hazard reduction, biodiversity restoration, and improved urban microclimates. For example, urban green corridors can reduce stormwater runoff management costs by up to 30% (UNEP, 2022), while also lowering heat island effects and enhancing recreational and aesthetic values.

Compared to grey infrastructure, NbS require 20–50% less upfront investment (MINAM, 2022) and have lower long-term operation and maintenance costs, as community-led upkeep and natural regeneration reduce the need for specialized technical interventions. From a sustainability perspective, NbS generates economic opportunities through local employment and climate-resilient business models, and provides long-term returns — with \$1 invested yielding \$3–\$4 in avoided damages and co-benefits over 20 years (IUCN, 2021; World Bank, 2022).

In contrast, grey infrastructure alternatives often address only single hazards, require high maintenance, and provide few co-benefits, while BAU scenarios perpetuate vulnerability, leading to escalating recovery costs and loss of livelihoods. The selected NbS and hybrid interventions thus offer a resilient, adaptable, and economically sustainable pathway, aligning with the project's paradigm shift toward integrated territorial adaptation and long-term climate resilience.

From a sustainability perspective, the project's design integrates:

- Long-term maintenance and operation plans developed with local stakeholders to ensure durability and replication of measures.
- Capacity-building for municipalities, communities, and the private sector to institutionalize technical and governance skills for adaptation.
- Economic sustainability by linking NbS with climate-resilient business models, thus creating revenue streams and incentives for upkeep.
- Environmental sustainability through the restoration of ecosystems that maintain their functionality without intensive external inputs.

This integrated approach ensures that the selected measures not only outperform BAU in terms of cost-benefit ratio but also strengthen adaptive capacity and self-reliance at local and regional scales over the long term.

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 project is aligned with Peru's national and subnational frameworks on climate change, development, and poverty reduction, contributing to the implementation of climate-resilient urban development pathways as prioritized in key national policies and strategies.

D1. Alignment with the National Adaptation Plan to Climate Change (PNACC)

The project directly contributes to the implementation of Peru's National Adaptation Plan to Climate Change (PNACC), approved in 2021 through Ministerial Resolution No. 096-2021-MINAM.

The PNACC provides a strategic framework for reducing the country's vulnerability to climate change and is structured around six priority sectors—agriculture, water resources, forestry, health, fisheries, and transport—while also addressing cross-cutting themes such as governance, gender, interculturality, and territorial management.

Specifically, the project contributes to the achievement of the three strategic objectives of the PNACC:

- Integrating climate change adaptation into development management at all levels of government;
- Reducing climate-related risks and/or damages in prioritized sectors and territories;
- Strengthening the adaptive capacities of the population, ecosystems, and productive systems to cope with the impacts of climate change.

Through Components 1 and 2, the program promotes the mainstreaming of climate adaptation into local governance, planning instruments, and financial systems, with a particular emphasis on ecosystem-based and territorial approaches. It also strengthens vertical and horizontal coordination across sectors and levels of government, in alignment with the PNACC's emphasis on improved institutional coordination and capacity to address climate risks.

Moreover, the project reinforces the PNACC's recognition of urban and peri-urban areas—particularly fast-growing intermediate cities—as highly vulnerable territories requiring differentiated, territorially focused adaptation strategies. By implementing pilot Nature-based Solutions (NbS) across Peru's three geographical regions (coast, highlands, and Amazon), the program operationalizes the PNACC's commitment to building climate resilience through territorial integration and intersectoral synergies.

D2. Alignment with the Nationally Determined Contributions (NDCs)

The project is fully aligned with Peru's updated Nationally Determined Contributions (NDCs) under the Paris Agreement, particularly with the adaptation pillar, which sets strategic objectives for reducing the country's vulnerability to climate change and strengthening resilience in key sectors and territories. Peru's adaptation NDCs define five priority thematic areas: agriculture, forests, fisheries and aquaculture, health, and water resources. These thematic areas are complemented by cross-cutting approaches that include disaster risk management, climate-resilient public infrastructure, gender equity and interculturality, private sector investment, poverty reduction, and the inclusion of vulnerable populations (Ministry of Environment – MINAM, 2020; Adaptation Measures Catalogue, 2024).

The project contributes to the implementation of specific adaptation targets and measures defined in the NDCs, particularly through:

- **Mainstreaming climate change adaptation into local governance with a territorial approach**, as well as into planning and financial systems, in line with the NDCs' emphasis on strengthening territorial governance for climate action.
- **Implementing Nature-based Solutions as key instruments to address localized climate hazards**, restore degraded ecosystems, and increase the resilience of vulnerable populations. This contributes to multiple NDC adaptation measures in the sectors of forests, agriculture, and water.
- **Supporting climate-resilient urban development** by focusing on intermediate and rapidly growing cities located across Peru's coast, highlands, and rainforest regions. The project develops pilot interventions and planning tools to address threats such as floods, landslides, heatwaves, and droughts in urban contexts, in accordance with the NDCs' approach to urban climate resilience.

- **Promoting inclusive and gender-responsive adaptation** through capacity-building programs, participatory planning mechanisms, and targeted support for women, youth, Indigenous Peoples, and rural populations, in alignment with the NDCs' cross-cutting approaches on gender and interculturality.

Through its territorial focus and the implementation of scalable pilot NbS interventions, the project directly contributes to the delivery of multiple adaptation measures and outputs outlined in Peru's *Catalogue of Adaptation Measures* (2024), including but not limited to:

- **1.2:** Strengthening of subnational climate governance.
- **3.1:** Implementation of Nature-based Solutions at the local level
- **5.1:** Integration of climate change adaptation into territorial development planning.
- **5.2:** Strengthening the capacities of local actors to implement and monitor adaptation actions.
- **6.1:** Mobilization of financial resources for adaptation at the subnational level.

By framing project activities within a nationally recognized adaptation framework and applying them at the subnational scale, the project ensures full alignment with the vision and commitments set forth in Peru's Nationally Determined Contributions (NDCs). Moreover, it contributes to the fulfillment of Peru's international reporting obligations under the Enhanced Transparency Framework of the Paris Agreement.

- **Specific Link with NDC Adaptation Measures by Theme**

The project directly addresses 14 prioritized adaptation measures outlined in Peru's NDCs, with particular emphasis on strengthening local climate risk planning and management (**Measure CI.1**). This is achieved through the participatory development of Local Climate Change Plans, climate risk assessments, legal frameworks, and the integration of adaptation into territorial and public investment planning instruments under Component 1. It also promotes capacity building in adaptation (**Measure CI.2**) through diploma programs, training workshops, technical assistance, and structured capacity-building modules targeting government officials, professionals, and local leaders—developed under Components 1, 2, and 5. Furthermore, the project contributes to the strengthening of systems for monitoring and evaluating adaptation (**Measure CI.3**) through the design and implementation of participatory monitoring tools, aligned with the National Adaptation Monitoring and Evaluation System managed by MINAM, as part of Component 5.

In addition, **Nature-based Solutions (NbS)** are implemented in vulnerable urban areas (**Measure CI.4**) through participatory pilot interventions in fourteen cities. These interventions combine environmental, social, and economic benefits, and are delivered through Components 3 and 4. The project also promotes the **generation and use of scientific and technical knowledge (Measure GT.1)** by establishing partnerships with academic and technical-scientific institutions such as SENAMHI and IGP, enabling the development of inputs for local planning and the generation of evidence to inform decision-making.

Cross-cutting approaches—including intercultural, gender, and intergenerational perspectives—are systematically integrated into adaptation processes (**Measure GT.2**), ensuring the active participation of local communities, including women, youth, and Indigenous peoples in activities such as risk assessments, planning, and community-based training.

The project also contributes to the **integration of adaptation into local development instruments (Measure GT.3)** by linking identified adaptation measures with development plans, participatory budgeting processes, and regional climate change strategies.

In the economic realm, the project promotes the **diversification and protection of livelihoods in vulnerable communities (Measure MV.1)** through the development of green enterprises, adaptive business models linked to NbS, and the strengthening of climate-resilient value chains—primarily under Component 4. In parallel, it builds the **capacities of local actors** to foster **sustainable and climate-resilient economic activities (Measure MV.2)** through technical training, mentorship, technical assistance, and connections with existing financing programs.

From a financial perspective, the project makes a concrete contribution to the **creation and strengthening of local financial mechanisms for climate adaptation (Measure MF.1)** through the development of regulatory instruments (e.g., ordinances, directives), concept notes for accessing national and international funds, and the promotion of public–private partnerships, as established under Component 2. The project also generates impact in the **conservation and restoration of strategic ecosystems (Measures CE.1 and CE.2)** through nature-based interventions that restore degraded ecosystem services and protect areas vulnerable to climate change.

Finally, the project contributes to **integrated water resource management (Measure AR.1)**, particularly in urban and peri-urban contexts, through hybrid and NbS interventions that enhance water infiltration, retention, and availability, all of which are aligned with local planning processes.

Below is a summary of the actions that contribute to the implementation of Peru’s **Nationally Determined Contributions (NDCs) on Adaptation**, through prioritized measures and enabling conditions to which the project will directly contribute.

Adaptation measures	C1	C2	C3	C4	C5
CI: GOVERNANCE					
CI.1: Strengthening climate risk planning and management at the local level.	x		x		x
CI.2: Capacity development in subnational governments.	x	x			x
CI.3: Implementation of monitoring and evaluation (M&E) systems for cities.					x
CI.4: Implementation of Nature-based Solutions (NbS) in vulnerable urban areas.			x	x	
GT: KNOWLEDGE MANAGEMENT WITH CROSS CUTTING APPROACHES					
GT.1: Generation and dissemination of scientific and technical knowledge					x
GT.2: Participation and intercultural approach in adaptation processes.	x		x		x
GT.3: Integration of climate adaptation into local planning instruments	x				
MV: LIVELIHOOD RESILIENCE					
MV.1: Promotion of adaptive livelihoods.				x	
MV.2: Strengthening of capacities for climate-resilient economic activities				x	
MF: FINANCING					
MF.1: Financial mechanisms for subnational adaptation		x			

Adaptation measures	C1	C2	C3	C4	C5
MF.2: Fiscal or economic incentive instruments to promote investment in adaptation.		x			
CE – ECOSYSTEMS					
CE.1: Restoration of degraded ecosystems.			x		
CE.2: Implementation of Ecosystem-based Adaptation (EbA) measures.			x		
AR – WATER					
AR.1: Implementation of green infrastructure and technologies for water storage..			x		

D3. Linkages with Subnational Climate Strategies and Instruments

The project supports the formulation and/or updating of Local Climate Change Plans (PLCCs) and Regional Climate Change Strategies (ERCCs) in selected territories, thereby reinforcing the decentralization of climate action and operationalizing the mandates of the Framework Law on Climate Change (Law No. 30754). These subnational strategies serve as instruments to localize the objectives of the Nationally Determined Contributions (NDCs) and the National Adaptation Plan (NAP). The program provides technical assistance, participatory tools, and financial mechanisms to ensure their effective implementation in prioritized cities.

D4 Component 3 aligns with relevant national regulations

[Component 3 on Nature-based Solutions \(NbS\) is fully aligned with Peru’s national regulatory framework governing ecosystem management, land use, and tenure. NbS interventions are consistent with the Forestry and Wildlife Law \(Law No. 29763\) and its regulations, which promote the conservation, restoration, and sustainable management of forest ecosystems and associated biodiversity. The component also supports the objectives of the National Land Use Policy \(approved by Supreme Decree No. 012-2021-MIDAGRI\), which fosters territorial planning based on ecological–economic zoning and sustainable land management principles. In addition, NbS measures respect and reinforce the Land Tenure Laws by promoting actions within legally recognized land rights frameworks, ensuring that interventions are carried out in coordination with relevant authorities and in full respect of community and indigenous land tenure. This alignment guarantees that NbS pilots contribute to national commitments on climate adaptation while safeguarding ecological integrity, land rights, and long-term sustainability.](#)

D54. Contribution to Development and Poverty Reduction Strategies

The project is aligned with the National Strategic Development Plan "Peru by 2050," which highlights the need for inclusive and sustainable territorial development, climate-resilient infrastructure, and strengthened environmental governance. It also contributes to the objectives of the National Land Use Planning Policy (PNOT) and the National Policy for Disaster Risk Management, by incorporating climate change considerations into territorial, sectoral, and investment decision-making processes.

By targeting urban areas with high levels of vulnerability, informal urbanization, and exposure to climate risks, the program contributes to poverty reduction and greater social equity, in line with the National Strategy for Social Development and Inclusion (ENDIS) and the Strategy for Multidimensional Poverty Reduction (MEF, 2022).

D65. Alignment with International Commitments

The project also supports the commitments undertaken by Peru under the United Nations Framework Convention on Climate Change (UNFCCC) and the Sendai Framework for Disaster

Risk Reduction.

In summary, the project serves as an implementation mechanism to advance Peru's climate and development objectives through a territorially integrated adaptation model. This model strengthens the adaptive capacity of cities and vulnerable populations while ensuring coherence with national and international frameworks.

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.

The project has been designed to comply with current national technical and regulatory standards in Peru and is fully aligned with the Environmental and Social Policy (ESP) of the Adaptation Fund. Each component incorporates technical, environmental, social, and institutional criteria that ensure the sustainability of the interventions, as well as the respect for human rights, equity, social inclusion, and ecosystem protection.

Compliance with Relevant National Technical Standards

a) Integration of the Climate Approach into Existing Instruments

The project represents an opportunity to mainstream a climate change approach within the National Environmental Impact Assessment System (SEIA), as well as to apply the PNACC guidelines for risk analysis related to the impacts of climate change. The implementation of the proposed interventions, particularly under Component 3 (pilot implementation of Nature-based and hybrid Solutions) and Component 4 (climate-resilient livelihoods), will be aligned with existing management instruments, incorporating methodologies approved by the Ministry of Environment (MINAM), [as required](#).

b) Building and Infrastructure Codes

~~All construction-related activities - whether involving minor work, green infrastructure, nature-based interventions or hybrid solutions - will comply with the provisions of the National Building Regulation (RNE - DS011-2006VIVIENDA) and its subsequent amendments. For NbS-related infrastructure - such as bioengineering works, urban green corridors, and water retention systems- designs will follow RNE standards and relevant technical guidelines issued by the Ministry of Housing, Construction and Sanitation (MVCS), ensuring climate resilience, safety and durability. Activities involving minor works or green/hybrid infrastructure will comply with current technical building codes, including the provisions of the National Building Regulation (Reglamento Nacional de Edificaciones — RNE) and specific sectoral norms (e.g., those issued by the housing and sanitation, health, or agriculture sectors). Priority will be given to the use of local materials and sustainable techniques compatible with climate adaptation principles.~~

c) Standards on Local Development Planning

The actions under Component 1 and Component 3 are aligned with the provisions of the *Framework Law on Climate Change* ([L N° 30754](#)) and its Regulation, which establish the integration of adaptation measures into planning, investment, and management instruments. The Ministry of Environment (MINAM) serves as the national authority on climate change. The project seeks to ensure coherence between adaptation measures and existing planning instruments. ~~The Ministry of Environment (MINAM) as the national authority on climate change, provides the overarching guidance to ensure that these measures are consistent with national climate policy. The project will also follow the General Guidelines for Territorial Development Plans and Local Development Plans, established by the National Center for Strategic Planning (CEPLAN) under the National System for Strategic Planning (SINAPLAN), ensuring coherence between adaptation actions and existing subnational, sectoral and territorial planning instruments.~~

d) Public Financial Management and Public Investment Projects

Under Component 2, the tools and capacities developed to mainstream climate change adaptation into public investment must align with the standards of the *National System for Multiannual Programming and Investment Management* (*Invierte.pe*) and with the eligibility criteria for climate-

focused public budgets. This includes compliance with the Ministry of Economy and Finance (MEF) eligibility criteria for climate-focused public budgets, adherence to the climate budget tapping framework, and the preparation of project profiles and technical files following approved methodologies. Financial management will conform to the National Public Sector Budget System, ensuring transparency, accountability and efficiency in resource allocation, according to guidelines issued by the Ministry of Economy and Finance (MEF) and the climate budget tagging framework.

e) Additional Relevant Technical Standards

Where activities intersect with specific sectoral regulations, the project will ensure compliance with:

- Forestry and Wildlife Law (Law No. 29763) and its regulations, for interventions in forested or riparian areas.
- National Land Use Policy (Supreme Decree No. 012-2021-MIDAGRI), ensuring alignment with ecological-economic zoning (ZEE) and sustainable land management principles.
- Water Resources Law (Law No. 29338), incorporating requirements from the National Water Authority (ANA) for interventions affecting water bodies.

A compliance checklist will be prepared during the inception phase to map each project activity against applicable technical standards. This will be updated periodically and verified during supervision missions, ensuring that the project maintains continuous alignment with national requirements and with the Environmental and Social Policy of the Fund.

Compliance with the Environmental and Social Policy (ESP) of the Adaptation Fund

The project is fully aligned with the Adaptation Fund's Environmental and Social Policy (ESP) and incorporates the following key environmental and social principles:

a) Marginalized and Vulnerable Groups

The project adopts a differentiated approach to climate impacts by recognizing the specific vulnerabilities of population groups affected by both climate-related and structural conditions. Special consideration is given to ensuring that these groups are meaningfully included in project design and implementation.

b) Gender Equality and Women's Empowerment

Activities under Components 1, 3, 4, and 5 integrate gender, intercultural, and intergenerational approaches, ensuring the full and effective participation of women, Indigenous peoples, youth, and other individuals in situations of vulnerability in all phases of the project.

c) Indigenous Peoples

Through participatory and culturally appropriate processes, the project ensures the respect and integration of ancestral knowledge and the right to free, prior, and informed consent, in accordance with national and international standards where applicable.

d) Protection of Natural Habitats and Conservation of Biological Diversity

Nature-based Solutions (NbS) are designed to restore, conserve, and strengthen strategic ecosystems, contributing to the objective of no net loss of biodiversity and promoting long-term ecological integrity.

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

There is no duplication of this project with other initiatives financed by multilateral, bilateral, or national sources. While other projects related to climate change adaptation have been implemented in urban or subnational contexts in Peru, this proposal is complementary and strategically aligned with ongoing efforts under the National Adaptation Plan (NAP) and the Nationally Determined Contributions (NDCs) for adaptation. It addresses critical gaps by specifically targeting intermediate and vulnerable cities exposed to climate-related hazards across the country's three main geographic regions—coast, highlands, and Amazon—employing Nature-based Solutions (NbS) with a territorial approach as an innovative axis of intervention.

The project complements initiatives such as the GEF-6 Sustainable Cities Program, as well as readiness activities financed by the Green Climate Fund (GCF), the International Climate Initiative (IKI), and other funding sources. However, none of these initiatives simultaneously address territorial resilience, Nature-based Solutions (NbS), adaptive planning, and the diversification of livelihoods—while also achieving the thematic breadth (directly contributing to the implementation of adaptation-related NDCs), territorial focus (a key dimension of adaptation), and population reach (targeting exposed and vulnerable communities) that this proposal offers.

Likewise, the project design has been based on consultation processes with key stakeholders and a thorough review of existing programs, specifically to avoid overlaps and ensure synergies—particularly in alignment with the national priorities established in the National Adaptation Plan (NAP), the Nationally Determined Contributions (NDCs), and the National Climate Change Strategy (ENCC).

This project represents a strategic and innovative intervention within the ecosystem of climate change adaptation initiatives in Peru. Its distinctive character lies in the integrated combination of transformative components or pillars that have not previously been addressed jointly and systematically in past interventions in the country:

- **Strengthening of local governance for adaptation**, by mainstreaming climate adaptation into planning, investment, and citizen participation systems;
- **Implementation of 14 pilot Nature-based Solutions (NbS) interventions**, adapted to diverse urban contexts—coastal, highland, and Amazon regions—with potential for scaling and replication;
- **Promotion of resilient and inclusive livelihoods in vulnerable cities**, enhancing the economic and adaptive capacities of women, youth, and other historically excluded groups;
- **Strengthening of knowledge management, monitoring, and evaluation of adaptation, aligned with the National Adaptation M&E System**, generating evidence, information, and learning at national and subnational levels.
- This combination of actions proposes an innovative intervention model for the country, aligned with the territorial adaptation approach prioritized by the Government of Peru in the implementation of its Nationally Determined Contributions (NDCs). The project connects solutions in specific territories—mainly intermediate cities and their surrounding areas—that have historically lagged behind in climate action, addressing their risks and opportunities through an integrated lens.
- Unlike previous interventions, many of which were sectoral or disconnected from one another, this initiative acts as a catalyst for synergies among adaptation governance, the implementation and monitoring of Nature-based Solutions, local economic systems, and the generation of evidence through social learning mechanisms. All these elements are embedded within the iterative adaptation process, which has been recognized by the IPCC as a key approach to effective adaptive management—one that is based on risk assessment, progressive implementation, monitoring, feedback, and the continuous adjustment of measures (IPCC, 2022).

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

The project incorporates a strong and cross-cutting knowledge management and learning component, specifically addressed under **Component 5: Knowledge Management and Monitoring & Evaluation (M&E) in Adaptation**. This component aims to ensure that adaptation processes are not only implemented but also systematically documented, evaluated, and shared, enabling continuous improvement, peer learning, and replication of successful experiences at local, regional, and national levels.

Key mechanisms and knowledge management products:

a) Systematic documentation and analysis of pilot experiences

Through Output 5.5, the project will collect and systematize knowledge generated from the implementation of Nature-based Solutions (Component 3), resilient livelihood models

(Component 4), and territorial planning and management tools (Component 1). Case studies, technical briefs, policy notes, and compilations of good practices will be produced, focusing on climate resilience, sustainability, and social inclusion.

b) Peer exchange and learning platforms

Through the activities of Output 5.5, the project will organize forums, exchange fairs, internships, intermunicipal meetings, and community of practice spaces, where local stakeholders, government officials, and community leaders will share experiences, results, and innovations. These platforms will foster horizontal learning and facilitate the replication of successful strategies across different territories.

c) Publications and outreach tools

The project will develop and disseminate technical materials, methodological guides, videos, infographics, and policy briefs tailored to various audiences (local governments, civil society, academia, private sector) to enhance access to and use of the knowledge generated.

d) Integration of scientific knowledge and local wisdom

Through Output 5.4, the project will promote partnerships with scientific and academic institutions (such as SENAMHI, IGP, and universities) to jointly produce strategic inputs (e.g., localized climate scenarios), ensuring their integration into decision-making. Likewise, traditional knowledge and community-based insights will be incorporated into participatory processes for risk analysis, planning, and the implementation of adaptation measures.

e) Capacity building for evidence-based decision-making

Aligned with Output 5.3, the project will develop training programs for public officials and local stakeholders focused on interpreting and applying climate information, evaluating the effectiveness of adaptation measures, and using data to inform adaptive planning and investment. This will enable the institutionalization of learning within local governments and support the scaling up of effective practices.

Cross-cutting learning throughout all project components

In addition to Component 5, learning is a cross-cutting pillar across all components of the project. From **Component 1**, practical knowledge is generated on how to integrate climate change adaptation into governance and territorial planning, through normative frameworks, technical tools, and local coordination mechanisms. **Component 2** provides insights into innovative and sustainable financial mechanisms that facilitate the integration of adaptation criteria into budgets, public investment systems, and partnerships with the private sector.

Component 3 yields valuable lessons on the implementation, operation, and sustainability of Nature-based and hybrid Solutions in diverse geographic and social contexts across the country. **Component 4** contributes experiences and lessons on adaptive business models and climate-resilient livelihoods that can be scaled and replicated, particularly among vulnerable communities.

Finally, **Component 5** serves as a knowledge integrator, enabling the systematization, analysis, and dissemination of information for continuous improvement, evidence-based decision-making, and the strengthening of institutional and community capacities.

Together, these learnings will inform public policy, enhance adaptation processes at all levels, and support the replication of successful experiences in other cities and regions of the country.

Tracking

Based on the knowledge management activities outlined in Component 5, the tracking of experiences gained will be led by the Project's Knowledge Management and M&E Unit, working in close coordination with the Ministry of Environment (MINAM) and the municipal technical teams of the 14 prioritized cities. The tracking process will be conducted on a quarterly basis, compiling data from pilot interventions (Component 3), livelihood diversification initiatives (Component 4), and governance/financial management improvements (Components 1 and 2). This will include documenting lessons learned, good practices, and challenges, using standardized templates and participatory tools. A semi-annual analysis will be carried out jointly by the Knowledge Management

[Unit, MINAM's Monitoring and Evaluation System for Adaptation Measures \(SMMEA\) team, and academic or technical partners. These analyses will be presented to the Project Steering Committee and shared with stakeholders through knowledge products such as briefs, case studies, and policy notes. Additionally, an annual synthesis report will be produced to consolidate experiences and feed into the project's replication and scaling strategies, as well as national adaptation policy processes.](#)

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

The concept note has been developed in coordination with the **General Directorate of Climate Change and Desertification of the Ministry of Environment**, ensuring alignment with the country's priorities on climate change adaptation and the fulfillment of its Nationally Determined Contributions (NDCs), in accordance with the National Adaptation Plan (PNACC).

During the project preparation phase, a **technical consultation and institutional engagement process** was carried out with key stakeholders at both national and subnational levels, in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund. This process aimed to identify relevant challenges, intervention opportunities, and potential synergies to strategically inform project design—particularly regarding **livelihood diversification (Component 4)** and the **strengthening of territorial governance (Components 1 and 2)**.

At the national level, bilateral meetings were held with **strategic sectors related to employment generation, inclusive productive development, and the economic empowerment of vulnerable populations**. Specifically, discussions were held with the **Ministry of Production (PRODUCE)**, **Ministry of Labor and Employment Promotion (MTPE)**, **Ministry of Women and Vulnerable Populations (MIMP)**, and the **Ministry of Foreign Trade and Tourism (MINCETUR)**. These meetings explored potential alignment with existing programs focused on **productive entrepreneurship, vocational training, sustainable value chains, and the promotion of community-based rural tourism** with an inclusive and territorial approach.

At the subnational level, engagement meetings were held with **representatives from the regional governments of 13 out of the 14 prioritized territories**, including regions such as Piura, Ancash, Lambayeque, Arequipa, Moquegua, Metropolitan Lima, Huancavelica, Ayacucho, Ucayali, Junín, Madre de Dios, and San Martín. These meetings made it possible to identify **local priorities in response to climate risks, available institutional capacities, and existing gaps** in effectively integrating adaptation into local planning, economic development, and public service delivery processes.

These spaces also supported a **preliminary identification of vulnerable populations**, particularly women, youth, Indigenous peoples, rural migrants, and households experiencing multidimensional poverty. In several territories, the need to apply **differentiated and culturally appropriate approaches** was highlighted, especially in the design of measures to strengthen resilient and sustainable livelihoods. These aspects will be addressed in the full proposal phase through **specific consultation mechanisms, social assessments, and inclusive participatory processes**.

Gender considerations have been integrated transversally in the preliminary formulation of **Component 4**, acknowledging the structural barriers women face in accessing economic opportunities, technical training, and participation in decision-making processes. Moreover, the development of a **Gender Action Plan** is foreseen during the final design phase, aimed at specifically guiding outputs and outcomes related to equity and empowerment.

In summary, the consultative process carried out thus far has helped shape the **multisectoral, territorial, and inclusive approach** of the project. It lays the groundwork for a **context-sensitive and socially responsible implementation**, capable of addressing climate change challenges through **transformative and equitable actions**.

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

The funding requested from the Adaptation Fund is justified under the total cost of adaptation approach, with the project specifically designed to respond to the current and projected impacts of climate change in vulnerable cities across Peru. It does not include financing for conventional development interventions. Each project component addresses additional and distinct costs that arise as a direct consequence of climate change—whether related to planning, infrastructure, livelihoods, financing, or knowledge systems—which would not be assumed without an explicit adaptation focus.

- a) **The prioritized local governments currently lack the technical and financial resources** to effectively incorporate climate change adaptation into their planning and governance processes (**Component 1**), into their budgeting systems and investment instruments (**Component 2**), or into economic and social strategies that protect livelihoods from climate impacts (**Component 4**).
- b) **The implementation of Nature-based Solutions (NbS) and hybrid measures (Component 3)** represents a cost-effective strategy to address climate risks such as flooding, heatwaves, and the loss of vegetative cover. However, these innovative approaches require **initial investments to build capacities and create enabling conditions** that shift the prevailing trend of relying primarily on conventional grey infrastructure to achieve urban resilience.
- c) In addition, **the generation of evidence, the systematization of experiences, and the strengthening of capacities for monitoring and knowledge management (Component 5)** are necessary costs to ensure that adaptation actions are effective, scalable, and data-driven. These elements are essential to guarantee long-lasting and measurable climate adaptation impacts. However, in most previously implemented experiences, these types of actions have often been considered secondary to more visible or physical interventions. For this reason, the project proposes a **robust approach to monitoring and knowledge management**, closely linked to the National M&E System, with the aim of generating **useful inputs for informed decision-making, territorial scaling, and accountability** at both national and international levels—particularly in line with the Paris Agreement and the Climate Change Framework Law.

In conclusion, the funding requested covers the **full incremental costs of implementing climate change adaptation measures across associated with making** planning, investment, ecosystems, livelihoods, and knowledge management **ensuring that these dimensions become climate-resilient, particularly in contexts where such approaches are currently absent or only incorporated in a limited and fragmented manner, without a territorial perspective.**

The project **does not replace local development investments**, but rather **complements and transforms them** through a territorial and climate-informed approach. It ensures that the prioritized cities and communities are equipped with the **capacities, tools, and solutions needed to adapt** to current and future climate risks, thereby promoting sustainable and inclusive development aligned with Peru's climate and development goals.

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

Sustainability

~~The~~ The sustainability of the project is underpinned by an integrated combination of regulatory, financial, and institutional arrangements designed to secure and expand benefits beyond the Adaptation Fund's financing period.

From a regulatory perspective, climate change adaptation measures—particularly Nature-based Solutions (NbS)—will be formally integrated into municipal ordinances, public investment regulations, and local planning instruments such as Local Climate Change Plans (PLCC) and Regional Climate Change Strategies (ERCC). This institutionalization will ensure that adaptation actions are embedded within regular investment programming and prioritization processes. Alignment with Peru's Framework Law on Climate Change (Law No. 30754), the National Adaptation Plan (NAP), and Invierte.pe standards will guarantee regulatory compliance and facilitate public investment viability.

Financial arrangements will include the creation and reinforcement of municipal funds, local trust

funds, and public-private partnerships to support the operation and maintenance of NbS. Resource mobilization strategies will incorporate co-financing mechanisms and targeted concept notes to access national and international climate finance. A key financial priority will be integrating adaptation into existing incentive programs, thereby reducing donor dependency and facilitating scaling.

At the institutional level, governance platforms and multi-level coordination committees will be established or strengthened to embed adaptation into urban and sectoral agendas. Formal management agreements between municipalities, communities, and technical agencies will define roles, maintenance plans, and incentive or sanction regimes to ensure long-term operation.

In the technical and knowledge dimension, the project will produce a standardized NbS toolkit adapted to diverse territorial contexts, alongside certified training programs for local governments, community actors, and the private sector. This will enable the replication of successful models in other cities. To operationalize replication and scaling, the project will develop “replicable packages” including cost references, designs, and regulatory models, and promote a Community of Practice for Municipalities.

By embedding NbS in planning and investment frameworks, securing sustained financing, formalizing management responsibilities, and providing practical tools and capacity-building, the project ensures that adaptation benefits are durable, replicable, and scalable across Peru’s diverse regions.

~~sSustainability of the project’s results has been comprehensively addressed to ensure that the benefits persist beyond the project implementation period. To this end, institutional, financial, social, technical, and environmental mechanisms have been incorporated to guarantee the continuity, scalability, and ownership of adaptation actions by local stakeholders.~~

- Under **Component 1**, the project promotes the institutionalization of climate change adaptation within local planning and governance frameworks through the development or updating of ordinances, plans, and guidelines that will remain embedded in the normative structure of local governments. This approach ensures that adaptation measures do not rely solely on the project but become a permanent part of local public management, aligned with the National Adaptation Plan (NAP) and the Nationally Determined Contributions (NDCs).
- **Component 2** ensures financial sustainability by strengthening budgetary instruments, public investment regulations, and financing mechanisms (such as municipal funds or public-private partnerships), as well as building the capacity of local governments to access and manage public and international cooperation resources. The development of concept notes and co-financing strategies enables the creation of an adaptation investment portfolio that goes beyond the project’s lifecycle.
- In **Component 3**, the sustainability of pilot measures is supported through the development of local capacities for the operation, maintenance, and monitoring of Nature-based and hybrid interventions, the creation of community management tools, and the implementation of upscaling and replication strategies integrated into territorial planning. These measures are carried out with the active participation of communities, ensuring ownership and long-term continuity.
- **Component 4** promotes economic and social sustainability through the development of climate-resilient livelihoods by supporting adaptive business models that integrate profitability, environmental sustainability, and territorial relevance. By linking these initiatives to public and private funds and programs, the project ensures that the supported enterprises can continue to grow and scale beyond the project’s duration.
- Finally, **Component 5** reinforces the sustainability of results through a knowledge management system, participatory monitoring, and partnerships with academic institutions. This enables the evaluation of the effectiveness of implemented measures and the generation of transferable lessons. Additionally, the creation of communities of practice and intermunicipal networks will foster ongoing experience exchange and support the continuous improvement of public policy.

Taken together, the project’s design ensures that its results are viable, locally owned, financially

sustainable, and replicable, thereby contributing to lasting climate resilience in the prioritized cities and communities.

Governance

The project will be executed by the Ministry of Environment of Peru (Ministerio del Ambiente – MINAM), through the General Directorate of Climate Change and Desertification, specifically via its technical branch, the Directorate of Climate Change Adaptation and Desertification. A Project Management Unit (PMU) will be established to coordinate and supervise the execution of the project's components, as well as to lead the Project Technical Committee.

The project will be implemented by Profonanpe, in its role as the nationally accredited implementing entity before the Adaptation Fund. Profonanpe will be responsible for the fiduciary management of the project.

The Project Board, chaired by MINAM, will be composed at least of representatives from the following entities:

- The General Directorate of Climate Change and Desertification of MINAM, as the executing entity.
- Profonanpe, as the National Implementing Entity.

The Project Technical Committee will be composed of representatives from the regional and/or local governments involved, as well as key public institutions such as:

- Ministry of Production (PRODUCE)
- Ministry of Women and Vulnerable Populations (MIMP)
- Ministry of Foreign Trade and Tourism (MINCETUR)
- Ministry of Labor and Employment Promotion (MTPE)

Other strategic actors related to the project's thematic areas may also be included. The Ministry of Environment (MINAM) serves as Peru's national focal point to the Adaptation Fund.

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

The project has identified potential environmental and social impacts and risks, taking into consideration the nature of its five components and the specific characteristics of the 14 prioritized territories across the coastal, highland (sierra), and Amazon (selva) regions. Overall, the project is expected to generate positive environmental and social outcomes by promoting climate-resilient planning with a territorial approach, the implementation of Nature-based Solutions (NbS), the development of sustainable livelihoods, and the strengthening of local governance. However, the following potential environmental and social risks have been identified:

Environmental Risks

The environmental risks associated with the implementation of Nature-based Solution (NbS) pilots under Component 3 are considered low. These interventions will be specifically designed to generate positive impacts on local ecosystems, particularly those located in environmentally sensitive areas such as mangroves or wetlands, by promoting actions that support their conservation and/or restoration.

Social Risks

The identified social risks are low and can be effectively managed through appropriate participatory strategies. To address the potential for limited participation by vulnerable groups—such as women, youth, Indigenous peoples, or older adults—targeted measures will be incorporated throughout the design, implementation, and governance stages of adaptation actions.

In the face of potential gender or cultural barriers that may hinder equitable access to training, financing, or economic opportunities, equity-based approaches will be integrated into the adaptive livelihood strategies under Component 4, as well as into the financial mechanisms developed under

Component 2, to prevent an unequal distribution of benefits.

Finally, the limited institutional capacity at the local level to sustain monitoring and evaluation systems or to scale up successful practices—particularly in relation to Component 5—represents a risk that will be mitigated through capacity-building interventions.

Risk Management and Safeguard Approach:

To address these risks, the project will be implemented in accordance with the Environmental and Social Policy (ESP) of the Adaptation Fund, from the design phase through to completion. Specifically, an Environmental and Social Management Plan (ESMP) will be developed and implemented. This plan will include specific mitigation measures, procedures for inclusive participation, and grievance redress mechanisms.

All pilot interventions will be required to include safeguards and coordination mechanisms with relevant stakeholders to identify potential impacts and establish preventive or corrective actions prior to implementation. Additionally, the project will ensure the application of Free, Prior, and Informed Consent (FPIC) where applicable, and will adopt gender, intercultural, and intergenerational approaches across all components. Active and meaningful participation by local institutions, community-based organizations, and Indigenous peoples will be promoted, ensuring that methodologies and processes are tailored to the territorial and sociocultural contexts of each of the prioritized cities and communities.

The screening process has classified the project as **Category B**, in accordance with the Adaptation Fund’s Environmental and Social Policy and guidance. The project involves small- to medium-scale interventions—primarily Nature-based Solutions (NbS)—with potential low adverse environmental and social risks that are site-specific, reversible, and can be readily mitigated through established management measures. No significant, large-scale, or irreversible impacts are anticipated, and mitigation measures have been integrated into the design and implementation plan for each identified risk.

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	X	No Risk Identified: <u>There is no anticipated non-compliance with national and local legal frameworks on climate change, human rights, and environmental protection. Activities will be carried out in alignment with the current national and local legal frameworks on climate change, human rights, and environmental protection.</u>
Access and Equity	-	Low Risk: <u>There is a risk of unequal access to the project’s benefits across different territories or social groups if inclusion measures are not effectively implemented.</u> <u>Mitigation: Apply targeted outreach strategies, prioritizing vulnerable groups in beneficiary selection and ensuring representation in decision-making spaces. An inclusive approach will be applied to ensure territorial and social equity in access to the project’s benefits.</u>
Marginalized and Vulnerable Groups	-	Low Risk: <u>There is a risk that the perspectives and needs of vulnerable groups—such as women, youth, Indigenous peoples, and older adults—may not be sufficiently represented in decision-making processes.</u> <u>Mitigation: Implement participatory methodologies and quota-based representation in governance and consultation processes. An effective participation approach will be considered to ensure that the voices of vulnerable groups—such as women, youth, Indigenous peoples, and older adults—are meaningfully included.</u>
Human Rights	X.	No Risk Identified: <u>There is no anticipated risk of human rights violations, as the project is aligned with national and international frameworks and promotes voluntary participation and dignified livelihoods. The project is aligned with national and international human rights frameworks. It also aims to promote voluntary participation and access to dignified livelihoods.</u>

Gender Equality and Women's Empowerment	-	<p>Low Risk: <u>There is a risk that women may have unequal access to processes, benefits, leadership opportunities, and project resources if gender-sensitive approaches are not consistently applied.</u></p> <p>Mitigation: <u>Apply gender-responsive budgeting and ensure women's representation in leadership and technical roles in all project phases. A gender-sensitive approach will be applied in project activities to ensure that women have equitable access to processes, benefits, leadership opportunities, and project resources.</u></p>
Core Labour Rights	X.	<p>No Risk Identified: <u>There is no anticipated risk of violations of national or international labor standards. No violations of labor rights are anticipated. National and international labor standards will be upheld.</u></p>
Indigenous Peoples	-	<p>Low Risk: <u>There is a risk that Indigenous peoples' effective participation or their recognized rights could be overlooked if inclusion mechanisms are not implemented in areas where they are present.</u></p> <p>Mitigation: <u>Coordinate with Indigenous organizations, apply FPIC (Free, Prior and Informed Consent) processes, and adapt project tools to culturally appropriate formats. An inclusive approach will be applied in areas with the presence of Indigenous peoples to ensure their effective participation. The pilot interventions do not pose any risk to their recognized rights.</u></p>
Involuntary Resettlement	X	<p>No Risk Identified: <u>There is no anticipated risk of physical or economic displacement. However, without careful site selection, there could be potential risk in cases of unplanned settlement in forest areas.</u></p> <p>Mitigation: <u>Incorporate resettlement risk screening in site selection criteria and validate areas with local land-use authorities. The project does not involve any physical or economic displacement. The identification of specific areas for the implementation of NbS pilot interventions will incorporate clear criteria to avoid any potential risk of involuntary resettlement, in this phase, including in cases of unplanned settlement in forest areas.</u></p>
Protection of Natural Habitats	-	<p>Low Risk: <u>There is a risk of unintended disturbance to sensitive ecosystems if pilot interventions are not aligned with existing master plans or management strategies.</u></p> <p>Mitigation: <u>Conduct prior environmental screening and ensure alignment with official land-use and conservation plans. The pilot interventions will not generate negative impacts on sensitive ecosystems. Coordination with the responsible management entities will be undertaken, if necessary, to ensure alignment with existing master plans or defined strategies.</u></p>
Conservation of Biological Diversity	-	<p>Low Risk: <u>There is a risk of negative impacts on sensitive ecosystems if coordination is not undertaken with responsible management entities during the planning of interventions.</u></p> <p>Mitigation: <u>Engage biodiversity authorities early in the design phase and apply ecosystem-friendly construction standards. The pilot interventions will not generate negative impacts on sensitive ecosystems. Coordination with the responsible management entities will be undertaken, if necessary, to ensure alignment with existing master plans or defined strategies.</u></p>
Climate Change	X.	<p>No Risk Identified: <u>There is no anticipated risk of activities increasing greenhouse gas emissions or exacerbating climate change drivers. The project contributes positively to climate change adaptation and increased resilience. It does not include activities that would result in increased greenhouse gas emissions or exacerbate the drivers of climate change.</u></p>
Pollution Prevention and Resource Efficiency	-	<p>Low Risk: <u>There is a risk of generating pollutants and emissions during the construction phase of pilot interventions if preventive measures are not applied.</u></p> <p>Mitigation: <u>Apply best practices in construction waste management and promote the use of low-emission materials. The implementation of the pilot interventions will include measures to reduce the generation of pollutants and emissions during construction, if necessary.</u></p>
Public Health	X	<p>No Risk Identified: <u>No negative health impacts are anticipated. On the contrary, the project is expected to contribute to improved health outcomes through the development of green spaces and the enhancement of climate-resilient livelihoods.</u></p>
Physical and Cultural Heritage	X	<p>No Risk Identified: <u>No negative impacts are anticipated on sites of cultural or archaeological value. If necessary, coordination will be established with the entities responsible for their management during project implementation.</u></p>
Lands and Soil Conservation	X.	<p>No Risk Identified: <u>There is no anticipated risk of soil degradation; however, without adequate design, interventions could cause localized disturbances.</u></p>

		<u>Mitigation: Integrate soil erosion control measures and native vegetation restoration in all pilot interventions. The design and implementation of the NbS pilot interventions will include soil management measures, if necessary.</u>
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PART III: IMPLEMENTATION ARRANGEMENTS

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

Project Objective(s) ¹	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD) *
Project Objective 1: Strengthen the integration of climate change adaptation into local government governance and planning systems through territorial approaches, ensuring alignment with the National Adaptation Plan (NAP), the Nationally Determined Contributions (NDCs), and local development policies.	1.1 Number of normative and/or local development planning instruments that integrate climate change adaptation. 1.2 Number of local governments with strengthened capacities. 1.3 Number of climate risk studies conducted.	AF Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	841,698,794
Project Objective 2: Strengthen the financial readiness of subnational governments and key stakeholders to plan, access, leverage, and manage funding that contributes to climate change adaptation, by promoting the inclusion of adaptation criteria in territorial financial management systems.	2.1 Number of financial and/or regulatory mechanisms designed and/or strengthened with a climate change adaptation focus. 2.2 Number of proposals developed to access climate finance (national and international). 2.3 Number of active public-private partnerships established to co-finance adaptation measures.	AF Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	673,358,16
Project Objective 3: Implement pilot interventions of Nature-based Solutions (NbS) and hybrid measures in prioritized cities of Peru (coast, highlands, and Amazon), aligned with local planning and a territorial approach, to strengthen ecological, urban, and social resilience to the impacts of climate change.	3.1 Number of operational and sustainable NbS and hybrid measures. 3.2: Number of participatory monitoring mechanisms in operation. 3.3: Number of upscaling and replication strategies developed and implemented.	AF Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress.	5.1 Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress.	5,050,186,224
Project Objective 4: Diversify and strengthen the livelihoods of vulnerable communities through climate-resilient economic options, promoting green and sustainable enterprises while reducing their exposure and	4.1 Number of adaptive business models implemented. 4.2 Number of people trained in adaptive livelihoods or green entrepreneurship. 4.3 Number of multi-stakeholder platforms	AF Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	6.2 Percentage of targeted population with sustained climate-resilient alternative livelihoods 8. Innovative adaptation practices are rolled out,	707,0264,010,037,24

dependence on climate-sensitive systems.	established to promote resilient livelihoods. 4.4 Number of technical tools or guidelines developed for climate-sensitive productive sectors.	AF Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	scaled up, encouraged and/or accelerated at regional, national and/or subnational level	
			8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level	303,011
Project Objective 5: Strengthen knowledge management and monitoring and evaluation (M&E) systems for climate change adaptation, promoting evidence-based decision-making at the local and national levels, and facilitating learning, continuous improvement, transparency, and the replicability of adaptation actions	5.1 Number of M&E tools implemented or strengthened with disaggregated local information. 5.2 Number of knowledge products generated and disseminated. 5.3 Number of partnerships established between public institutions and academic entities for adaptation knowledge management.	AF Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level.	3.1 Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses.	841.6987,704
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD) *
Project Outcome 1: Local governments integrate climate change adaptation, with a territorial approach, into local governance and development planning to reduce risks and strengthen resilience to climate-related hazards.	1.1 Number of local governments that integrate adaptation into their planning and governance instruments. 1.2 Percentage of territorial instruments that incorporate climate risk analysis and adaptation measures. 1.3 Number of climate governance mechanisms established or strengthened.	AF Output 7: Improved integration of climate-resilience strategies into country development plans	7.1. No. of policies introduced or adjusted to address climate change risks (by sector) 7.2. No. of targeted development strategies with incorporated climate change priorities enforced	420,849
			7.2. No. of targeted development strategies with incorporated climate change priorities enforced	420,849
Project Outcome 2: Local governments integrate climate change adaptation into the economic and financial management of local development by strengthening budgetary tools and investment regulations that promote resilient, sustainable, and results-oriented interventions in response to climate change risks.	2.1 Number of local governments that incorporate adaptation criteria into their investment and public budgeting systems. 2.2 Percentage of local financial instruments that include adaptation or Nature-based Solutions (NbS) measures. 2.3 Amount of resources mobilized for adaptation measures (public and private). 2.4 Number of public and private actors trained in climate financial management.	AF Output 2.2: Increased readiness and capacity of national and sub-national entities to directly access and program adaptation finance	2.2.1 No. of people benefitting from the direct access and enhanced direct access modality	673,358

Project Outcome 3: Vulnerable cities and communities implement Nature-based and hybrid Solutions (NbS) as a strategy for adapting to climate change, in coordination with their local planning and management systems, thereby strengthening their ecological, urban, and social resilience to climate-related hazards.	3.1 Number of operational and sustainable NbS and hybrid measures. 3.2 Percentage of measures integrated into local planning and management instruments. 3.3 Number of participatory monitoring mechanisms in operation. 3.4 Number of upscaling and replication strategies developed and implemented.	AF Output 5.1: Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress.	5.1.1 Number and type of natural resource assets created, maintained or improved to withstand climate change and variability-induced stress.	5,050,186
Project Outcome 4: Vulnerable communities diversify and strengthen their livelihoods through climate-resilient economic options, reducing their exposure to and dependence on systems sensitive to climate change.	4.1 Percentage of business models replicated or scaled up. 4.2 Number of productive initiatives linked to NbS measures. 4.3 Percentage of participants who improve their access to productive resources or adaptive financing.	AF Output 6.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability. AF Output 8: Viable innovations are rolled out, scaled up, encouraged and/or accelerated.	6.1.1 Type, number and sector of risk reduction and adaptation assets and services created, improved or maintained. 8.1. No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated	707,026
			8.1. No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated	303,011
Project Outcome 5: Local decision-making is based on evidence, knowledge management, and M&E processes that guide climate policies and actions, strengthening the capacity of local governments and relevant stakeholders to manage climate change adaptation.	5.1 Percentage of local governments applying participatory monitoring tools. 5.2 Number of trained users (technical staff, community members, authorities) utilizing generated inputs. 5.3 Number of knowledge products applied for scaling, replication, or improvement of interventions.	AF Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	3.2.1 No. of technical committees/associations formed to ensure transfer of knowledge 3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	336,679
			3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	505,019

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

*This estimation will be reviewed and, if necessary, adjusted during the development of the full proposal.

ANNEX 1 - List of projects



PERÚ

Ministerio
del Ambiente

Viceministerio de
Desarrollo Estratégico de
los Recursos Naturales

Dirección General
de Cambio Climático
y Desertificación

*"Decenio de la Igualdad de Oportunidades para mujeres y hombres"
"Año de la recuperación y consolidación de la economía económica"*

Lima, July 17th, 2025

Letter N° 00101-2025-MINAM/VMDERN/DGCCD

Messrs.

The Adaptation Fund Board

c/o Adaptation Fund Board Secretariat
Washington

United States

Email: Secretariat@adaptation-fund.org

Fax: 202 522 3240/5

Subject : Endorsement of the project "Strengthening resilience and adaptation to climate change in vulnerable cities in Peru through nature-based solutions with a territorial approach".

The Ministry of the Environment of Peru is the national authority on climate change and is responsible for coordinating the implementation of the National Strategy on Climate Change and the National Adaptation Plan to Climate Change. It also the entity responsible for reporting, on behalf of the Peruvian State, on the progress of the Nationally Determined Contributions (NDCs) to the United Nations Framework Convention on Climate Change (UNFCCC).

In this context, we have reviewed the Concept Note entitled "Strengthening resilience and adaptation to climate change in vulnerable cities in Peru through nature-based solutions with a territorial approach", submitted by Profonanpe in its capacity as an accredited implementing entity before the Adaptation Fund.

This proposal will make a significant contribution to strengthening the adaptive capacity and resilience of Peruvian cities by helping to integrate climate change adaptation into local governance, planning, financial management, and action, in line with our national adaptation priorities.

Therefore, I am pleased to express the Ministry of the Environment's support for this Concept Note, and we kindly request that it be considered for funding by the Adaptation Fund.

If approved, the Ministry of the Environment, as the executing entity, will ensure that the project is aligned with the country's adaptation objectives and will be implemented in coordination with Profonanpe, in its role as implementing entity.

Sincerely,

Berioska Quispe Estrada

Head of the General Directorate of Climate Change and Desertification
Ministry of the Environment
Designated Authority



PERÚ

Ministerio
del Ambiente

Viceministerio de
Desarrollo Estratégico de
los Recursos Naturales

Dirección General
de Cambio Climático
y Desertificación

*“Decenio de la Igualdad de Oportunidades para mujeres y hombres”
“Año de la recuperación y consolidación de la economía económica”*

File number: 2025056377

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Revised PFG Submission Form¹
Project Formulation Grant (PFG)

Submission Date: July 11th, 2025

Adaptation Fund Project ID:

Country/ies: Peru

Title of Project/Programme: Strengthening resilience and adaptation to climate change in vulnerable cities in Peru through nature-based solutions with a territorial approach

Type of IE (NIE/RIE/MIE): NIE

Implementing Entity: Profonampe

Executing Entity/ies: Profonampe

Start date of PFG	October 2025
Completion date of PFG	March 2026

B. Proposed Project Preparation Activities (\$)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US\$ Amount	Budget note²
1- Analysis of climate-related causes, barriers and risks, with emphasis on natural disaster-related hazards and local vulnerabilities. Includes selection of intervention districts and identification of beneficiaries.	1.1 Assessment report validating geographic scope of intervention and beneficiaries	20,000.00	Lump-sum consultancy for approximately 2 specialists (climate and territorial experts) over 2 months.
2- Social environmental risk Analysis including gender-related risks, aligned with AF standards, and formulation of Environmental and Social Management Plan, including Gender and Indigenous Action Plans	2.1 Social environmental and gender -related risk analysis report 2.2 Environmental and Social Safeguards System (ESMS) proposal and risk analysis aligned with AF standards 2.3 Environmental and Social Management Plan, including Gender and Indigenous Action Plans.	35,000.00	Lump-sum consultancy of safeguard and gender/ inclusion specialist for over 2 months

¹ As presented in AFB/PPRC.33/40 Annex 1.

² The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

3- Socio Economic baseline to assess livelihoods, planning status, and policy coherence at national and subnational levels	3.1 Assessment report of livelihoods, value chains and institutional planning status for project prioritization	10,500.00	Two national consultants (livelihoods, value chains and institutional planning experts) for approx. 3 weeks each.
4. Full project proposal formulation	4.1 Full proposal developed	33,000.00	Lump-sum expert consultancy for preparing the full proposal (2 months).
5 - Workshops and field visits for local consultations and technical validation of project design	5.1 Workshops and field visit reports. 5.2 Project design validated	35,000.00	Lump-sum consultancy for a national coordination team and field facilitators (approximately 3 rounds of visits, 14 workshops)
6- Translation of project documents	6.1 Documents translated	4,748.85	Lump-sum contract for professional translator
Implementing Entity's Management Fee		11,751.15	8,5% Fee
Total Project Formulation Grant		150,000.00	

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

1. Analysis of climate-related causes, barriers and risks, with emphasis on natural disaster-related hazards and local vulnerabilities. Includes selection of intervention districts and identification of beneficiaries.

This activity will include a comprehensive diagnostic and assessment of climate-related issues across the 14 prioritized cities, identifying key structural barriers, environmental conditions, and vulnerability patterns. This will also include hazard mapping, exposure, and vulnerability assessment to determine where and how climate change impacts occur. Given Peru's multisectoral and multi-hazard reality (e.g., floods, droughts, heat), this analysis is essential for identifying priority intervention zones. It ensures context-specific project design, especially considering the environmental and urban diversity across Peru's coast, highlands, and rainforest.

A socio-economic analysis will also be carried out to pinpoint the most vulnerable groups—such as women, older adults, and youth—and to identify the districts and communities most in need of support. The assessment will consider factors such as poverty incidence, climate-related risks, limited access to essential services, and the level of reliance on natural resources.

It will focus and validate the geographic scope and intended beneficiaries of the project based on differentiated local contexts.

Justification: Requires local data review, existing climate data, Geospatial analysis tools (GIS), climate models, expert analysis, risk map with prioritization of the most vulnerable areas and contextual differentiation.

2. Social environmental risk Analysis including gender-related risks, aligned with AF standards, and formulation of Environmental and Social Management Plan, including Gender and Indigenous Action Plans

The social environmental and gender-related risks analysis will assess potential project environmental effects to prevent negative impacts, while also examining how climate change differently affects men and women, ensuring that the project adopts gender-responsive strategies. A report will be prepared identifying the main social environmental and gender-based risks in the intervention areas and proposing appropriate mitigation measures.

An Environmental and Social Management System (ESMS) framework aligned with Adaptation Fund standards will also be prepared, including environmental and social risk categorization.

Consequently, an Environmental and Social Management Plan (ESMP) will be formulated in order to monitor the project's social environmental impacts, define mitigation measures, and outline responsive actions to address unforeseen effects. Also, a Gender and Indigenous Peoples Action Plans will be prepared outlining measures to overcome gender-related barriers to adaptation, and to enhance women's older adults and youth's access to resources, information, and decision-making processes within the project. Likewise, a plan will be developed to ensure the inclusion and active participation of Indigenous Peoples, taking into account their rights, needs, and traditional knowledge in the implementation of project activities.

Justification: Essential for risk classification and inclusive project design. May involve fieldwork and stakeholder validation.

3. Socioeconomic baseline to assess livelihoods, planning status, and policy coherence at national and subnational levels

This activity will help to understand local livelihoods and value chains, institutional gaps, and the coherence of national and local policies on sustainability. It supports the selection of priority sectors per city and provides the foundation for indicators and monitoring.

The assessment report will provide an integrated analysis of livelihoods, sectoral value chains, and the status of public planning and policy implementation in each of the prioritized cities, to support project prioritization.

Justification: Involves data collection, stakeholder interviews, national/local policy review and multisectoral analysis.

4. Full project proposal formulation

This activity entails the development of a comprehensive and technically sound project proposal aligned with the Adaptation Fund's criteria and national priorities. It demands specialized technical knowledge, inclusive stakeholder participation, and close coordination with national counterparts. The allocated funding ensures the proposal is both high-quality and contextually appropriate.

It will include the refinement and development of a detailed logical framework and theory of change, description of project activities, detailed budget development, Monitoring and evaluation plan, among other sections required for the proposal.

Justification: Requires multidisciplinary coordination and full proposal drafting aligned with AF criteria.

5. Workshops and field visits for local consultations and technical validation of project design

The Workshops and field visit reports will synthesize findings from participatory workshops and field visits conducted in each of the 14 prioritized cities, including feedback on the proposed activities and local validation of project design. These spaces will engage multiple stakeholders, from local populations and government institutions to NGOs, technical experts, and other involved parties.

Workshops will be designed to present the draft Theory of Change, project components, and proposed interventions, validate climate risk assessments, priority areas, and selected adaptation measures and collect final feedback from local stakeholders to strengthen the relevance and legitimacy of the proposal. Each validation workshop will provide a structured space for dialogue and consensus-building, ensuring that the proposal reflects local knowledge, institutional needs, and culturally appropriate approaches.

Field visits will be essential for gaining a deep, contextual understanding of climate vulnerabilities, adaptation needs, and local opportunities in each of the 14 prioritized cities. The collected inputs will serve to refine the full proposal.

Justification: Workshops: Conducting 14 inception workshops and 14 validation workshops across Peru’s coast, highlands, and rainforest entails significant logistical planning, facilitation costs, stakeholder mobilization, venue rentals, and workshop materials. The activity also includes the development of detailed Terms of Reference, agendas, and communication materials, as well as the preparation of a technical report per city summarizing outcomes and contributions. This process ensures strong territorial ownership and early alignment with local priorities, which is fundamental for the success of a multi-sited climate adaptation project. Field visits: The scope and frequency of these visits demand detailed logistical planning and coordination, including travel arrangements, engagement with local stakeholders, and the development of tailored site agendas and data collection protocols. This activity will ensure that the project design reflects grounded territorial realities and meaningful stakeholder input.

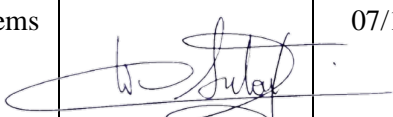
6. Translation of project documents

Bilingual translation of key technical documents including the full proposal and its annexes, between Spanish and English.

Justification: Ensures bilingual availability for national stakeholders and AF compliance.

C. Implementing Entity

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

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Anton Willems		07/11/2025	Claudia Godfrey	(511) 218 1097	cgodfrey@profonanpe.org.pe

Project / Period	Target area Target population	Measures	Outcomes	Financing	Synergies Period
Adapting urban water resources management (GIZ) 2014–2019	Chillón, Rímac y Lurín, Lima River Basin Lima's urban population, water companies, local governments, private operators	Water observatory, public-private partnerships (PPPs), greywater reuse	Operational observatory, 6 PPP initiatives, parks irrigated with treated water	IKI-GIZ: €2.5 M	2014–2019 Experience in water governance and PPP models for urban water; synergy with C1 and C2.
Adaptation of urban water management (GIZ) 2019–2020	Lima Local governments, water operators, decisions makers	Urban water adaptation study and planning	Diagnosis with multisectoral participation	GIZ: €54,587	2019–2020 Provides a technical diagnosis and planning framework that can inform the detailed design of the proposed project
Green Corridor – Huatanay River 2021– ...	Cusco Urban population Users of public spaces	Design of green corridor and riparian restoration	Green infrastructure - Prototype	GIZ (licitación): €1.275 M	2021– ... Pilot experience in urban green infrastructure and riparian restoration replicable in other project cities
EbaMar (IKI) 2017-2022	Ica, Lima, Piura (coasts) Coastal communities, artisanal fishermen, riverside farmers	Mangrove/wetland restoration, coastal integration	Coastal EbA (Ecosystem-based Adaptation) interventions	IKI: €2.05 M	2017–2022 Technical models of coastal EbA that can be adapted to other coastal cities prioritized.
Global Covenant of Mayors 2024–2028	28 municipalities (Cusco, San Isidro...) Local governments and urban population in participating cities	Local PAC, cycling infrastructure, electric buses	16 local climate plans, CO ₂ reduction	GEF / CIM incentivos (~USD 18 M regional)	2024–2028 Facilitates coordination with global city networks and access to local climate finance; synergy with the governance and climate planning of the proposed project.

Sector reform for urban water management (KfW/BID) 2006–2015	Several cities Drinking water service providers, regulatory authorities	Sectoral reforms, integration of adaptation	Regulatory and institutional support	KfW/BID: €15 M (Fase VI: €5 M)	2006–2015 Lessons on institutional strengthening and regulatory reforms applicable to the sustainability framework of the proposed project.
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ANNEX 2 - Technical consultation process and institutional engagement

- National-level meetings (04):

Institution	Ministry of Foreign Trade and Tourism (MINCETUR)
Date	04 July 2025
Participants	Katherine Sophia Davila, Director, Directorate of Environmental Tourism Affairs (MINCETUR) Mayra Cáceres, Specialist, Directorate of Environmental Tourism Affairs – National Directorate of Tourism Development (MINCETUR) Pamela Reyes, Specialist, PROFONANPE (National Implementing Entity) Elisabet Olivares, Consultant, PROFONANPE (NIE)
Key points	The project was presented, and opportunities were identified to build synergies between existing initiatives and the proposed intervention. Initiatives related to ecotourism based on both cultural and natural resources were acknowledged, and the potential to strengthen these ventures by enhancing their environmental and climate-related approach was recognized.

Institution	Ministry of Women and Vulnerable Populations (MIMP)
Date	07 July 2025
Participants	Jorge Juan Preciado, Acting Director II, Directorate of Displaced Persons and Culture of Peace, General Directorate of Population, Development and Volunteering (MIMP) Marcelino Varillas, Specialist, Directorate of Displaced Persons (MIMP) Marisol Torres, Specialist, Directorate of Displaced Persons (MIMP) Pamela Reyes, Specialist, PROFONANPE (NIE) Elisabet Olivares, Consultant, PROFONANPE (NIE)
Key points	The meeting focused on identifying potential synergies between the project and the Ministry's existing efforts to reduce structural socio-economic vulnerability, with a particular emphasis on a gender-sensitive approach. MIMP highlighted the importance of integrating climate resilience into programs aimed at supporting women-led enterprises, care economy initiatives, and violence prevention in climate-stressed communities. Opportunities for collaboration were identified in the co-design of capacity-building activities and productive initiatives that address climate vulnerability while promoting gender equity, especially in urban and peri-urban contexts with high exposure to climate hazards.

Institution	Ministry of Labor and Employment Promotion (MTPE)
Date	July 04, 2025
Participants	Rony Flores, Specialist, General Directorate for Employment Promotion (MTPE) Pamela Reyes, Specialist, PROFONANPE (NIE) Elisabet Olivares, Consultant, PROFONANPE (NIE) Roger Morales, Directorate General of Climate Change, Ministry of the Environment (MINAM)
Key points	Potential synergies were identified among sectoral initiatives aimed at self-employment and the formalization of informal enterprises—particularly within the Llamkasun Perú Program (temporary employment program) and the Productive Youth Program. A shared priority across these initiatives

	was the integration of sustainable "green" businesses into sectoral policies, as well as the ongoing development of a methodology to measure green employment.
Institution	Ministry of Production (PRODUCE)
Date	July 7. 2025
Participants	Alex Urbina Cárdenas, Director, Directorate of Climate Change and Aquatic Biodiversity (PRODUCE) Giancarlo Ríos, Specialist (PRODUCE) Pamela Reyes, Specialist, PROFONANPE (NIE) Elisabet Olivares, Consultant, PROFONANPE (NIE) Rogger Morales, Directorate General of Climate Change, Ministry of the Environment (MINAM)
Key points	Coordination centered on the role of artisanal fisheries as a potential sustainable livelihood strategy in climate-vulnerable coastal areas. PRODUCE emphasized ongoing efforts to strengthen productive capacities, formalization, and market access for artisanal fishers through its fisheries program. Potential synergies were identified in linking the project's nature-based and resilience-focused interventions with community-based fisheries initiatives, including the promotion of low-impact fishing practices, value chain improvements, and alignment with marine-coastal conservation goals. The importance of integrating climate risk into fisheries management and coastal planning was also underscored.

- Meetings at the Regional Level (13):

Institution	Regional Government of Ancash
Date	11 July 2025
Participants	Yeng Castillo Torre – Regional Manager of Natural Resources, GORE Áncash Diana Paola Giraldo Sandoval – Specialist, GORE Áncash Edwin Córdova – Specialist, GORE Áncash Pamela Reyes – PROFONANPE (NIE), Specialist Elisabet Olivares – PROFONANPE (NIE), Consultant Rogger Morales – General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	Coordination began with the presentation of the project initiative, its prioritized scope, and objectives. A joint assessment was conducted, focusing on the degradation of coastal ecosystems in the prioritized context of Chimbote, a strategic center for both industrial and artisanal fishing. Potential synergies were explored between the project and local government efforts, particularly regarding the identification of environmental challenges and the strengthening of capacities for the development of green enterprises and sustainable value chains.

Institution	Regional Government of Lambayeque
Date	02 July 2025
Participants	Juan Jose Inoñan Olivera, Regional Manager of Natural Resources, GORE Lambayeque Guillermo E. Moreno - Specialist, GORE Lambayeque Héctor Flores - Specialist, GORE Lambayeque Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Rogger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM) Roberto Mauricio Diaz Diaz - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	The meeting focused on climate vulnerabilities in the urban and peri-urban areas of Chiclayo, particularly related to flooding and coastal erosion, which are intensified by the El Niño phenomenon. The region experiences recurrent impacts on informal settlements and agricultural areas, highlighting the need for integrated risk management. The ongoing update of the Regional Climate Change Strategy was identified as a critical process to align future interventions and funding opportunities. Potential synergies were noted around ecosystem restoration, risk-sensitive planning, and the promotion of nature-based solutions in urban settings.

Institution	Regional Government of Arequipa
Date	10 July 2025
Participants	Andy Rodrigo Arcco - Specialist, GORE Arequipa Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Roger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	The meeting focused on the district of Camana, where climate risks are marked by water-related hazards, including river flooding and drought cycles. High vulnerability was noted in sectors such as agriculture and tourism, both crucial to the local economy. The regional government expressed interest in coordinating with the project on climate risk mapping and integrating nature-based solutions in river basin management and tourism resilience strategies.

Institution	Regional Government of Huancavelica
Date	3 July 2025
Participants	Hugo Caballero - Regional Management of Natural Resources, GORE Huancavelica Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Roger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	Discussions centered on water scarcity and the reduction of glaciers, which are significantly affecting both rural livelihoods and urban supply systems. The risk of mass movements triggered by soil saturation during intense rainfall events was also highlighted. Synergies were identified with regional initiatives focused on ecosystem restoration, highland water harvesting systems, and the need for early warning mechanisms adapted to mountainous terrain.

Institution	Regional Government of Ayacucho
Date	11 July 2025
Participants	Odvar Huamani, Deputy Manager, Regional Management of Natural Resources, GORE Ayacucho Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Roger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	The meeting emphasized water deficits as a critical climate risk, with consequences for rural livelihoods, food security, and social stability. The government highlighted evidence of internal migration linked to climate pressures, including agricultural decline. Opportunities for coordination include support for climate-resilient livelihoods, territorial planning with a climate lens, and the development of productive green value chains for vulnerable populations.

Institution	Regional Government of Ucayali
Date	2 July 2025
Participants	Nelsón Seijas, Regional Manager of Natural Resources, GORE Ucayali Hugo Diaz, Specialist, Regional Management of Natural Resources, GORE Ucayali Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant
Key points	Coordination focused on the urban and peri-urban areas of Pucallpa and Yarinacocha, where key climate-related challenges include deforestation, unregulated urban expansion, and the resulting increase in heat stress and vector-borne diseases such as dengue. A major milestone was noted: the recent approval of the Regional Climate Change Strategy of Ucayali to 2030 (ERCC-U al 2030) in January 2025, which provides a guiding framework for action and investment. Discussions also highlighted ongoing agroforestry programs within the Regional Conservation Area (ACR), linked to sustainable trade-oriented management plans currently under review. Opportunities for collaboration include urban reforestation, restoration of riparian ecosystems, and the promotion of green enterprises aligned with the ERCC-U.

Institution	Regional Government of Junín
Date	10 Julio 2025
Participants	Walter López - Regional Manager of Natural Resources, GORE Junín Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Rogger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	Coordination began with the presentation of the project initiative, its prioritized scope, and objectives. A joint assessment was carried out, focusing on fluvial flooding along the Satipo River and the increase in torrential rainfall. Related challenges were emphasized, including mass landslides, which have intensified due to deforestation, the expansion of the agricultural frontier, and unplanned urban growth. Additional concerns included the rise in temperatures and the spread of vector-borne diseases such as dengue. Ongoing projects in the area were identified, including HL2.

Institution	Regional Government of Madre de Dios
Date	4 July 2025
Participants	Luis Nieto - Regional Manager of Natural Resources, GORE Madre de Dios Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Rogger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	Coordination began with the presentation of the project initiative, its prioritized scope, and objectives. A joint assessment was conducted, focusing on forest ecosystem loss due to deforestation. The reduction in vegetation cover is intensifying problems related to heavy rainfall and heat stress. Additionally, vector-borne diseases such as dengue were identified as emerging issues associated with these climate impacts. Sustainable value chain initiatives were identified, particularly those linked to reforestation and the sustainable use of resources through productive approaches, such as nut cultivation.

Institution	Regional Government of San Martín
Date	2 July 2025
Participants	Ditmar Joel Alcarazo, Gerencia Regional de Recursos Naturales del GORE San Martín Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Rogger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	The meeting focused on the territory of Tarapoto, where climate-related risks such as intense rainfall, landslides, and urban flooding have worsened due to hillside deforestation and unregulated urban expansion. A key milestone was highlighted, the approval of the Local Climate Change Plan (March 2025), which now provides a strategic framework for local adaptation efforts. Additionally, the creation of a dedicated Climate Change Working Group within the Municipal Environmental Commission was recognized as a significant institutional advancement to improve coordination and monitoring. Opportunities for collaboration include the promotion of green infrastructure, nature-based solutions, and sustainable agroforestry and green business models in peri-urban areas.

Institution	Metropolitan Municipality of Lima
Date	11 July 2025
Participants	Stefany Aroni - Head of the Climate Change Office, Municipality of Lima (MML) María Esther Neyra -Specialist, Municipality of Lima (MML) Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant Rogger Morales - General Directorate of Climate Change, Ministry of the Environment (MINAM)
Key points	Coordination began with the presentation of the project initiative, its prioritized scope, and objectives. A joint recognition of priority climate hazards was addressed, focusing on coastal swell and wave impacts, heat stress and urban heat islands, and the increased occurrence of pluvial flooding in urban areas. The institution expressed interest in incorporating solid waste valorization as part of capacity-building efforts

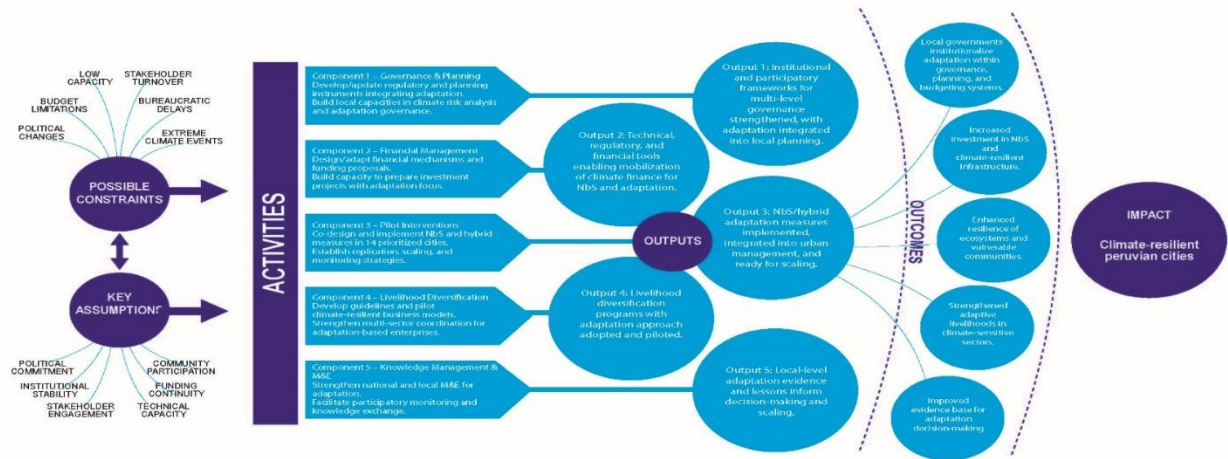
	to support green entrepreneurship, in line with its sectoral priorities on waste management. Ongoing initiatives were identified aimed at strengthening entrepreneurship among vulnerable groups, such as the “Lima Women for Climate” program, developed with support from C40 Cities.
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Institution	Regional Government of Tumbes
Date	4 July 2025
Participants	Lynelda López, Regional Manager of Natural Resources, GORE Tumbes Adrian Chiroque - Especialista GORE Tumbes Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant
Key points	Coordination began with the presentation of the project initiative, its prioritized scope, and objectives. A joint assessment was carried out, focusing on key issues such as mangrove ecosystem degradation and land-use change pressures, both of which threaten critical ecosystem services like coastal buffering. These ecosystems also represent important opportunities for the development of sustainable green enterprises, including artisanal fishing and ecotourism. Existing blue carbon initiatives linked to mangroves were acknowledged as relevant ongoing climate efforts in the territory.

Institution	Regional Government of Moquegua
Date	4 July 2025
Participants	María Barrios, Regional Manager of Natural Resources, GORE Moquegua Rosalinda Mamani Cuayla - Especialista GORE Moquegua Noe Botello - Especialista GORE Moquegua Pamela Reyes - PROFONANPE (NIE), Specialist Elisabet Olivares - PROFONANPE (NIE), Consultant
Key points	Coordination began with the presentation of the project initiative, its prioritized scope, and objectives. A joint assessment was conducted, focusing on sea level rise and its impacts on coastal areas, particularly the city of Ilo. Additional challenges were acknowledged, including water stress and the average increase in temperature. Reference was made to strategic instruments such as the Marine-Coastal Plan, which highlights the decline in species and the growing risks associated with climate change. Initiatives were also recognized involving the reforestation of coastal hill ecosystems with a productive focus on Tara cultivation, along with ongoing efforts to establish a Regional Conservation Area (ACR) aimed at protecting this vulnerable ecosystem.

ANNEX 3 Theory of Change

Theory of Change - Diagram



Paradigm Shift

IF cities in Peru effectively integrate climate change adaptation into their governance, planning, investment, and territorial action processes; strengthen their institutional, technical, and economic capacities to direct resources toward resilience-building; promote sustainable and inclusive productive alternatives; and prioritize the implementation of Nature-based Solutions (NbS) as the foundation for integrated territorial adaptation,

THEN Peruvian cities will be able to transition toward a climate-resilient, multi-level, and inclusive development model that protects and restores strategic ecosystems sustaining key ecosystem services, diversifies and strengthens the livelihoods of vulnerable populations, and ensures decision-making processes that are evidence-based, participatory, and sustainable in the face of the adverse effects of climate change.

COMPONENT 1:

GOVERNANCE AND PLANNING FOR CLIMATE CHANGE ADAPTATION

COMPONENT 2:

FINANCIAL MANAGEMENT FOR CLIMATE CHANGE ADAPTATION

COMPONENT 3:

PILOT INTERVENTIONS FOR CLIMATE RESILIENCE

COMPONENT 4:

DIVERSIFICATION AND PROTECTION OF LIVELIHOODS

COMPONENT 5:

KNOWLEDGE MANAGEMENT AND M&E IN ADAPTATION

<p>The integration of climate change adaptation through a territorial approach is strengthened within local governance, planning, and decision-making processes. This ensures coherence and alignment with national and subnational policy frameworks, particularly the National Adaptation Plan (NAP), the adaptation commitments outlined in the Nationally Determined Contributions (NDCs), and local development policies and plans</p>	<p>The integration of climate change adaptation, based on territorial approaches, is promoted within the financial management systems of local governments and other strategic stakeholders. This aims to enable the mobilization, administration, allocation, and/or monitoring of public and/or private resources. Such integration ensures transparency, efficiency, and the long-term sustainability of investments aimed at strengthening climate resilience.</p>	<p>The design and implementation of adaptation measures—including Nature-based Solutions (NbS) and hybrid approaches—are promoted as cost-effective and multifunctional strategies. These measures are integrated into urban planning and management processes, contributing to reduced climate vulnerability by decreasing hazard exposure and enhancing the adaptive capacity of both strategic ecosystems and vulnerable communities.</p>	<p>The strengthening and diversification of livelihoods is promoted through a climate change adaptation lens, with a focus on reducing vulnerability and increasing adaptive capacity, particularly in the economic dimension</p>	<p>Enabling conditions are created and utilized to strengthen knowledge management and monitoring tools, in order to inform decision-making and assess the effectiveness of climate change adaptation actions.</p>
<p>OUTCOME 1</p>	<p>OUTCOME 2</p>	<p>OUTCOME 3</p>	<p>OUTCOME 4</p>	<p>OUTCOME 5</p>
<p>Local governments integrate climate change adaptation, using a territorial approach, into local development governance and planning processes, aiming to reduce risks associated with climate change impacts and strengthen the resilience of cities to climate-related hazards</p>	<p>Local governments integrate climate change adaptation into the economic and financial management of local development by strengthening budgeting tools and investment regulations that promote resilient, sustainable, and results-oriented interventions to address the risks associated with climate change impacts.</p>	<p>Vulnerable cities and communities implement Nature-based Solutions (NbS) and hybrid measures as strategies for climate change adaptation, in coordination with local planning and management processes. These actions strengthen ecological, urban, and social resilience to climate-related hazards.</p>	<p>Vulnerable communities diversify and strengthen their livelihoods through climate-resilient economic options, reducing their exposure to and dependence on systems sensitive to climate change.</p>	<p>Decision-making in local management is evidence-based and supported by knowledge management and monitoring and evaluation (M&E) processes that guide climate policies and actions. This approach strengthens the capacity of local governments and relevant stakeholders to effectively manage climate change adaptation.</p>
<p>OUTPUT 1</p>	<p>OUTPUT 2</p>	<p>OUTPUT 3</p>	<p>OUTPUT 4</p>	<p>OUTPUT 5</p>

<p>Institutional and participatory frameworks for multilevel, multisectoral, and multi-stakeholder governance are strengthened to incorporate and/or enhance climate change adaptation within urban management, using a territorial approach. Enabling conditions are also developed to integrate climate adaptation into local planning instruments, through the incorporation of technical tools based on climate scenarios and risk analysis of climate change impacts. In parallel, local capacities are built to identify, prioritize, and manage climate risks using a Nature-based Solutions (NbS) approach, fostering integrated territorial adaptation in alignment with the National Adaptation Plan (NAP) and the adaptation components of the Nationally Determined Contributions (NDCs).</p>	<p>Technical, regulatory, and financial tools are consolidated to facilitate the integration of climate change adaptation into planning, investment, and public budgeting instruments at both national and subnational levels. This includes capacity-building for municipal staff in the formulation of projects with a climate-adaptation approach.</p> <p>In addition, coordinated access to climate finance mechanisms is promoted through multiple funding windows—including public and private sources, international cooperation, and multilateral funds—focusing on the implementation of Nature-based Solutions (NbS) to strengthen the resilience of prioritized cities across different geographical regions of the country.</p>	<p>Pilot interventions of Nature-based Solutions (NbS) and hybrid measures are implemented in prioritized cities across Peru's diverse geographical regions—coast, highlands, and Amazon—as part of their climate-adaptation strategies. These interventions are integrated into local planning processes using a territorial approach and are accompanied by strategies for their replication and scaling.</p>	<p>National and/or subnational sectoral livelihood diversification programs have incorporated a climate change adaptation approach into their guidelines, criteria, and strategies, promoting more resilient livelihoods in vulnerable communities. Coordination between sectors and local governments has also been strengthened to provide technical assistance to local enterprises with adaptation potential.</p> <p>At the same time, specific guidelines and capacities have been developed to support the economic use of Nature-based Solutions (NbS), integrating environmental, social, and economic co-benefits that promote sustainable business models aligned with climate resilience.</p>	<p>Knowledge management and adaptation monitoring have been strengthened, in alignment with the National Monitoring and Evaluation System for Adaptation Measures managed by the Ministry of Environment (MINAM).</p> <p>Additionally, knowledge management processes have been implemented to support the documentation, analysis, and dissemination of lessons learned, good practices, and relevant technical evidence to inform local adaptation planning and management in urban areas.</p>
<p>ACTIVITIES 1</p>	<p>ACTIVITIES 2</p>	<p>ACTIVITIES 3</p>	<p>ACTIVITIES 4</p>	<p>ACTIVITIES 5</p>
<p>1.1 Development and/or update of instruments (such as investment plans and/or programs, guidelines, manuals, sectoral programming frameworks, among others) and regulatory frameworks (such as ordinances, directives, among others) that promote the integration of adaptation measures into local development.</p>	<p>2.1 Design, update, and/or strengthening of public and cooperation-based financial mechanisms for climate change adaptation at the territorial level.</p>	<p>3.1 Participatory development of climate risk assessments in prioritized communities to identify Nature-based and hybrid-adaptation measures in urban areas.</p>	<p>4.1 Development of guidelines and/or tools for integrating climate change adaptation into productive diversification programs related to climate-sensitive sectors in prioritized urban areas, including the sustainable use of Nature-based Solutions (NbS).</p>	<p>5.1 Strengthening of the Climate Change Adaptation Monitoring and Evaluation System with disaggregated local-level information (including climate risk assessments, implementation of pilot measures, planning and management actions, and livelihood protection efforts, incorporating cross-cutting approaches). This information will support evidence-based decision-making for local adaptation management.</p>

<p>1.2 Design and implementation of training programs and technical assistance for government officials from prioritized local governments to support the integration of climate change adaptation into local planning and governance instruments, including Local Climate Change Plans and tools for climate risk analysis.</p>	<p>2.2 Development of three (03) concept notes—one for each geographical region—targeted at national and/or international funding windows available for the implementation of Nature-based Solutions (NbS)-aimed at climate change adaptation in each of the prioritized cities.</p>	<p>3.2 Participatory design and implementation of fourteen (14) pilot interventions involving Nature-based Solutions (NbS) and hybrid measures (such as Multi-Hazard Early Warning Systems—MHEWS), in collaboration with local stakeholders. These interventions will aim to reduce climate vulnerability in prioritized communities across Peru's three main geographical regions—coast, highlands, and Amazon—based on the specific climate hazards identified in each area.</p>	<p>4.2 Design and implementation of training processes for technicians, professionals, and local stakeholders in climate-resilient productive activities and/or the promotion of enterprises with a climate adaptation approach.</p>	<p>5.2 Design and application of local participatory monitoring tools for the implemented pilot adaptation measures.</p>
<p>1.3 Development and/or update of Local Climate Change Plans and Regional Climate Change Strategies.</p>	<p>2.3 Promotion of resource mobilization and public-private partnerships.</p>	<p>3.3 Development of strategies for the design, operation, and maintenance of pilot measures, targeting key stakeholders to ensure their sustainability. This includes mechanisms for replication and scaling, as well as the integration of these initiatives into local management through various planning and governance instruments.</p>	<p>4.3 Establishment of multisectoral, multi-stakeholder, and multilevel coordination platforms to facilitate technical assistance for promoting local enterprises with a climate adaptation approach, including support for the design of climate-resilient business models.</p>	<p>5.3 Capacity-building for local governments and key stakeholders through training modules on climate change scenarios, climate risk assessments, integration of climate information into local management for adaptation purposes, evaluation of the effectiveness of adaptation measures, among other related topics.</p>
<p>1.4 Development and/or update of climate risk analyses, including climate change scenarios at the district level.</p>	<p>2.4 Training of technical staff from prioritized local governments and key stakeholders in the identification, formulation, and evaluation of investment and cooperation projects that incorporate climate change adaptation to enhance urban resilience, within the framework of the implementation of the adaptation component of the NDCs.</p>	<p>3.4 Design and implementation of local monitoring mechanisms that are differentiated and adapted to the capacities and roles of the various stakeholders involved (public authorities, private sector, civil society, and communities), to ensure the sustainability and participatory evaluation of implemented measures. These mechanisms will be linked to progress reporting under the Monitoring and Evaluation System for Adaptation Measures managed by MINAM.</p>	<p>4.4 Development of six (06) demonstrative pilot business models—two (02) in each geographical region—that incorporate an ecosystem-based adaptation approach. These models will be linked either to the project's pilot interventions (Component 3) or to existing local initiatives and enterprises.</p>	<p>5.4 Establishment of agreements and partnerships among academic institutions, public agencies, and technical-scientific entities (such as SENAMHI, IGP, among others) aimed at developing training programs and generating strategic inputs for local planning (e.g., climate scenarios), incorporating participatory tools with a territorial approach.</p>

<p>1.5 Development and/or strengthening of governance and territorial coordination mechanisms to foster synergies among adaptation measures under the framework of the NDCs, using a multilevel approach for the management of the prioritized cities.</p>	<p>2.5 Design and implementation of three (03) pilot training and technical assistance programs for the private sector— one (01) in each geographical region— for the application of the AdaptAcción tool, aimed at identifying and recognizing adaptation actions and mobilizing resources for climate adaptation within private sector value chains.</p>	<p>3.5 Capacity-building programs with cross-cutting approaches (gender, interculturality, and intergenerational inclusion) targeting municipal officials, public service operators, community leaders, youth, and other stakeholder groups, focused on Ecosystem-based Adaptation (EbA) and its role in climate change adaptation within local management. These programs will also include experience-sharing spaces between pilot cities and other interested municipalities (networks of climate-resilient cities).</p>	<p>4.5 Design and implementation of local monitoring mechanisms for strengthened livelihoods, linked to progress reporting under the Monitoring and Evaluation System for Adaptation Measures managed by MINAM.</p>	<p>5.5 Knowledge management for climate change adaptation in local urban governance.</p>
<p>1.6 Design and implementation of participatory strategies and processes for community empowerment and the integration of local knowledge and key stakeholders in climate change adaptation planning</p>				