



PRE-CONCEPT FOR A REGIONAL PROJECT/PROGRAMME

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Enhancing the climate resilience of coastal communities in Limon, Costa Rica and Bocas del Toro, Panama through Nature-based Solutions for local livelihoods
Countries:	Costa Rica and Panama
Thematic Focal Area ¹ :	Disaster risk reduction and early warning systems
Type of Implementing Entity:	International
Implementing Entity:	United Nations Environmental Program (UNEP)
Executing Entities:	Fundación Natura and Fundecooperación
Amount of Financing Requested:	11.9M (in U.S Dollars Equivalent)

Project / Programme Background and Context:

1. Limon and Bocas del Toro cover 13,846 km², are home to 607.407 people², and conform a bi-national continuous bio-geographic region³ that is already impacted by extreme events and climate variability (main hazards being heavy rainfall episodes, strong winds), as well as by slow-onset climate change (main hazards being sea level rise causing coastal erosion), resulting in sudden rapid events such as landslides, overflow of rivers, inland and coastal flooding and storm surge.
2. Normally, these events are associated with hurricanes in the Caribbean that severely impact local economies as systems (infrastructure and social) are not able to cope with, nor respond to increased levels and magnitude of rain, winds, and storm surges. Drownings, damage to households (including damage to infrastructure or complete destruction), communities' isolation, loss of croplands, critical public infrastructure damage, and electricity and freshwater supply failure, are the most common reported consequences associated with such events^{4,5}. As with other similar events, during Eta and Iota hurricanes (2020) coastal settlements and hundreds of hectares of cropland flooded or production was unable to reach markets. Only in Bocas del Toro, 19 people died during storm surge, flash floods and intensive rains. Land subsidence has also been attributed to the amount of rainfall⁶. Historical records register similar life-threatening impacts of several hurricanes since 1851^{7,8,9}; for example, in 1988, Joan severely impacted the coastal regions of Limon and Bocas del Toro. Costa Rica estimated 3.5 billion USD in losses due to hydro-meteorological events between 1998-2018, 500 million USD calculated for the province of Limon¹⁰. Similar estimates do not exist for Panama; furthermore, the lack of reporting at the local level, both in Limon and Bocas del Toro has made it difficult to assess the damages of these and other events, although such impact is present in the testimonies of inhabitants¹¹.
3. Future climate projections based on RCP 8.5 and RCP 4.5 scenarios for Limon, suggest an increase on precipitation intensity of 60 to +100mm/h respectively by 2070, potentially increasing even further landslides, flash floods, and flood risks during the rainy season. Annual precipitations could rank between 2000-4500 mm/year in the mid and long term. Coastal areas with potential flood hazard (either due to sea level rise or

¹ Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.

² Costa Rica household survey 2020 & Panama Census 2010

³ Biogeographical region sharing climate, hazard exposure, short watersheds, abrupt relief, seagrass-coral-mangrove ecosystem mosaic, rich continental and marine biodiversity, home of charismatic and endemic species

⁴ DesInventar dataset (<https://www.desinventar.net>) Reports for Costa Rica (1968-2019) and for Panama (1933-2020)

⁵ Hazards identified by the National Climate Change Directions.

⁶ Cathalac 2020 Impactos del Huracán Eta e Iota en Panama <https://www.servir.net/servir-en-accion/analisis-de-desastres/1134-impacto-del-huracan-eta-en-panama-noviembre-del-2020.html>

⁷ Martha 1969; Cesar, 1996; Lenny, 1999; Otto, 2016; Mathew, 2016; Nate 2017

⁸ Solano et al 2011 Impacto de los Ciclones Tropicales del Atlántico en América Central, Temporada de 1968 y 1969. Diálogos rev. electr. hist vol.12 n.1 San Pedro Aug. 2011

⁹ Lizano Rodríguez, O. and Mora Escalante, R. 2019. Simulación de las condiciones oceanográficas de los huracanes que han pasado más cerca de Costa Rica. *Revista En Torno a la Prevención*, No. 22: 22-31

¹⁰ Costa Rica impacto de los fenómenos naturales para el período 1988-2018, por sectores, provincias, cantones y distritos : compendio / Ministerio de Planificación Nacional y Política Económica, Ministerio de Agricultura y Ganadería. Secretaría Ejecutiva de Planificación Sectorial Agropecuaria. -- San José, CR : MIDEPLAN, 2019

¹¹ Idem 8

precipitation)¹² and under intense coastal erosion¹³ have been identified. For Panama, CATHALAC climate models for water security suggest abnormalities in precipitation and temperature patterns for the medium and long term¹⁴ with very high levels of uncertainty, hence a much-needed effort to better understand the local dynamics and interactions with climate stressors. Regional assessments place the Caribbean coasts of Costa Rica and Panama under much greater exposure to climate related risks, including of hurricanes, not due to the direct hit, but to sea level rise combined with the storm surges associated with hurricanes¹⁵.

4. Change in precipitation patterns, floods, landslides, flash floods and coastal erosion are already reflected/integrated in national and local (Costa Rica) planning instruments¹⁶. Other climate change associated risks that could be impacting coastal populations but are not being addressed include: saline intrusion, ocean acidification, increase in temperature (land & sea surface) and wave elevation. Climate change related uncertainty together with the limited understanding of local systems (that contribute to this uncertainty) result in an enormous challenge for resilient planning and decision making. Uncertainty and often misconception about current and future risk, together with the absence of reporting and information to monitor changes, is already resulting in misinterpretation among the public on how to mitigate such risks¹⁷, and tensions among stakeholders¹⁸.
5. Project pre-consultations (see Annex 1 for more detail) with local communities in the Panamanian side to better understand their climate adaptation needs provided a worrying scenario in which climate change impacts are being attributed to their own actions (*"there are more recurrent floods because we have not treated nature nicely"*) or there is a total misconception of causes and consequences (*"solar panels cause disasters"*, *"we don't understand why Orey trees are dying"*, *"what can we do for the sea to stop rising?"*). Part of the problem is the lack of understanding and monitoring of local dynamics and how these are being impacted by a changing climate together with deficient communication to local communities.
6. Limon and Bocas del Toro also share a similar biogeography and rich cultural diversity (including transboundary indigenous territories and afro-Antillean communities) and face similar interlinked socio-economic, land planning and environmental challenges (see Annex 2 for more detail about non-climatic drivers of vulnerability). Indigenous groups, youth, and women, -particularly women head of families- have been identified in both regions among the most vulnerable populations due to lack of formal employment, limited access to technical training opportunities and overall limited capacity to diversify their livelihoods^{19,20}. The Covid pandemic increased such vulnerability, particularly because the tourism sector, which is the one that normally provides informal non-skilled employment, was inactive for many months²¹.
7. Agriculture is the main activity in the area²², but techniques used do not consider climate aspects or adaptation practices. Banana, the most important crop, is mainly produced by large companies for export, increasing the pressure for monocropping. The regions' subsistence agriculture is highly inefficient, non-reliable and highly vulnerable to climate variability. Tourism is the next most relevant economic activity for both provinces, and, as mentioned before, it is also the source of employment for the more vulnerable and less qualified members of the communities^{14,23,24}. Even though it is broadly recognized that tourism is a relevant source of income and development, local communities, business, and authorities have not yet been able to harmonise the industry with its impacts to the environment; furthermore, climate change associated risks are not being considered in tourism development and the role of healthy ecosystems and soils to protect and increase the resilience of local communities is neglected in land use and economic development planning. Livestock and fisheries are also important livelihoods in the area. The fishery is mostly artisanal, and its main destinations are local trade (e.g., for tourism), self-consumption, and direct sales. Sport fishing, linked to tourism, is also relevant in some areas²⁵. Despite both countries having national policies promoting "farm-to-table" tourism to empower and strengthen the link between local production and tourism, the reality is that local productive sectors are not aligned. A few communities have built on agro-tourism, but these are

¹² Areas: Parímina, Boca Facuare, Limon, Todruk, Talamanca and the river deltas (Colorado, Tortuguero, Matina, Banano, La Estrella y Sixaola). Source: Borge et al 2018 Plan-A: Territorios Resilientes ante el Cambio Climático. MINAE. Costa Rica

¹³ Areas: Limón, SE Westfalia, Cahuita, Puerto Vargas, Manzanillo and Gandoca. Source: Barrantes and Sandoval 2021. Cambios en la línea de costa en el Caribe Sur de Costa Rica durante el periodo 2005-2016

¹⁴ Comité de Alto Nivel de Seguridad Hídrica 2016. Plan Nacional de Seguridad Hídrica 2015-2050: Agua para Todos. Panamá, República de Panamá.

¹⁵ IHUC, CEPAL 2012 Efectos del CC en las costas de America Latina y el Caribe

¹⁶ Idem 7

¹⁷ Camargo Velandia et al. 2016. Variabilidad climática y desarrollo de capacidad adaptativa en el Archipiélago Bocas del Toro en Panamá. ESAICA: 2 7-11

¹⁸ Pre-consultation processes with local communities in Panama May 2020 (see Annex 1)

¹⁹ Variabilidad climática y desarrollo de capacidad adaptativa en el Archipiélago Bocas del Toro en Panamá 2016

²⁰ Plan Regional de Competitividad Territorial Region Huetar Atlantica Vision 2012-2022+

²¹ PNUD 2020. Impactos del COVID en Panama

²² Diagnóstico Huetar Caribe 2021 (internal document)

²³ Plan Maestro de Turismo Sostenible de Panama 2020-2025

²⁴ Region Huetar Caribe Plan de Desarrollo 2030

²⁵ Towards the transboundary Integrated Water Resource Management (IWRM) of the Sixaola River Basin shared by Costa Rica and Panama. GEF PIF.

exceptions, as local products are not reaching the markets and are not normally supplying neither tourists nor communities.

8. Through the proposed project, Nature-based Solutions (NbS) will be applied for climate risk mitigation and resilient local livelihoods (tourism and associated agriculture, fishing practices) while strengthening enabling conditions for coastal communities' climate adaptation. Considering the variety of climate change associated risks and that not all of them have been considered at the national level, despite being observed at the local level, the project will address the current lack of understanding of climate change associated risks, their mitigation via Nature-based Solutions (NbS) and will aim to increase coping capacity by addressing key vulnerability drivers and strengthening information and capacity for decision making in a changing climate. To achieve this, on one hand, NbS need to support resilient livelihoods and ecosystems, while using local evidence for risk mitigation, and on the other hand, enabling mechanisms (policy, finance, information, capacity) must be ensured so communities and institutions can act informed. The project will directly address the challenges mentioned and build on the region's resilience opportunities²⁶.
9. Indigenous groups, youth, and women, particularly women head of families have been identified in both regions among the most vulnerable populations due to lack of formal employment, reduced access to education and technical training opportunities and overall reduced capacity to diversify their livelihoods^{8,27,28}.
10. The proposal is aligned with the national adaptation priorities and contextualized to the regional current and potential climate change impacts and needs, and associated uncertainties. Costa Rica and Panama's national climate adaptation policy instruments, both emphasize the integration of climate adaptation within sustainable development frameworks, and its mainstreaming in all sectors of the economy including disaster and risk reduction (DRR)^{29,30}. As such, adaptation initiatives are required to be framed within sustainable development contexts and be aligned with each country's adaptation priorities. Watershed management, biodiversity, productive systems, infrastructure, climate information and health are all adaptation priorities for both, Panama and Costa Rica. For Costa Rica, tourism, capacity building, land/coastal/marine planning, investment, and financial security are also key adaptation priorities. For Panama, cities, marine and coastal systems, circular economy, measuring monitoring and verification risk reduction are also key adaptation priorities. More detail about alignment with national adaptation priorities can be found on Annex 3.
11. The project aims to influence climate resilience conditions for communities within the coastal provinces of Limon (9,189 km²) and Bocas del Toro (4,657 km²³¹), as well as directly into settlements and rural areas with subsistence agriculture that potentially could be linked to tourism and around 4016.2 km² of protected areas (marine and continental) that would increase ecosystem connectivity³². In Costa Rica, a preliminary selection of the focus populations within Limon provinces includes the urban and rural localities of Limon, Puerto Viejo de Talamanca, and rural coastal areas of Pococi (including Tortuguero National Park), Siquirres, and Matina, of which the project would target around 166,000 people. Over 40% of the population in the province lives in rural areas³³. According to MTSS (2002), there is a lack of formal employment for women, rural youth, and people with disabilities. By 2020, only 28% of women in the province were formally occupied, which was below the male average (over 50%). Unemployment is closely linked to poverty, with 46% of the poor households in the province being headed by women by mid-2020³⁴. In Talamanca and Matina cantons, between 48-49% of the population is female, more than 60% is between 15 and 64 years-old, and between 50-60% have at least one unmet basic need. Additionally, Talamanca has one of the highest rates of illiteracy in the country, with most cases being women (8% vs 5.9% male)³⁵. In general, the

²⁶ Conditions that could enable climate resilience: rich cultural, landscape and biological diversity; well-identified environmental problems around intensive agriculture; well-documented land-use history; well-documented impacts of tourism activities; sound understanding of coastal ecosystems' and charismatic species' ecology; highly biodiverse systems; local successes agrotourism; protected area network; relatively short watersheds; local communities and authorities, as well as national authorities aligned in nature-based tourism as an alternative for regional sustainable development and mutual acknowledgement from Panama and Costa Rica to learn from each other successes.

²⁷ Variabilidad climática y desarrollo de capacidad adaptativa en el Archipiélago Bocas del Toro en Panamá 2016

²⁸ Plan Regional de Competitividad Territorial Region Huetar Atlantica Vision 2012-2022+

²⁹ Gobierno de Costa Rica. Política Nacional de Adaptación al Cambio Climático 2018-2030. 2018 <https://cambioclimatico.go.cr/wp-content/uploads/2019/01/Politica-Nacional-de-Adaptacion-al-Cambio-Climatico-Costa-Rica-2018-2030.pdf>?x64720

³⁰ Gobierno de la Republica de Panama. 2020. Contribución Determinada a Nivel Nacional de Panama (CDNI). Actualización.

<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Panama%20First/CDN1%20Actualizada%20Rep%C3%BAblica%20de%20Panam%C3%A1.pdf>

³¹ This value is an estimation and does not include marine areas where the project will also be implemented. During the proposal design marine areas will be estimated.

³² A preliminary selection of the focus populations includes the Costa Rican localities of Tortuguero in the northern part of Limon, and Cahuita -Puerto Viejo, in the southern part; and Panamanian localities of the archipelago of Bocas del Toro, and coastal communities of Bocas del Toro province.

³³ MIDEPLAN y MAG. 2013. Informe Sistematización de la Información del Impacto de los Fenómenos Naturales en Costa Rica. Periodo 2005-2011. Available in: <https://reliefweb.int/sites/reliefweb.int/files/resources/Informe%20sistematizacion%20de%20la%20informacion%20del%20impacto%20de%20los%20fenomenos%20naturales%20en%20Costa%20Rica.pdf>

³⁴ Diagnóstico Región Huetar Caribe. MINAE.

³⁵ Retana et al. 2017. Riesgo ante eventos hidrometeorológicos extremos en Liberia, Carrillo, Matina y Talamanca. Instituto Meteorológico Nacional, MINAE-AECID-MIDEPLAN. Available in: <http://cglobal.imn.ac.cr/documentos/publicaciones/RiesgoEventosHMExtremos/offline/download.pdf>

province has been considered the most vulnerable in the country, in great part due to its population/social conditions (more than its climate hazards)³⁶. For Panama, preliminarily considered townships within Bocas del Toro province include Bocas de Toro, Bastimentos, Changuinola, Chiriqui Grande, Almirante, among others. These townships account for more than 83,000 people, of which over 48% is female, around 48% is younger than 18 years old, and over 66% is living in poverty and considered vulnerable³⁷. The province occupied the 4th place in Panama's Multidimensional Poverty Index 2018, which measures poverty not only based on income, but also on education, housing, basic services, access to internet, health, and employment³⁸.

Project / Programme Objectives:

12. The objective of the project is to increase the climate change resilience of coastal communities of Limon and Bocas del Toro to cope with both rapid and slow-onset climate change events by strengthening and integrating local livelihoods around nature-based solutions to reduce vulnerability and build adaptive capacity. This will be achieved by:
 - a) Ensuring the ecological resilience and integrity of ecosystems supporting sustainable livelihoods and reducing climate risks.
 - b) Enhancing nature-based livelihoods and value chains' coping capacity, and access to financial mechanisms that support adaptation processes.
 - c) Increasing key stakeholder's information access and use, and cross-sectoral capacity for decision making in a changing climate.

Project / Programme Components and Financing:

Project / Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US\$)
1. Nature based solutions for adaptation benefits	1. Increased ecosystem resilience in response to climate variability and climate change.	1.1 Climate risk and vulnerability assessments developed to identify a portfolio of potential nature-based climate resilient livelihoods (products and services). 1.2 Area managed to withstand climate change through NbS pilots (applied to watershed management, coastal protection, and climate resilient local livelihoods).	Costa Rica & Panama	4.0M
2. Strengthening livelihoods to promote climate change resilience.	2. Strengthened livelihoods and sources of income for vulnerable communities in targeted areas.	2.1 Strengthened nature-based climate resilient local livelihoods and value chains (tourism, agriculture, and fisheries as relevant). 2.2 Financial products and mechanisms supporting the transition to nature-based climate resilient local livelihoods. 2.3 Standards for resilient (nature-based) tourism developed. 2.4 Strengthened capacities of local stakeholders on nature-based resilient livelihoods.	Costa Rica & Panama	4.0M

³⁶ MINAE, IMN, PNUD. 2011. Análisis de riesgo actual del sector hídrico de Costa Rica ante el cambio climático.

³⁷ Censo 2010 de Panama.

³⁸ PNUD, MIDES. 2020. Índice de Pobreza Multidimensional (IPM-C). Available in: https://mppn.org/wp-content/uploads/2020/10/Panama-IPM_Digital_3-30-9-2020-final.pdf

3. Information and knowledge for resilient decision making.	3. Improved knowledge, information and policies that promote and enforce resilience measures.	3.1 Bi-national climate resilience local information system in place for project Monitoring, Evaluation and Learning. 3.2 Climate change adaptation mainstreamed into local planning and businesses' management, aligned with local DRR strategies. 3.3 Knowledge management products incorporated in bi-national system to capture project results, lessons learned, training material, etc. 3.4 Awareness-raising strategy in place focused on climate change impacts on local communities, and Nature-based climate resilient local livelihoods.	Costa Rica & Panama	2.0M
6. Project/Programme Execution cost				0.95M
7. Total Project/Programme Cost				10.95M
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)				0.93M
Amount of Financing Requested				11.9M

Project Duration: 4 years (48 months)

PART II: PROJECT / PROGRAMME JUSTIFICATION

13. The current development trajectory Limon and Bocas del Toro is leading to increased vulnerabilities to climate change due to a combination of: i) lack of understanding of climate change associated risks (climate-blind business-as-usual development with no associated planning), ii) uncertainty related to climate risks, and iii) lack of technical capacity that can increase coastal communities' resilience and coping capacity to climate change and environmental degradation.
14. Both, **Limon and Bocas del Toro are geographically and culturally diverse, facing similar socio-economic challenges and resilience opportunities for development.** Both follow a similar mosaic of coastal ecosystems (ridge-to-reef) that are under similar pressures (climate and human driven) and are being promoted and recognized as key inputs for tourism and more recently for sustainable agriculture³⁹. The provinces have **similarities (in challenges and opportunities) and a shared vision on adaptation underpinned on sustainable economical development based in a rich natural capital, particularly focussed on local livelihoods. A joint effort towards such goal would ensure a common approach to ecosystem management for disaster risk reduction and climate change adaptation. A regional approach would also contribute to a better understanding of local coastal dynamics, as well to align development goals towards resilient** sustainable communities and livelihoods, while acknowledging differences in local contexts and taking full advantage of the country-to-country learning opportunities and south-to-south cooperation.
15. Additionally, the regional approach is cost-effective precisely because this south-south cooperation and exchange of experiences will **accelerate the provinces/countries' learning processes and transferring of strengths to tackle similar adaptation challenges, making it cost-efficient.** For example, Costa Rica's more advanced stage in their NAP process (e.g. vulnerability diagnoses developed, planning for risk assessments, execution of adaptation measures) can help enhance the planning capacities of Panama and guide the type of studies needed. Similarly, Bocas del Toro's more developed touristic products and services can be useful for Limon. Also, given the above-mentioned geographical/ecological connectivity⁴⁰, other

³⁹ The regions already share the La Amistad protected area, the Sixaola delta and important areas for conservation; and are part of the ecosystems existing biological corridors that enable and strengthen ecological resilience, across the southern Caribbean coastal zone and attract national and international tourists for wildlife observation, indigenous communities, agro-tourism, scientific tourism and mostly for adventure and beach and sun tourism

⁴⁰ As mentioned in the previous footnote, the two provinces share a binational watershed (Sixaola), a binational protected area (La Amistad) and their coasts both belong to the Caribbean Large Marine Ecosystem (CLME) region.

initiatives/projects target the area as one, which **allows the allocation of funds to strategic activities, catalyzing actions, and harnessing synergies**. The cost-effectiveness also increases when activities are complemented and aligned with existing regional programs/strategies. Costs will be shared throughout all activities, such as to produce knowledge products (output 3.3) that capture project results and lessons learned, including data about cost-effectiveness itself (e.g., of the pilots in output 1.2).

16. Project Component 1 aims to reduce communities' vulnerability by enhancing the ecological resilience of land and coastal ecosystems present in both regions (fundamental for the provision of protective and regulative services) and by strengthening the functions that allow provision of other key services for Nature-based local resilient livelihoods. Outputs in this component will allow a better understanding of ecosystems functionalities associated with mitigating climate risks and, via pilots, the identification of innovative ways in which nature and ecosystems can provide sustainable and resilient services and livelihoods to communities, including those services related to climate risks mitigation.
17. Specific adaptation activities for the pilots will be defined in further formulation stages. Potential NbS at the watershed and landscape (coastal) levels include starting/continuing reforestation and forest conversion processes, wetland's restoration, increased bio-retention and infiltration through green spaces, strengthening protected areas management plans, including and/or updating local flood management plans to include NbS (Eco-DRR) based on the project pilots (output 1.2). The project would engage with stakeholders across selected watersheds to promote sustainable agriculture practices -such as agroforestry, regenerative agriculture, etc. depending on context- to ensure forest cover restoration and conservation. Potential NbS practices for agriculture include upper watershed forest protection (including working with landowners and authorities for awareness raising, as in output 3.4), soils' biodiversity restoration (reducing chemicals and fertilizers, pest management plans revision), soil conditioning to reduce erosion, increased forest cover in farms, agroforestry, water retention and infiltration areas, among others. These solutions would need to be combined with more efficient farm management, financially viable sustainable practices, and increased access to finance (pilots in output 1.2, aligned with 2.1, 2.2, 2.4). As mentioned, the proposed project focuses on tourism and agriculture as the two main livelihoods. Other livelihoods (e.g. fisheries) will be characterized during concept/full proposal formulation if relevant/critical for the specific targeted localities. Further analysis will then be done to determine other pertinent NbS, which might include the restoration of mangroves, coral reefs or coastal ecosystems in general.
18. Component 2 aims to increase livelihoods and value chains' coping capacities. Climate resilient livelihoods (tourism and associated value chains in agriculture and fisheries) depend not only on healthy systems, but also on innovative, cost-effective and affordable alternatives to business-as-usual practices. A large input into technical capacity is also needed, focused on the implementation of NbS and how they can increase efficiency of local production, including improved access to financial mechanisms and guided by standards for resilient development. The pilots in component 1, and activities in component 2 will aim to strengthen and integrate economic activities around NbS in order to diversify livelihoods and reduce vulnerability to climate change. Training in NbS applied to local livelihoods (tourism services and supporting productive sectors) will increase communities' coping capacity and resilience opportunities.
19. Component 3's elements will **improve decision making, as well as local and sector planning while also collecting data and information to better understand the impacts of climate variability and other climate change related risks in local economies, including registering and reporting losses**. A better understanding of the climate risks and impacts associated with sea level rise, saline intrusion, ocean acidification, storm surges and climate variability will allow all stakeholders to take more informed decisions regarding land use and actions to mitigate climate change related risks. The Binational climate resilience local information system, output 3.1, will feed from previous outputs and will become the **monitoring, evaluation and learning** tool for the project, incorporating not only environmental information, hazards and losses, specifics of areas and types of interventions, in order to steer the project accordingly with emerging challenges and opportunities, and ensure its continuity post 2027 (4 years after potential start of project implementation).
20. Annex 5 expands on the proposed outputs and interlinks between them, referencing cases to portray the cost-effectiveness of the approach. Those cases are listed, proving the **cost-effectiveness of concrete Nature-based Solutions in Latin America and the Caribbean**. There is a need to grow the evidence base for NbS, but according to Watkiss et al. (2019), even in data-poor or data-limited settings, no-regret or low-regret NbS options can be prioritized, including wetland rehabilitation in areas of high flood risk and establishment of protected areas for vulnerable habitats and threatened species, providing multiple co-

benefits to communities and ecosystems. In general, NbS provide a triple benefit in terms of mitigating climate change, building agricultural production and resilience, and enhancing nature and biodiversity^{41,42}.

21. To achieve the **region's goal on nature-based sustainable growth** (including Climate resilient economic growth), natural capital thresholds need to be understood (as in output 1.1), both in relation to pressures from a changing climate and to sustainable use, information that is still scarce for most tropical coastal marine ecosystems despite several global efforts attempting to solve key questions⁴³. **Through a combined effort of activities from all components, the project aims to provide evidence-based adaptation solutions that are sustainable, financially viable and enhance services provided by tropical coastal ecosystems. The project will provide innovative contextualised approaches** for Limon and Bocas del Toro, and these could also be applicable in other tropical areas. Given the effort required for this transition and the diversity of stakeholders involved in it, **knowledge products** resulting from components 1 and 2 and developed through component 3 will be designed to target different audiences across all sectors, including the financial, education, commerce, infrastructure and planning sectors.
22. Although both countries are prioritizing sustainable tourism, the sector has not yet integrated climate change impacts into its development policies^{44,45}. Furthermore, despite the exposure and communities' observations⁴⁶, national agriculture, land planning and biodiversity policies face challenges mainstreaming climate change adaptation strategies within sectorial instruments, either because the policies are incomplete, lack funding for implementation or have completely excluded climate change. Activities in output 3.4 will aim to create **awareness and capacity across national and local agencies, including authorities of tourism, and even transport and infrastructure as relevant**. The project will work with relevant national and local authorities, so that officials in charge of **development plans and policy development** have the tools to address the impacts of a changing climate. As previously mentioned, even though both countries have national policies promoting "farm-to-table" tourism to empower and strengthen the link between local products and tourism, such cases are exceptional, as local production is not reaching the markets and does not provide to neither tourists nor communities. **NbS incorporated to achieve resilient local livelihoods including tourism, agriculture, and fisheries (output 1.2), as well as capacity building (output 2.4) are proposed to increase farms and productive systems' efficiencies**.
23. In a changing climate, and particularly in a post-Covid scenario, there are not many formal sustainable economic alternatives for developing regions that still have a wealth of natural capital, that value biodiversity and natural ecosystems and are highly dependent on them, while facing unemployment, poverty, and inequity, such as Limon and Bocas del Toro (**women and youth in particular**)⁴⁷. In that sense, a focus on **Nature-based climate resilient local livelihoods as proposed in this project is innovative as it not only guarantees safeguarding ecosystems but also strengthens local economies by increasing communities coping capacity and integrating productive systems in Limon and Bocas del Toro. Strengthening the link between tourism and productive value chains will bring communities together and meet the agriculture and tourism goals set by both governments, ensuring sustainability**. For more detail, Annex 4 lists more benefits of supporting local livelihoods in a changing climate, including the relevance of integrating the tourism sector with agriculture and fisheries. Biodiversity-dependent economies' resilience rely on ensuring solid supply chains that better integrate their dependencies on biodiversity and climate (including the impacts of climate change) into long-term land planning and business plans. **The long-term survival of a number of livelihoods and business (including tourism, agriculture and fisheries) in Limon and Bocas del Toro regions, depends directly on biodiversity and well-functioning ecosystems, which at the same time reduce exposure and mitigate risks related with a changing climate**.
24. The sustainability of project actions will be secured because communities will be involved in all three outputs of the project. Output 1's pilots will be co-designed with local stakeholders. The strengthening of local livelihoods, value chains and integration of local markets (output 2) will also be done in consultation with

⁴¹ Miralles-Wilhelm and Iseman. 2021. Nature-based solutions in agriculture: The case and Pathway for Adoption. FAO. Available in: <http://www.fao.org/3/cb3141en/CB3141EN.pdf>

⁴² Leecerf et al. 2021. Coastal and marine ecosystems as Nature-based Solutions in new or updated Nationally Determined Contributions. Ocean & Climate Platform, Conservation International, IUCN, GIZ, Rare, The Nature Conservancy and WWF. Available in: <https://ocean-climate.org/wp-content/uploads/2021/06/coastal-and-marine-ecosystem-2806.pdf>

⁴³ Sudmeier, et al. 2021 Ecosystems for disaster risk reduction: an analysis of the scientific evidence. Nature sustainability.

⁴⁴ Plan Maestro de Turismo Sostenible

⁴⁵ Municipalidad de Limón. Proceso Desarrollo Integral del Territorio. Diseño de la propuesta de plan regulador y su reglamentación ZMT -. https://www.municlimon.go.cr/images/normativalegal/manualProcedimiento/DIRECCION%20INGENIERIA/Planificaci%C3%B3n%20territorial/DIT-020-060_Dise%C3%B1o_de_la_propuesta_de_plan_regulador_y_su_reglamentacion_ZMT.pdf

⁴⁶ Preliminary consultations with coastal communities in Panama to better understand their adaptation needs and that will continue during project proposal

⁴⁷ Estimates accumulated losses for the tourism sector in Central America and Mexico between 2020-2023 of US \$ 89 million with abrupt consequences in women employment, given that women represent 61% of work force in accommodation and food services in the region. Comisión Económica para América Latina y el Caribe (CEPAL). 2020. "Evaluación de los efectos e impactos de la pandemia de COVID-19 sobre el turismo en América Latina y el Caribe: aplicación de la metodología para la evaluación de desastres (DaLA)". Documentos de Proyectos (LC/TS.2020/162), Santiago, Chile

local associations, communities, and local authorities. Capacity building, awareness creation and DRR in output 3 will also be designed along with local communities to reflect their specific needs. Communities' involvement will be guaranteed by ensuring an adequate representation of women, indigenous population, and other vulnerable or marginalized groups at all stages (including further consultations for project formulation). Their participation in trainings and coordination processes will be encouraged and facilitated by adequately disseminating communication and by ensuring means for their participation. In fact, relevant materials or knowledge products (e.g. output 3) will consider approaches and tools that ensure ease of use (e.g. to tackle low-literacy if necessary). Moreover, their specific vulnerability to climate risks will also be considered when assessing potential NbS, as well as when designing monitoring systems and indicators. The project also considers a reasonable duration to ensure enough time for a sense of ownership to be developed through community engagement, and active participation in all processes. By year 1, community-level implementation plans will be designed in a participatory manner.

25. Another key issue for communities' ownership and empowering is ensuring that the resilient solutions brought forward are financially viable for them, that their benefits are clear, and that the investment risk for the transition is shared. Activities related to pilots in output 1, as well as output 2 aim to strengthen the "business case" of the solutions to be prioritized and implemented, both for local producers but also to attract potential investors/partners in those solutions, who would ensure sustainability. Capacity building (e.g. output 2.4) will, therefore, not be limited to community individuals or governments, but also to local organizations.
26. **Consultation processes** and local and regional meetings among key stakeholders will be conducted for the two provinces/countries throughout project formulation, in addition to the pre-consultation held in Panama. These will strengthen dialogue with the stakeholders and focus on better understanding the shared visions of the communities, planning authorities and economic sectors' for the regions' future. Those held with locals will aim to better comprehend the relation between communities' livelihoods, ecosystems and perceived climate risks; while those held with policy makers will aim to further understand potential for policies' alignment⁴⁸. In general, consultations will provide more information regarding vulnerable groups, which is especially important given the provinces' vulnerability and potential ethnic diversity in the area. For example, Talamanca, one of the preliminarily targeted cantons in Costa Rica, is the most ethnically diverse in the country, with 48% of the people belonging to a native population (mainly Bribri, Cabécar and Guaymí)⁴⁹. Concept development will include an initial review of environmental and social impacts, which will be further developed during full proposal formulation into an Environmental and Social Management Framework, as well as a Gender Plan, in line with the Environmental and Social policy of the Adaptation Fund, respecting Free, Prior, and Informed Consent (FPIC) at all levels.
27. If action is not taken now, communities' already limited adaptive capacity will worsen in the face of intensified climate variability and unpredictability, reducing thus their resilience capabilities, and further increasing the vulnerability of coastal communities.

PART III: IMPLEMENTATION ARRANGEMENTS

28. The project will be implemented by UNEP. Countries' NIE, Fundecooperación (Costa Rica) and Fundación Natura (Panama), are expected to be the executing entities (EE) supported by national, regional and local climate authorities, as well as tourism and environmental institutions. Local partners are expected to include NGOs, Indigenous Peoples, associations and community groups. The identification and selection of partners will be defined in further phases. A tentative list of potential local partners that will be contacted to explore collaboration opportunities include:
 - Costa Rica: Pococí Tourist Business Services Association, Tours Win Ka-Bribri Indigenous Territory, SOMOS CARIBE (platform of public and private entities), Raising Corals.
 - Panama: Bocas Alliance (coalition of organizations, institutions and communities), Bocas Dolphines, PROMAR Foundation, PANCETACEA, Bocas del Toro Community Tourism Network (REDTUCOMBO), Panamanian Foundation for Sustainable Tourism.

⁴⁸ Consultation meetings in Bocas del Toro were very successful in the sense that communities in the coastal districts are aligned with the national government in the need to invest in integral development around tourism and reducing pressure on natural resources.

⁴⁹ Retana et al. 2017. Riesgo ante eventos hidrometeorológicos extremos en Liberia, Carrillo, Matina y Talamanca. Instituto Meteorológico Nacional, MINAE-AECID-MIDEPLAN. Available in: <http://cglobal.imn.ac.cr/documentos/publicaciones/RiesgoEventosHMExtremos/offline/download.pdf>

- Fundecooperación has been the Costa Rican partner of UNEP’s MEBa multi-country programme on microfinance. There is potential for synergies with the national microfinance networks of Costa Rica (REDCOM) and Panama (REDPAMIF), and the regional network (REDCAMIF).
 - National Tourism Authority / Institute will be involved in the execution of the project, as well as territorial and local authorities starting on the concept development. Other tourism associations that will be contacted for potential involvement include: Somos Caribe and Pococí tourism business services association in Costa Rica, and tour operators of indigenous territories.
29. The formulation stage will draft a coherent governance/implementation structure from the regional to the local levels, based on lessons learned from previous projects. A Regional Project Steering Committee will be established as part of the implementation arrangements to facilitate cooperation between all project partners and other related initiatives in the region. The national EE will coordinate the work of local partners through cooperation agreements. Local partners will be identified during consultations in project formulation. Partners will have experience in the area and in relevant topics for the project. Since the project intends to be built on the active participation of communities and local organizations, local governance structures will be formed to co-lead/design activities on the ground and mobilize communities for greater reach.
30. The project also plans to build on UNEP’s Global Programme on Sustainable Tourism’s experience and related networks and will explore synergies with the One Planet Network, the framework of programmes on sustainable consumption and production (Secretariat is hosted by UNEP), in alignment with its programme “Transforming tourism”, including the Network’s vision for responsible recovery post-Covid.

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

A. Record of endorsement on behalf of the government⁵⁰ *Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project/programme. Add more lines as necessary. The endorsement letters should be attached as annexes to the project/programme proposal.*

<i>Milciades Concepción, Minister, Ministry of Environment, Panama</i>	<i>Date: July 30, 2021</i>
<i>Patricia Campos, Director, Direction of Climate Change, Ministry of Environment and Energy, Costa Rica</i>	<i>Date: July 29, 2021</i>

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

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



Gustavo Máñez
Implementing Entity Coordinator

<i>Date: August 9, 2021</i>	<i>Tel. and email: +50761406202 / gustavo.manez@un.org</i>
<i>Project Contact Person: Marta Moneo Lain</i>	
<i>Tel. And Email: +50760388570 / marta.moneo@un.org</i>	

⁵⁰ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.