



## **Towards the Transboundary Integrated Water Resource Management (IWRM) of the Sixaola River Basin shared by Costa Rica and Panama**

### **Part I: Project Information**

#### **GEF ID**

10172

#### **Project Type**

FSP

#### **Type of Trust Fund**

GET

#### **CBIT/NGI**

CBIT

NGI

#### **Project Title**

Towards the Transboundary Integrated Water Resource Management (IWRM) of the Sixaola River Basin shared by Costa Rica and Panama

#### **Countries**

Regional, Costa Rica, Panama

#### **Agency(ies)**

UNDP

#### **Other Executing Partner(s)**

Technical Secretariat of the Binational Agreement Ministry of Environment and Energy of Costa Rica  
Ministry of Environment of Panam?

#### **Executing Partner Type**

Government

#### **GEF Focal Area**

International Waters

**Taxonomy**

Sound Management of chemicals and waste, Chemicals and Waste, Focal Areas, Pesticides, International Waters, Freshwater, River Basin, Strategic Action Plan Implementation, Transboundary Diagnostic Analysis and Strategic Action Plan Preparation, Biomes, Coral Reefs, Mangrove, Pollution, Nutrient pollution from all sectors except wastewater, Persistent toxic substances, Nutrient pollution from Wastewater, Climate Change Adaptation, Climate Change, Disaster risk management, Climate information, Convene multi-stakeholder alliances, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approaches, Transform policy and regulatory environments, Beneficiaries, Stakeholders, Indigenous Peoples, Civil Society, Non-Governmental Organization, Academia, Community Based Organization, Communications, Awareness Raising, Public Campaigns, Behavior change, Education, Local Communities, Private Sector, SMEs, Large corporations, Individuals/Entrepreneurs, Type of Engagement, Consultation, Participation, Partnership, Information Dissemination, Gender results areas, Gender Equality, Access to benefits and services, Participation and leadership, Capacity Development, Gender Mainstreaming, Gender-sensitive indicators, Women groups, Sex-disaggregated indicators, Learning, Capacity, Knowledge and Research, Adaptive management, Indicators to measure change, Theory of change, Enabling Activities

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 2

**Climate Change Adaptation**

Climate Change Adaptation 2

**Submission Date**

12/10/2020

**Expected Implementation Start**

2/2/2021

**Expected Completion Date**

2/28/2025

**Duration**

48In Months

**Agency Fee(\$)**

416,690.00

**A. FOCAL/NON-FOCAL AREA ELEMENTS**

<b>Objectives/Programs</b>	<b>Focal Area Outcomes</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
IW-3-5	Advance information exchange and early warning	GET	1,462,070.00	4,617,863.00
IW-3-6	Enhance regional and national cooperation on shared freshwater surface and groundwater basins	GET	1,462,070.00	4,617,864.44
IW-3-7	Investments in water, food, energy and environmental security.	GET	1,462,070.00	4,617,864.00
<b>Total Project Cost(\$)</b>			<b>4,386,210.00</b>	<b>13,853,591.44</b>

## B. Project description summary

### Project Objective

To strengthen transboundary multi-stakeholder action in the Sixaola River Basin shared by Costa Rica and Panama to restore riverine and coastal ecosystems, reduce pollution from agricultural production and reduce risks from hydro meteorological disasters.

<b>Project Component</b>	<b>Financing Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing (\$)</b>
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Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing (\$)
1. Governance instruments improved for joint integrated management of Sixaola Binational River Basin.	Technical Assistance	<p>1.1 Common understanding of the transboundary water and environmental issues, challenges and opportunities affecting the Sixaola river basin and agreed strategy for basin restoration and protection.</p> <p>-----</p> <p>1.2. The Binational commission of the Sixaola River Basin (CBCRS) role as facilitator of IWRM joint actions by public and private sector stakeholders is strengthened.</p>	<p>1.1.1 Transboundary Diagnostic Analysis (TDA) of the Sixaola River Basin prioritizes threats to this binational watershed identifying their immediate and root causes as technical input to preparation of the SAP.</p> <p>1.1.2. TDA available at the national (Costa Rica and Panama), sub-national, municipal and community levels.</p> <p>-</p> <p>1.2.1 The Strategic Action Programme (SAP) for the period 2022-2032 developed and endorsed at ministerial level by the Permanent Binational Commission of the Border Development Agreement (the commission is chaired by Ministers of MIDEPLAN and MEF).[1]</p> <p>-----</p> <p>[1] See figure 2.</p> <p>-----</p> <p>1.2.2 Four Inter-institutional and multisectoral coordination working-groups convened from CBCRS are strengthened.</p> <p>1.2.3 Strategy for awareness raising and engagement for discussion, consultation (if needed) and review of the SAP among key decision-makers, Indigenous Peoples, local governments and civil society.</p> <p>1.2.4 Training of key stakeholders (public and</p>	GE T	1,854,335.00	5,108,166.44

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing (\$)
2. Demonstrative pilot projects stimulate collaborative work, replication and implementation and build capacity, experience and support for SAP implementation	Technical Assistance	<p>2.1 Demonstrative pilot interventions generate global environmental benefits in the Binational Sixaola River basin measured as:</p> <p>Increased forest cover in the river margins of the Sixaola river basin through restoration with species selected for ecosystem-based adaptation to climate change.</p> <p>Improved land management in the agricultural sector</p> <p>Improved knowledge and skills to adopt best environmental practices in plantain and banana</p>	<p>2.1.1 Three binational Programmes implemented by local stakeholders and community-based organizations advance targets of the SAP on:</p> <p>Pilot 1. Restoration strategy implemented to reduce erosion and pollution.</p> <p>Pilot 2. Multi-stakeholder dialogue platform to promote and scale-up low polluting production best practices (banana and plantain).</p> <p>Pilot 3. Scaling up agroforestry systems (with cocoa, banana and plantain production in the binational basin)</p>	GE T	1,101,825.00	4,000,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing (\$)
3. Flood Risk Management		3.1 Capacity of communities and local organizations to respond to flood risks in the Sixaola river margin is strengthened	<p>Binational early warning systems reactivated and strengthened that include:</p> <p>3.1.1. Feasibility study of the expansion of geo-spatial information and local hydrometeorological networks to provide real-time precipitation and flood information and improves knowledge of disaster risks.</p> <p>3.1.2. Protocol development and strengthening of binational communications and local communities in the Sixaola Binational River Basin.</p> <p>Development of capacities to manage the early warning system based on a resilience approach.</p> <p>3.1.3. Binational Investment Plan for flood risk management in the basin</p>	GE T	633,600.00	2,645,425.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing (\$)
4. Knowledge Management		4.1 Improved knowledge, practice and aptitudes of key stakeholders regarding binational collaborative action to restore coastal and riverine ecosystems; control pollution and reduce vulnerability to flood risks.	<p>4.1.1 Best practice and lessons from the pilots systematized, accessible and available to all stakeholders in the region, translated and in culturally adapted formats and shared through international platforms on International Waters such as IW:Learn.</p> <p>4.1.2 Monitoring and evaluation system of project impact indicators, including the technical design and piloting of a binational monitoring system for the basin water resources.</p> <p>4.1.3 Website for dissemination of lessons and best practices, populated with information about the basin and its user, linked to partners portals and IW:LEARN.</p>	GET	588,950.00	1,600,000.00
<b>Sub Total (\$)</b>					<b>4,178,710.00</b>	<b>13,353,591.44</b>
<b>Project Management Cost (PMC)</b>						
			GET	207,500.00	500,000.00	
			<b>Sub Total(\$)</b>	<b>207,500.00</b>	<b>500,000.00</b>	
			<b>Total Project Cost(\$)</b>	<b>4,386,210.00</b>	<b>13,853,591.44</b>	



**C. Sources of Co-financing for the Project by name and by type**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Co-financing</b>	<b>Investment Mobilized</b>	<b>Amount(\$)</b>
Recipient Country Government	MOPT-CNE Costa Rica	Public Investment	Investment mobilized	5,000,000.00
Recipient Country Government	Instituto Nacional de Acueductos y Alcantarillados (A y A), Costa Rica	Public Investment	Investment mobilized	5,000,000.00
Recipient Country Government	Ministry of Environment, Panama	In-kind	Recurrent expenditures	415,440.00
Recipient Country Government	Ministry of Environment, Panama	Public Investment	Investment mobilized	880,000.00
Recipient Country Government	SINAPROC Panama	In-kind	Recurrent expenditures	558,151.44
Recipient Country Government	Municipality Talamanca Costa Rica	Public Investment	Investment mobilized	1,000,000.00
Recipient Country Government	Municipality Changuinola, Panama	In-kind	Recurrent expenditures	1,000,000.00
<b>Total Co-Financing(\$)</b>				<b>13,853,591.44</b>

**Describe how any "Investment Mobilized" was identified**

? Costa Rica's National Commission for Risk Prevention and Disaster Response (CNE) institutional budget granted by the emergency decree n° 39056 of 2015. Funding for 2019-2022 will be used to develop protection and channeling works for flood mitigation in the Telire and Sixaola rivers. ? Panama's National Civil Protection System (SINAPROC) investment relates to emergencies for environmental risks. ? Ministry of Environment of Panama investment is related to the overall work to strengthen the IWRM of the basin, develop the TDA, the SAP, and the pilot projects. ? Costa Rica's Institute of Aqueducts and Sewers (AyA) investment is related to the installment of a drinking water and sewage system in the lower Sixaola, as well as the monitoring of water quality. AyA will also strengthen community water management through Communal Associations of the Systems of the Aqueducts and Sewers (ASADAS). ? Municipality of Talamanca investments are related to the environmental risk and management of solid

waste in the next five years that match project outcome. ? Municipality of Changuinola investments are related to risk management (2019-2023) that match project outcomes. ? Other co-financing letters, from local NGOs was not feasible during PPG phase, and due to COVID conditions. However, there are several ongoing projects in the area, and coordination and sinergies will be prioritized during project start up phase.

**D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds**

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>
UNDP	GET	Regional	International Waters	International Waters	4,386,210	416,690
<b>Total Grant Resources(\$)</b>					<b>4,386,210.00</b>	<b>416,690.00</b>

**E. Non Grant Instrument**

NON-GRANT INSTRUMENT at CEO Endorsement

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Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

**F. Project Preparation Grant (PPG)**

PPG Required

**PPG Amount (\$)**

150,000

**PPG Agency Fee (\$)**

14,250

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programmin g of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>
UNDP	GET	Regional	International Waters	International Waters	150,000	14,250
<b>Total Project Costs(\$)</b>					<b>150,000.00</b>	<b>14,250.00</b>

## Core Indicators

### Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	3000.00	0.00	0.00

### Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	500.00		

### Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	2,000.00		

### Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

### Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	500.00		

### Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	1000.00	0.00	0.00

### Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	1,000.00		

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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### Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted
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Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 5.1 Number of fisheries that meet national or international third party certification that incorporates biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
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Type/name of the third-party certification

Indicator 5.2 Number of Large Marine Ecosystems (LMEs) with reduced pollutions and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE
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**Indicator 5.3 Amount of Marine Litter Avoided**

Metric Tons (expected at PIF)	Metric Tons (expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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**Indicator 7 Number of shared water ecosystems (fresh or marine) under new or improved cooperative management**

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
<b>Shared water Ecosystem</b>	Sixaola / Salinas Aquifer	Sixaola / Salinas Aquifer		
<b>Count</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>

**Indicator 7.1 Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)**

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Sixaola / Salinas Aquifer	1	1		
<b>Select SWE</b>				<input type="checkbox"/>

**Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)**



<b>Shared Water Ecosystem</b>	<b>Rating (Expected at PIF)</b>	<b>Rating (Expected at CEO Endorsement)</b>	<b>Rating (Achieved at MTR)</b>	<b>Rating (Achieved at TE)</b>
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Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministeral Committees (IMC; scale 1 to 4; See Guidance)

<b>Shared Water Ecosystem</b>	<b>Rating (Expected at PIF)</b>	<b>Rating (Expected at CEO Endorsement)</b>	<b>Rating (Achieved at MTR)</b>	<b>Rating (Achieved at TE)</b>
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Indicator 7.4 Level of engagement in IWLEARN through participation and delivery of key products(scale 1 to 4; see Guidance)

<b>Shared Water Ecosystem</b>	<b>Rating (Expected at PIF)</b>	<b>Rating (Expected at CEO Endorsement)</b>	<b>Rating (Achieved at MTR)</b>	<b>Rating (Achieved at TE)</b>
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Sixaola / Salinas Aquifer	1			
<b>Select SWE</b>				

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
<b>Female</b>	15,000	15,000		
<b>Male</b>	15,000	15,000		
<b>Total</b>	30000	30000	0	0

## Part II. Project Justification

### 1a. Project Description

#### *Summary of changes*

There are no changes in alignment in the PRODOC with respect to the PIF. However, it is important to highlight small changes:

1. According to GEF, SAP requires ministerial endorsement. At PIF the SAP was expected to be endorsed at ministerial level by the Executive Technical Secretariat of the Border Agreement (see figure 2). Under the PPG, this was adjusted so the SAP could be discussed and approved by the Binational Permanent Commission of the Border Agreement; a commission chaired by Ministers of the Planning and Finances Ministries of Costa Rica and Panama.
2. At PIF, a first pilot was oriented to promote agricultural practices to reduce pollution. The associated indicators in the PIF, indicated that there will be a significant impact on GEF core indicator 9 (Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (thousand metric tons of toxic chemicals reduced). During the PPG, the pilot was refocused and it will be carried out through the establishment a multistakeholder dialogue platform. Under the Project, and considering the scope and time period, there is not feasible to achieve a significant reduction on elimination and avoidance of chemicals of global concern.
3. Regarding the target goals for indicator 3, at PIF these involved the restoration of natural grass and shrublands. During project preparation analysis, the opportunities focused on increasing the target for restoration under riverine forest, according to previous IUCN studies and land use analysis carried out during project preparation. The overall amount of target hectares does not change.
4. Additionally, during the project preparation, it was clear that it is necessary to have a comprehensive and integral basis of water quality in the basin in order to later be able to guide more precise actions and realistic goals in pollution prevention and control in the SAP phase. The technical design and piloting of a monitoring system on water quality, has been integrated in Component 4: Knowledge Management.

#### 1a. *Project Description.*

5. This project seeks to create long-term conditions for an improved shared river basin governance, with timely information for the Integrated Water Resources Management in the Sixaola River Binational Basin between Costa Rica and Panama, and will contribute to reducing agrochemical pollution and the risks associated with periodic flooding in the basin.

*1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)*

6. According to the Transboundary Waters Assessment Programme (TWAP), the SBRB overall relative risk factor is very low,[1]<sup>1</sup> based on the averaged indicators for i) water quality, ii) water quantity, iii) ecosystems, iv) governance, and v) socioeconomic (UNEP, 2010).[2]<sup>2</sup> However, beyond the overall risk, this assessment indicates very high risk factors related to the water quality and governance of the basin (Figure 1); in particular pointing out major risk related to indicators on wastewater pollution and the legal framework. The basin is also assessed high risk related to exposure to floods and droughts.
  7. Indeed, publications, interviews and participatory workshops carried out during the project preparation, highlight a contradictory status and understanding of the environmental and governance status of the basin. In one side, the basin well conserved, and almost 50% is under some kind of protection, with important protected areas in Costa Rica such as: La Amistad National Park, Chirripó National Park, Hitoy Cerere Biological Reserve, Gandoca-Manzanillo National Wildlife Reserve; and in Panamá such as: the International La Amistad Park, the San San Pond Sack Wetland, and the Palo Seco Forest Reserve.[3]<sup>3</sup>, [4]<sup>4</sup> It is important to notice, (Figure 3) that critical protected areas are mainly in the upper part of the basin; In Costa Rica, the basin forests, mostly in Indigenous Territories, are also a target for Payment of Environmental Services Program. This program is supported by MINAE through the National Fund for Forest Financing (Fondo Nacional de Financiamiento Forestal, FONAFIFO, in Spanish) that provides a financial incentive for people interested in forest conservation, recovery of degraded areas (natural regeneration) and reforestation.
  8. On the other side, there are important governance problems identified and validated during the project preparation, such as: a) a weak management of protected areas; b) a poor implementation of the Integrated Water Resources Management (IWRM) approach, with representativeness issues regarding decision making: [5]<sup>5</sup>, [6]<sup>6</sup> c) weak articulation of environmental targets for the freshwater conservation; d) weak articulation with the private sector. As a consequence, the SRB presents diffuse pollution of pesticides at the middle and low basin, from intensive agriculture that has not been addressed by the agriculture sector nor been considered by any of the protected area management plans.[7]<sup>7</sup>, [8]<sup>8</sup> Pollutants drain, from the middle part to the coastal wetlands, where freshwater and coastal biodiversity is significantly affected.
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Figure 1.SBRB Assessment results.

TWAP RB Assessment Results: BCU and Basin Relative Risk Category per Indicator<sup>3</sup>

Thematic group	Water Quantity			Water Quality			Ecosystems			Governance			Socioeconomics		
BCU	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SIOL_CRI	1		2		5	2			3	5	2	3	1	2	3
SIOL_PAN	1		1		4	2			3	5	2	3	1	3	4
River Basin	1		2	2	5				2	5	2	3	1	3	4

**Indicators**

1 - Environmental water stress 2 – Human water stress 3 – Agricultural water stress 4 – Nutrient pollution 5 – Wastewater pollution  
 6 – Wetland disconnectivity 7 – Ecosystem impacts from dams 8 – Threat to fish 9 – Extinction risk 10 – Legal framework 11 –  
 Hydropolitical tension 12 – Enabling environment 13 – Economic dependence on water resources 14 – Societal well-being 15 – Exposure to  
 floods and droughts

9. The core transboundary environmental problem in the SBRB is the degradation of freshwater ecosystems and water resources. Interlinked problems (summarized in Table 1) are related with a) pollution of surface and ground water; degradation in quality of water resources, b) degradation of habitats, c) changes in biodiversity, and d) recurrent flooding affecting livelihoods and human settlements.
10. The main threats (immediate causes) are direct discharge of polluted effluents, diffuse pollution, solid waste accumulation, inappropriate agricultural practices, land use change and deforestation, mainly of riparian forest.
11. Loss of forest cover, inappropriate agricultural practices, and the geomorphology of the basin, contribute to high rates of soil erosion and increased sedimentation. Finally, an immediate cause of freshwater ecosystem degradation is the inadequate disposal of solid waste and the accumulation plastics within ecosystems, and the bioaccumulation of microplastics in freshwater species. This pollution is due to weak coverage of waste collection (domestic and agricultural) and absence of water treatment on both sides of the Sixaola river basin.
12. The SBRB face multiple threats to water quality and quantity, biodiversity and the human population that depend on it. Costa Rica and Panama government and civil society have made joint efforts to advance towards collaborative IWRM, however challenge requires a more comprehensive approach.

Core environmental problem:	Interlinked transboundary environmental problems	Immediate causes	Underlying causes	Root causes
<b>DEGRADATION OF FRESHWATER ECOSYSTEMS AND WATER</b>	a. Pollution of surface and ground water with the consequent degradation of freshwater	Discharge of untreated agricultural effluents.	Legal gaps on drainage effluents from agriculture.	
			Limited capacities for IWRM.	

<b>RESOURCES</b>	ecosystems in both Costa Rica and Panama.	Direct discharge into surface water and inadequate treatment of wastewater, generated by human activities.	Limited waste and wastewater management coverage by municipal governments.		
		Diffuse pollution from improper application of fertilizers and pesticides.	Productive practices with a high toxicity footprint		
			Poor environmental awareness and education		
	Solid waste in waterbeds (blue bags).	Intensive agricultural production.			
	b. Degradation of habitats	Soil erosion and loss of soil fertility.	Intensive agricultural production.		<b>Weak environmental governance</b>
		Deforestation processes and changes in land use.	Intensive agricultural production.		
			Increase in extractive and hydroelectric projects.		<b>Weak environmental legal enforcement</b>
		Development of tourism infrastructure in coastal ecosystems.	<b>Development model in the SBRB</b>		
		Weak governance of Protected Areas (PILA-La Amistad International Park, National Parks, Wetlands).	<b>Consumption Patterns and lack of environmental awareness</b>		
	Conversion of mangroves and coastal wetlands for agriculture.	Intensive agricultural production.	<b>Climate Change</b>		

	c. Changes in Biodiversity	Diffuse pollution from improper application of fertilizers and pesticides.	Intensive agricultural production.
		Solid waste and plastics accumulation in ecosystem, and bioaccumulation in species.	Limited waste and wastewater management coverage by municipal governments.
	d) Recurrent flooding downstream affects agricultural production and human settlements	Extreme events and intense rain	Communities located in high-risk and flood-prone areas.
		Lack of vegetation barriers at riverbanks.	Intensive agricultural production.
		Soil erosion and sedimentation. (idem)	Intensive agricultural production.

**Table 1.** Summary of Problems, Root Causes, Underlying Causes and Immediate Causes

13. (a) *Pollution of surface and ground water with the consequent degradation of freshwater ecosystems in both Costa Rica and Panama.* Surface and groundwater resources are threatened by the direct discharges and effluents that reach the river, especially in the lower middle and lower part of the basin. The use of agrochemicals in agro-export plantations and the overall unsustainable productive practices (use of agrochemicals without adequate dosages, farming on slopes or dragging of agrochemicals in the dikes of large plantations), produce untreated effluents and drainage polluted with aerial fumigation and on-site residues. The pollution clearly affects the quality of water, as shown in a study carried out during the project preparation (see ANNEX 11). The results showed a drastic increase in pollutants along the river course and between samples taken before agricultural intensive areas, and after land use change. When the river course passes through banana plantations receives drainage and polluted effluents from agricultural land. Together with bad agricultural practices cause diffuse pollution and biodiversity loss, mainly in the middle and downstream basin. The weak implementation of green barriers along plantations, and the inadequate management of drainage waters causes diffuse pollution along the surface water body and groundwater. Moreover, this environmental problem is also linked to conditions of heavy rainfall, sedimentation, changes in land use.

14. (b) *Degradation of habitats.* While the upper watershed of the SBRB is characterized by a well conserved tropical forest, the middle and lower sections of the basin are increasingly facing land use pressures and pollution, leading to habitat degradation, of riparian forest and coastal wetlands, such as Gandoca-Manzanillo and San San Pond Sak. As shown in a study carried out during the PPG (see annex 11) a drastic drop in bioindicators in quantity and diversity along the river course and between samples taken before agricultural intensive areas,

and after land use change. The main drivers for these land use changes are linked to commercial agriculture and conversion of mangroves to agriculture and tourism infrastructure.

15. According to the World Heritage Outlook, for the Talamanca Range-La Amistad Reserves / La Amistad National Park, developed by IUCN and UNESCO, the cumulative level of current threats to this site is high, because of the high impact of dams on the aquatic habitats of some major watersheds. The Outlook indicates that while protected areas in both countries have relatively effective management system and legal framework, the impacts of dams cannot be mitigated, reduced or eliminated only through management actions within the site. The management effectiveness is also seriously affected by poor relationship with local indigenous peoples who opposed hydropower projects (IUCN-UNESCO).[9]<sup>9</sup>
  16. (c) *Changes in biodiversity.* Erosive processes and pollution by chemical agents, from agriculture intensive plantations, have been affecting the freshwater biodiversity, mainly in the lower middle and lower part of the basin. As part of the baseline studies commissioned during the PPG phase, an analysis of water quality and freshwater ecosystem biodiversity Biological Monitoring Working Party (BMWP) from a total of 13 sample points in the upper, middle and lower, shows a ten-fold drop in the presence of benthic macro-invertebrates between the upper tributaries of the Sixaola River basin (Telire River 85 reported species) and the lower part of the Sixaola River (5 reported species) (see Annex 11 for complete report).
  17. (d) *Recurrent flooding affects agricultural production and human settlements.* The steep slopes of the upper and upper middle parts of the basin and its heavy rainfall present a combination of factors that contribute to the occurrence of floods. The average annual rainfall in the upper part of the basin ranges from 1,500 to 2,000 mm, in the middle part from 3,000 to 5,000 mm and in the lower part from 2,000 to 3,000 mm. This situation is further aggravated due to the increase of quantity and magnitude of rains because of the effects of climate change and variability, extreme events such as depressions and tropical storms, etc. All these factors contribute to problematizing territorial and water stability in the basin.
  18. Flood risks directly affect human settlements along the Sixaola and Telire. When seasonal floods coincide with coastal storms and high tides, they can cause extensive coastal flooding, which is where most tourist infrastructure is concentrated. Climate change is likely to worsen these risks of coastal flooding, as rising sea levels will add to this dangerous combination of hazards. The Sixaola area has a significant history of flood events, which have resulted in significant infrastructure and economic losses.[10]<sup>10</sup> The flood event with the greatest impact in recent history occurred in 2008, which isolated the area from the rest of the country for weeks, resulting in many losses. Such an event could happen again in the near future which, along with rising sea levels, would create massive coastal flooding. According to the hydrological models generated for the coastal area of the Sixaola basin, it is estimated that during the flooding stage the river would rise four meters above its normal level, which would
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cause much of the mouth of the Sixaola river and the surrounding area of the city to disappear under water.[11]<sup>11</sup>

### *Immediate Causes*

#### 1. Increased pollution from land-based sources

19. *Direct discharge of untreated agricultural effluents.* A major source of pollutant that impact the quality of surface waters and groundwaters in the Sixaola river basin are the untreated effluents. Banana plantations production systems require important investments in terms of drainage canals and culverts which discharge directly into tributaries of the lower Sixaola valley. These drainage systems contribute to increased runoff from agricultural fields and effluents with sediment loads containing traces of fertilizer and pesticides. This in turn increases the nutrient loading and the toxicity of surface waters in the lower Sixaola valley (see Annex 11 for the results of baseline biomonitoring and water quality analyses). These production systems require important investments in terms of drainage canals and culverts which discharge directly into tributaries of the lower Sixaola valley. These drainage systems contribute to increased runoff from agricultural fields and effluents with sediment loads containing traces of fertilizer and pesticides. This in turn increases the nutrient loading and the toxicity of surface waters in the lower Sixaola valley (see Annex 11).
  20. *Direct discharge into surface water and inadequate treatment of wastewater, generated by human activities.* One of the main sources of waterborne pollutants is related to the discharge of untreated sewerage into surface waters and shallow aquifers. Although both countries are currently investing significant resources in sanitation infrastructure, with sewerage treatment plants under construction in Changuinola and Puerto Viejo, there is still a large number of human settlements in the Sixaola river basin with little or no treatment of wastewater. These often result in direct discharges into surface waters and through septic tanks built over shallow aquifers. All contribute to increasing the nutrient load of surface waters and to elevated level of nitrate contents in groundwaters.
  21. *Diffuse pollution from improper application of fertilizers and pesticides.* The frequent aerial application of fertilizers and pesticide in banana and plantain production systems in the lower Sixaola river valley also contribute the diffuse, non-point sources of water pollution. The misuse of chemicals and agrochemicals has also led to accelerated soil degradation and widespread contamination of surface and groundwater in the Sixaola Basin. This is also reflected in the toxicity and loss of freshwater biodiversity in the lower sections of the Sixaola river, as the baseline biomonitoring and water quality analyses reveal (see Annex 11).
  22. *Sediments, pesticides and pollution from land-based activities: agriculture.* These processes are originated mainly by a combination of factors, previous processes of mass removal in the upper parts, mainly of the Telire river, as well as changes in the channel of the Sixaola river that are added to the enlargement of meanders through the undermining of its concave parts
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and the sedimentation of its convex parts.[12]<sup>12</sup> This is due to sedimentary processes that characterize the alluvial plain in the lower parts of the basin and due to changes in land use that have caused increased siltation of rivers and bodies of water in the basin, particularly in the lower part, threatening the stability of the riverbeds and the consequent contamination of those bodies of water.

23. *Solid waste in waterbeds (blue bags)*. There is no installed capacity in the area to handle and process waste, and there are no sanitary landfills or facilities to recycle these bags. The nearest facilities are more than two hours away, in the close canton of Siquirres, which is a serious problem for the project, as these bags have become a serious pollution problem for the basin's water system, mainly in the lower part. In addition, the plastics used to ripen bunches of bananas and plantains impregnated with pesticides are disposed of as trash without proper handling and therefore contaminate water bodies, reaching coral reefs with lasting impacts on marine life.

## 2. Degradation of land and coastal ecosystems and habitats.

24. *Soil erosion and loss of soil fertility*. In the lower section of the basin, a flat undulating land relief predominates on the floodplain created by the Sixaola River. A relatively smooth land relief composed by the relicts of the water dividers can be observed in the surroundings. While the slope conditions of the Sixaola Valley favour deposition, the erosive action that is manifested is performed by the river due to its meandering behaviour. These processes that drag organic and chemical sediments into the rivers are causing a progressive loss of fertility. This loss of soil puts at risk the productivity of the soil and causes the need to use more agrochemicals, which also increases pollution.
25. *Deforestation processes and land use change*. In the Sixaola Lower Basin is closely related to the expansion of large banana plantations and other monoculture systems. Commodity production and its associated infrastructure and services have been present in the Sixaola river basin for more than a century, but the intensification of export agricultural production since the 1990s has impacted these freshwater ecosystems and related coastal marine ecosystems.
26. *Conversion of mangroves and coastal wetlands for agriculture*. Mangroves are very valuable for coastal communities. The wetland area is 2% of the SBRB, however, according to the land use spatial analysis, this indicated the presence of banana and even palm plantations within those areas. Mangroves suffer a critical pressure by agriculture, not only from conversion of the deforestation of mangrove area, but also by the direct and indirect discharge of polluting effluents to this habitat. Runoff from the upper basin carries sediments and pollutants such as pesticides and heavy metals.

## 3. Climate change and Climate variability

27. *Extreme events and intense rain*. It is anticipated that climate change will affect the conditions of the SBRB. So far it has been identified a general warming trend of air
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temperature and more intense rainfall events in Central America.[13]<sup>13</sup> There is a positive tendency on the sea level rise in the Caribbean. This has been observed on the period 1992-2012, with extremes in the south Caribbean of Costa Rica and the north Caribbean of Panama, where the SBRB is located (up to 2.02 mm/annually).[14]<sup>14</sup> The area is vulnerable to major sea level rise, with potential coastal flooding effects.

28. *Future changes in ENSO events will affect the SBRB.* Cai et al., (2014 and 2015)[15]<sup>15</sup> anticipated more intense and stronger ENSO events. Nevertheless, the tendency is that El Niño events increase rainfall in the Caribbean coast, with floods. La Niña events have increased drought periods in the past which severely impact exposed productive areas, increasing the risks of landslides. Increased rainfall will also favour conditions for the growth of bacteria and fungi, encouraging the spread of diseases on banana and plantain plantations, such as black sigatoka (caused by the fungus of the *Mycosphaerella* species).
29. *Soil erosion.* See line No. 24.

#### *Underlying Causes*

30. *Legal gaps and lack of control over the use of pesticides and other pollutants.* The institutional weakness and asymmetries in regulations and standards between the two countries, in particular regarding pesticides and other pollutants, severely threatens the stability of the water system in the project area. The doses and qualities of the agrochemicals are not properly controlled, causing contamination processes in the bodies of water and affecting the aquatic flora and fauna necessary to maintain the health of the bodies of water. The lack of adequate management and monitoring also means that the use of contaminants has been left to the discretion of the producers in the area.
  31. *Limited capacities for IWRM.* There is limited capacity for transboundary IWRM. The combination of the asymmetries between the governing institutions of Costa Rica and Panama, the institutional weakness in the border territories and the lack of knowledge and experiences management of the local actors do not allow a full development of the institutional technical coordination actions that should take place in the Sixaola basin.
  32. Although there is a Binational Border Agreement between Costa Rica and Panama (see structure in figure 2) which constitutes a major asset for the sound management of shared natural resources and in particular for the integrated water resources management in the Sixaola river basin, its management is limited. The weak financial and institutional capacities by the institutions and bodies operating under the Binational Agreement mean that they have limited impacts on the sustainable development pathway of this section of the border region between Costa Rica and Panama. Moreover, regarding the limitations of the IWRM model, there is limited monitoring and follow-up capacities for water resources degradation. The lack of development and knowledge for water resources management, both among producers and
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within institutions, limits the capacity to monitor and provide follow-up on water quality and quantity in the basin and does not allow the full development of IWRM-related programs and projects.

33. *Limited waste and wastewater management coverage by municipal governments.* The residues and wastes generated by urban activities, generate a considerable amount of both organic and inorganic wastes, that enter the river flow, arrive in coastal wetlands, and/or are burned or buried by the population. Moreover, there is an absence of coverage to appropriate sewage system. Only 6% of Bocas del Toro wastewater is treated. Over 95% of Costa Rican homes are connected to a basic septic tank.
34. *Productive practices with a high toxicity footprint.* The lack of clear regulations, lack of coordination among the governing institutions, along with the institutional weaknesses, both within the countries and in binational management, results in little control and supervision over the use of toxic chemical supplies.

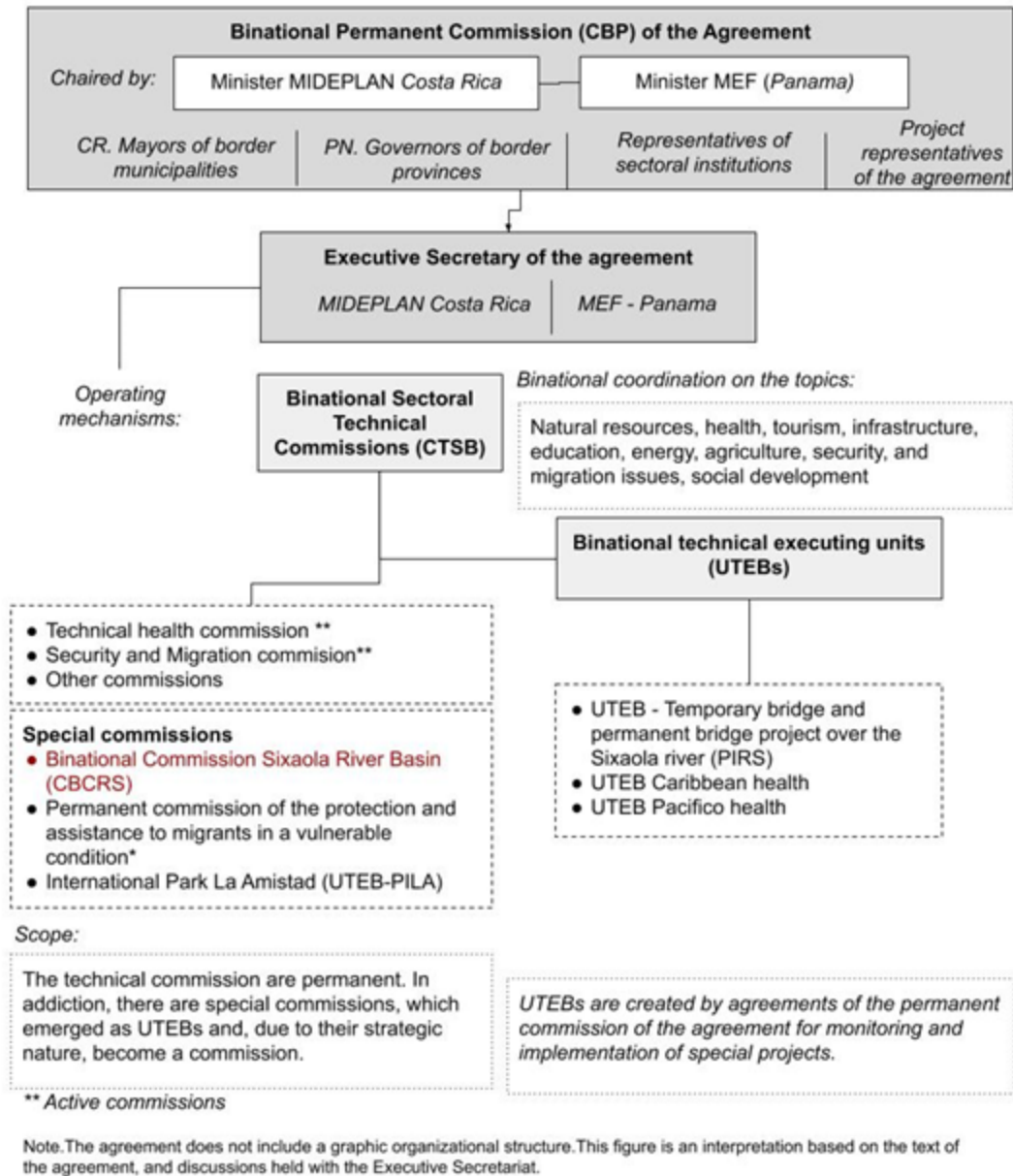


Figure 2. Structure and Governance of the Binational Border Agreement. The agreement is chaired by a Binational Permanent Commission, conformed by the Ministers of MIDEPLAN (Costa Rica) and MEF (Panama).

35. *Poor environmental awareness and education.* This condition is further aggravated due to the lack of skills and technical knowledge among medium and small producers, who make discretionary use of these supplies.

36. *Intensive agricultural production.* This model operated with limited environmental management of core business and their supply chain. Differences between national regulations hinder an effective and ethical implementation of environmental management standards. Moreover, although environmental management is well structured in core business operations, it is most difficult to follow up in their supply chain. Both by chemical and organic elements, altering their nature and reducing their capacity for human consumption. Therefore, producing processes of sedimentation and removal of slopes of rivers and other bodies of water. Bad practices reduce land resilience and increase vulnerability to hydro-climatic events. Moreover, activities, mainly industrial agriculture such as plastics and similar materials that contaminate the bodies of water, covering them with these materials and affecting the aquatic fauna and the environment as a whole.
  37. *Increase in extractive and hydroelectric projects.* PILA was recognized as a UNESCO World Heritage Site in 1983. Since then there have been several international assessment missions to check whether the National States that are parties to the agreement with UNESCO, Costa Rica and Panama, fulfil their responsibilities to preserve the values and natural and cultural heritage of PILA. Following the approval of the extractive and hydroelectric projects in the Panamanian sector of PILA in 2007, in particular the two hydroelectric projects in the area, Bonyic and Chan III, PILA was added/recommended to the list of World Heritage Sites in Danger. An IUCN and the International Council on Monuments and Sites (ICOMOS) joint mission was carried out in 2008 and generated a series of recommendations to mitigate the impacts of these projects on the PILA.[16]<sup>16</sup> These Bonyic hydroelectric generation projects are still in place and although they are located in the neighbouring Changuinola River and Bonyic River basins in Panama, the associated infrastructure development processes constitute a potential threat to the Sixaola River basin. CHAN II concession was suspended twice in two different governments.
  38. *Development of tourism infrastructure in coastal ecosystems.* Tourism-driven impacts on mangroves and coastal ecosystem are considerable, but still poorly understood. Reconciling the long-term conservation of highly vulnerable wetlands with a fast-growing tourism sector remains a difficult and important task.
  39. *Weak governance of Protected Areas (PILA-La Amistad International Park, National Parks, Wetlands).* The binational coordination body has little influence on national scales and on decision-making for the management of protected natural spaces. The legal and institutional frameworks and sectoral administrative competencies are not clearly harmonized, despite the efforts of the Central American Integration System (SICA) and the Central American Commission for Environment and Development (CCAD). Another issue that affects the good binational governance of the basin is the slow institutional pace for the decisions that must be made, which makes it difficult to implement actions and initiatives for the management of water and the protected areas that exist there. However, the existence of the PILA is an experience and a structure that can be enhanced for these purposes.
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40. *Communities are located in high-risk and flood-prone areas.* Although early warning systems exist, they do not function regularly and require capacity building, as well as greater binational coordination and the provision and renewal of equipment. None of these early warning systems rely on hydrogeological and meteorological models that can help trigger warnings.

*Root causes.*

41. Root causes (**Table 3**) are pervasive and long-standing development constraints, often structural in nature, having to do with history, deeply embedded social and political systems, cultural factors, geography, climate and demography that are transmitted through attitudes, behaviours and actions at different levels, both tangibly in policy, legislation and the way public and private institutions work, but also intangibly through discrimination and exclusion.

Weak environmental governance

42. Weak presence of the State and asymmetries between both sides of the border. The weak presence of public institutions, together with differences in installed capacities between the two countries, limits the implementation of IWRM. Moreover, there is limited transparency on agrochemical usage and dangers.
43. Early Warning Systems (EWS) are a set of articulated capacities, tools and procedures for generating and disseminating early warning information in a timely manner, to enable individuals, communities and organizations exposed to a hazard so that they may be able to prepare and act appropriately and in advance to reduce or avoid loss of life. However, these territories do not have such a set of mechanisms and procedures, nor is there an official instrument to standardize the design of early warning systems (EWS), establishing clear responsibilities for their operation and sustainability. Capabilities that used to exist but eventually were lost.

Weak environmental legal enforcement

44. *Weak enforcement of environmental law, regulations and standards.* existing water laws in both countries are outdated [17]<sup>17</sup> and poorly enforced in the Sixaola River Basin. This is a limiting factor for coordinating actions that must be carried out within a harmonized normative legal framework, particularly regarding effluents discharges and waste. Moreover, there is limited presence of public institutions that are in charge of the regulations, increased by weak inter-institutional coordination and asymmetries between countries.

Development model in the SBRB

45. *Persistence of the agro-export model.* In the lower middle and lower part of the basin, the existence of agro-export enclaves and industrial plantations of palm oil, pineapple and banana that have contributed to deforestation and changes in local climatic patterns and processes, as
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well as to the generation of conditions that have increased social, economic and ecological vulnerability in the most anthropized parts of the basin.

#### Consumption Patterns

46. The use of single-use plastics has increased by the population of the basin. Households consumption patterns see the use of plastics as a standard. There is limited environmental awareness of the problems that caused by its unsustainable massive use.

#### Climate Change

47. *Climate variability and climate change risks.* The direct impacts and residual effects of climate change and variability are expressed differently in the basin, the upper and upper middle part, due to its good state of conservation and forest cover. Climate change is likely to worsen risks of coastal flooding, as rising sea levels will add to this dangerous combination of hazards.

#### Structural Poverty

48. *Structural poverty of indigenous peoples and rural population with gender inequalities.* The intensive agricultural production of banana and plantain in the lower Sixaola valley; the dependence of this source of labour from poorest populations, along with land use global changes drivers, and deficient solid and liquid waste management are increasing and contributing to the degradation of the unique freshwater ecosystems found in this binational watershed.

#### Barriers

49. There are technical and economic limitations that restrict actions in the territory and little coordination between existing organizations, which are obstacles for good water management in the basin.

#### Barrier 1. Incomplete information to support common management of binational issues.

50. *Information for IWRM is incomplete, inaccessible and does not have a repository.* There is limited understanding of binational management for integrated transboundary water resources management (IWRM). Both countries face similar challenges of lack of clarity in terms of the respective competencies of the institutions in the environmental sector, aqueducts and sewage systems. There are especially gaps and lack of complementarity between existing regulations for risk management, pollution, production practices and watershed management, lacking information and an accessible and organized database for adequate decision-making, which represents a serious problem for water management.
51. *Traditional knowledge is not recognised and incorporated into the social management of water and territory.* The accumulation of experiences and knowledge that have been developed in the indigenous peoples of the area, which, although not recognized as scientific knowledge, are very valuable. These are result of the relationship of these peoples with their

environment and are traditional and ancestral knowledge that could provide important inputs for efficient and effective management of water resources. The lack of recognition of this knowledge and understanding of natural phenomena, limits not only the appropriation of the project by the local communities, but also in many cases, the lack of correspondence between the technical proposals with the reality and dynamics of these territories.

Barrier 2. Limited effectiveness of existing governance structures on IWRM.

52. *Limited effectiveness of existing governance structures.* A recurring factor that generates limitations and problems is the remoteness away from the power and decision-making centres, added to this is the weakness of the institutions that exist in the area and the lack of adequate coordination and alignment of regulations that allow for a positive relationship between governments and the governed. These conditions must be articulated and harmonized with the government, local and national bodies present in the area.
53. *Limited coordination with the tourism and agricultural sectors.* The regulatory frameworks of the public institutions that deal with tourism and agricultural issues are not harmonized at the local level, a situation that generates gaps and barriers when carrying out actions such as those proposed in this project. There is a marked weakness in the relationship between the municipality and the representation of the ministries of the sector, particularly with regard to the management of solid and liquid waste. Both the existing tourist activities and the banana plantations produce a considerable amount of organic and chemical waste, the lack of sufficient coordination between these institutions, represents a problem for the proper management of the project. Agricultural planning and sectoral work are segmented and rarely coordinated with the planning and promotion of tourism development in both countries.
54. *Limited application of land management and soil conservation tools.* The problem that this represents is associated to factors that have to do with the lack of development and institutional presence in addition to weak technical capacity on behalf of both the civil servants as well as from small producers. Also, the fact that the big plantations manage their own technical standards mainly addressing factors of product quality and volume.
55. *Limited resources and human capacity in municipalities for resource management.* Because these are isolated areas that are peripheral and distant from the administrative centres of the countries, there is not enough budget allocated to them. In addition, they have low tax collection since a large part of the territory is in protected areas and indigenous territories, as well as weak human installed capacities for the management of resources. This means that the work of monitoring and follow-up, as well as the accompaniment that should be provided to projects and programs, as natural counterparts, is not only greatly reduced, but resources for the contributions and counterpart that these initiatives require are not enough, both in financial and human resources.

Barrier 3. Limited understanding and experience in managing differentiated risk & impacts to

Indigenous Peoples and women



56. *Limited appropriation of spaces for social participation.* Although there are social and sectoral organizations such as Association of Small Producers of Talamanca (APPTA, *Asociación de Pequeños Productores de Talamanca* in Spanish) these differentiations affect the lack of effective appropriation of participation spaces, particularly if they deal with aspects such as integrated water resources management and other more technical issues rather than organizational ones.
57. *Limited capacities to face the impacts and adverse effects of climate change.* For climate change issues, a series of information and scenarios have been elaborated on from the international scale to assess the global situation; efforts have been made to scale down this information and scenarios on a country scale. However, there are two factors that are missing: the lack of scaling up of this information at the local level and the degree of uncertainty of these projections and the lack of development of technical and institutional capacities. These do not allow us to face the effects produced by climate change with a good degree of success, nor to carry out an adequate water management system since the information cannot be included into the decision-making processes.

Barrier 4. Limited opportunities to scale up sustainable solutions.

58. *Limited opportunities for small organic producers.* Development interventions in the region have focused mainly on support for conventional agriculture, which has limited small producers' access to technical assistance and accompaniment. Also, the little investment directed to these producers, limits the capacity to introduce clean technological improvements and the incorporation of added value to their products and afterwards, the difficulties to access markets are another limitation that does not encourage this type of production.

2) the baseline scenario and any associated baseline projects

59. The current baseline scenario is complex. It is impossible to address all the causes of biodiversity loss at once. The most strategic approach is to strengthen binational coordination, management and leadership through the Binational Commission of the Sixaola River Basin to articulate and deliver on agreed priorities at the basin level.

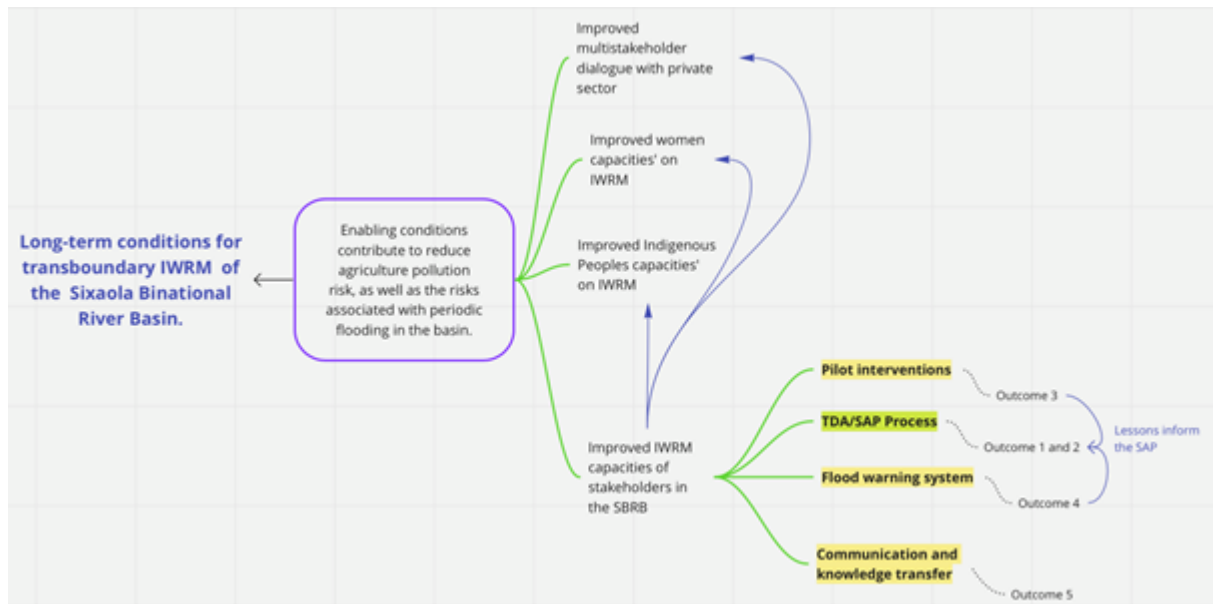
3) the proposed alternative scenario with a brief description of expected outcomes and components of the project

60. The long-term solution is to build agreed binational actions and governance arrangements to address the main common problems that threaten land and coastal biodiversity loss and related impacts.
61. Without an enhanced binational management framework, Panama and Costa Rica will continue to manage their resources and activities without considering global environmental benefits and/or adaptation benefits, leading to an increased loss of biodiversity and climate-related risks.
62. The project identified a central problem: the degradation of freshwater ecosystems and water resources of the basin. The actions proposed by the project are described in a logical

framework derived from the construction of a Theory of Change, which must be feasible and measurable through specific and relevant indicators that show a logical connection with the expected result, which in this case is that, at the end of the project, the conditions for binational management of water resources and greater global environmental benefits have been created.

63. Solving the whole range of issues occurring in the Sixaola Binational River Basin is beyond the means of the present project considering the scope of interventions which will be needed. However, the present GEF project can assist Costa Rica and Panama to build upon existing binational cooperation mechanisms, the CBCRS and the Territorial Strategic Plan 2017-2021 and advance transboundary cooperation with a focus on IWRM. There are a range of interconnected causes of freshwater biodiversity loss (as indicated in following section: Theory of Change), but the core of this project is that improved governance, on IWRM will catalyse a range of improvements along the causal chain.
  64. The project will focus on improving capacities on transboundary IWRM to address the existing inadequate management of shared ecosystem and avoid further degradation, social conflicts and potential risk to Indigenous Peoples and/or differentiated to women. This will be done in the understanding that improved governance and technical capacities will contribute to construct sound sustainable, fair and scalable ecosystem-based management. With timely information, addressing existing barriers and contributing with lessons to scale up solutions such as agrochemical pollution and the risks associated with periodic flooding.
  65. The main tools of the Project will be the Transboundary Diagnostic Analysis (TDA) and the Strategic Action Programme (SAP) development approach (TDA/SAP process).[18]<sup>18</sup> This is an exercise of deep collaborative, inclusive analysis and strategic planning, which will warrant the mainstreaming of fundamental elements such as common understanding of the current CBCRS IWRM challenges, opportunities, participation and representation (see Figure 3). The aim will be to have a formal instrument (the SAP) that has an adequate balance between the technical, social-gender and political dimensions of transboundary management. In addition, it is envisioned that the SAP will be the basis to ensure cooperation and investment at the binational scale of the basin.
  66. To complement the TDA/SAP process, the project will develop:
    - ? Enhanced instruments and mechanisms for the CBCRS work, ensuring the integration of Indigenous Peoples consultation and decision mechanisms and gender mainstreaming.
    - ? Pilot interventions to generate learning on key issues: restoration and biological corridors, multi-stakeholder dialogues, and scaling up agroforestry.
    - ? A shared binational flood warning system.
    - ? A collaborative information system for long-term monitoring and reporting of condition.
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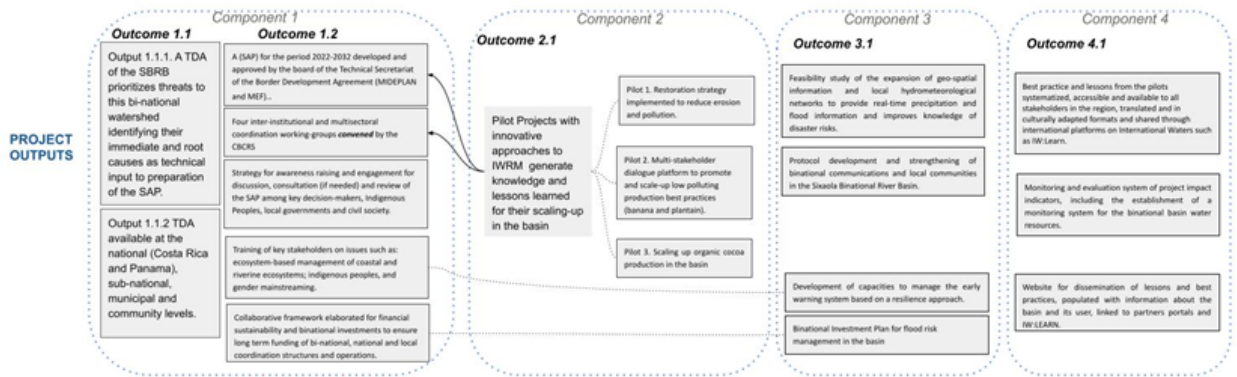
67. A Theory of Change roadmap has been discussed with the participation of key stakeholders during the PPG phase. It starts from the core problem and proposes a route to be followed until reaching both the project's goal (Figure 3 and figure 4); that national and binational actors, identified during the PPG phase (See Annex 4b for the Stakeholder Analysis), may have the capacities and tools for a better binational management of the project, as well as, to contribute to the long-term goal, that is: the conditions for the binational management of water resources and greater overall environmental benefits are created.
68. The logical scaling of the desired change, starts from the identification of the main problems that gave rise to the degradation of water resources, and which strategies will contribute to the goal of the project, taking into consideration the preconditions for this process to be fully carried out, both from the coordination mechanisms, knowledge management at the end and a clear political will of the parties.
69. In the longer term, the project will contribute to integrated soil and water management, such as by advancing the nexus approach in watersheds and drainage basins, contributing to reducing water pollution, reducing land-based sources of marine pollution and contributing to ecosystem-based adaptation of vulnerable human populations.



**Figure 3.** Simplified and interrelations within the Project Theory of Change

**PROJECT IMPACT**

At the end of the project, the conditions for the Integrated Water Resources Management in the Sixaola River Binational Basin between Costa Rica and Panama will have been enabled and contribute to reducing agrochemical pollution and the risks associated with periodic flooding in the basin.



**Figure 4.** Project's Theory of Change linked to causal anal

Expected Results

70. The objective of the project is to create long-term conditions for an improved shared river basin governance, with timely information for the Integrated Water Resources Management in the Sixaola River Binational Basin between Costa Rica and Panama and will contribute to reducing agrochemical pollution and the risks associated with periodic flooding in the basin. The project is organized in four components and five outcomes. In total, five outputs will be generated (Table 2).
- ? Component 1: Governance instruments improved for the joint management of the SBRB.
  - ? Component 2: Demonstrative pilot projects stimulate collaborative work replication and implementation of SAP and build capacity, experience and support for SAP implementation
  - ? Component 3: Flood and risk management improved
  - ? Component 4: Knowledge Management

Table 2. Project outcomes and outputs.

Project Outcomes	Outputs
<b>Component 1. Governance instruments improved for the joint management of the SBRB.</b>	
1.1 Common understanding of the transboundary water and environmental issues, challenges and opportunities with gender perspective affecting the Sixaola Binational river basin and agreed strategy for basin restoration and protection.	<b>1.1.1.</b> Transboundary Diagnostic Analysis (TDA) of the Sixaola Binational River Basin prioritizes threats to this bi-national watershed identifying their immediate and root causes as technical input to preparation of the SAP.
	<b>1.1.2.</b> TDA available at the national (Costa Rica and Panama), sub-national, municipal and community levels.
1.2 The Binational Commission of the Sixaola River Basin (CBCRS) role as a facilitator of IWRM actions by public and private sector stakeholders is strengthened and builds upon an and agreed strategy to attend the environmental issues, challenges and opportunities affecting the Sixaola river basin.	<b>1.2.1</b> Strategic Action Programme (SAP) for the period 2022-2032 developed and <b>endorsed at ministerial level</b> by the Permanent Binational Commission of the Border Development Agreement (the commission is chaired by Ministers of MIDEPLAN and MEF).
	<b>1.2.2</b> Four inter-institutional and multisectoral coordination working-groups <i>convened</i> by the CBCRS.
	<b>1.2.3</b> Strategy for awareness raising and engagement for discussion, consultation (if needed) and review of the SAP among key decision-makers, Indigenous Peoples, local governments and civil society.

	<p><b>1.2.4</b> Training of key stakeholders (public and private) on issues such as: ecosystem-based management of coastal and riverine ecosystems; indigenous peoples, and gender mainstreaming.</p>
	<p><b>1.2.5</b> Collaborative framework elaborated for financial sustainability and binational investments to ensure long term funding of bi-national, national and local coordination structures and operations.</p>
<p><b>Component 2. Demonstrative pilot projects stimulate collaborative work replication and implementation of SAP and build capacity, experience and support for SAP implementation</b></p>	
<p>2.1 Demonstrative pilot interventions implemented by local stakeholders and community-based organizations advance targets of the SAP and generate global environmental benefits in the SBRB.</p>	<p><b>2.1.1 Pilot 1.</b> Restoration strategy implemented to reduce erosion and pollution.</p>
	<p><b>2.1.2 Pilot 2.</b> Multi-stakeholder dialogue platform to promote and scale-up low polluting production best practices (banana and plantain).</p>
	<p><b>2.1.3 Pilot 3.</b> Scaling up agroforestry systems (with cocoa, banana and plantain production in the binational basin)</p>
<p><b>Component 3. Flood and risk management improved</b></p>	
<p>3.1 Capacity of communities and local organizations to respond to flood risks in the Sixaola river margin is strengthened.</p>	<p><b>3.1.1</b> Feasibility study of the expansion of geo-spatial information and local hydrometeorological networks to provide real-time precipitation and flood information and improves knowledge of disaster risks.</p>
	<p><b>3.1.2</b> Protocol development and strengthening of binational communications and local communities in the Sixaola Binational River Basin.</p>
	<p><b>3.1.3</b> Development of capacities to manage the early warning system based on a resilience approach.</p>
	<p><b>3.1.4</b> Binational Investment Plan for flood risk management in the basin</p>
<p><b>Component 4. Knowledge Management</b></p>	
<p>4.1 Improved knowledge, practice and aptitudes of key stakeholders regarding binational collaborative action to restore coastal and riverine ecosystems; control pollution</p>	<p><b>4.1.1</b> Best practice and lessons from the pilots systematized, accessible and available to all stakeholders in the region, translated and in culturally adapted formats and shared through international platforms on International Waters such as IW:Learn.</p>

and reduce vulnerability to flood risks.	<b>4.1.2</b> Monitoring and evaluation system of project impact indicators, including the technical design and piloting of a binational monitoring system for the basin water resources.
	<b>4.1.3</b> Website for dissemination of lessons and best practices, populated with information about the basin and its user, linked to partners portals and IW:LEARN.

Brief description of project components and outcomes are described below:

Component 1. Governance instruments improved for the joint management of the SBRB

Outcome 1.1 Common understanding of the transboundary water and environmental issues, challenges and opportunities with gender perspective affecting the Sixaola river basin and agreed strategy for basin restoration and protection.

71. The core scope to achieve this outcome will be applying the Transboundary Diagnostic Analysis and Strategic Action Programme development approach (TDA/SAP process) for the management of SBRB.[19]<sup>19</sup> The TDA will consider the impacts of the COVID-19 pandemic and the SAP will integrate, as much as possible, the countries' recovery strategies.
72. The project actions and budget to undertake the TDA/SAP process include the two participating countries.
73. This component will be driven by the project coordinator in close collaboration with the gender and participation specialist (EGP), the Social and Human Rights Expert Sp, and consultants. The EGP will ensure that (i) the process is participatory and inclusive and (ii) that key aspects like participation, representation and gender are addressed in the TDA/SAP process. The Social Expert will ensure to carry out the coordination with the Indigenous Peoples.

Outcome 1.2 The Binational Commission of the Sixaola River Basin (CBCRS) role as a facilitator of IWRM actions by public and private sector stakeholders is strengthened and builds upon an agreed strategy to cope with the environmental issues, challenges and opportunities affecting the Sixaola river basin.

74. This outcome constitutes one of the key elements of long-term planning in the basin. This outcome will allow the strengthening of binational governance conditions for integrated water resources management and strengthen the functioning of the CBCRS, and thus the management of the basin's water resources.
  75. This outcome proposes to provide technical assistance to improve the skills and methods of the Sixaola River Basin Binational Commission (CBCRS) stakeholders to use the
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complementary studies to develop an Strategic Action Programme (SAP) for the period 2022-2032.

76. The SAP requires ministerial endorsement, so the SAP could be discussed to facilitate endorsement **at ministerial level** by the Binational Permanent Commission of the Border Agreement. This Commission is chaired by Ministers of the Planning and Finance Ministries of Costa Rica and Panama. The discussion and negotiation will be facilitated through the Executive Binational Secretariat.

Component 2. Demonstrative pilot projects stimulate collaborative work, replication and

implementation and build capacity, experience and support for SAP implementation.

Outcome 2.1. Demonstrative pilot interventions implemented by local stakeholders and community-based organizations advance targets of the SAP and generate global environmental benefits in the SBRB.

77. This Component focus on generating practical lessons through **three pilot interventions** on key issues: (i) riparian forest restoration; (ii) multistakeholder dialogue around sustainable plantain and banana production and iii) scaling up agroforestry with cacao production. The experience and lessons from these pilots will provide inputs to the TDA/SAP process and will serve to prepare governance instruments.
78. The COVID-19 pandemic had a wide range of impacts on the basin populations; not only on social and health aspects, but also on the economic dynamics: the export chain, the tourism, and others. The pilots will document pertinent impacts on each case to provide inputs to the TDA/SAP process.
79. This outcome is the implementation of four pilot projects in Costa Rica and Panama to reduce surface and groundwater pollution in the Sixaola River Basin, increase aquifer recharge through ecological restoration measures, rehabilitate coastal ecosystems, manage contaminated wastes in coastal wetlands and beaches, and optimize the availability of water resources.
80. As indicated in the Gender Plan, the pilots will involve women, women's groups and women's empowerment groups in specific activities. In addition, their participation will be sought in environmental education programs implemented through innovative investments and to maintain inclusive and gender-sensitive participation.
81. Indigenous Peoples will be beneficiaries and take part in the implementation of demonstrative pilots. These pilot projects foresee actions to be implemented with or in their territories. As indicated in SESP (PRODOC Annex 4a) and draft IPPF (PRODOC annex 4c), risk as mitigation measures will be taken to ensure Indigenous Peoples rights while implementing the pilot projects.
82. The project demonstrative pilots will involve groups that will contribute to the sustainability of specific actions to replicate best environmental practices throughout the basin.



83. The national subcommittees and the Executive Committee of the project will play an important role in the project pilots, seeking best available innovative solutions, sustainability mechanisms and scaling up to ensure lessons are incorporated, understood, and disseminated among stakeholders (see section VII Governance and Management Arrangements Section). As agreed by the stakeholders consulted during the project preparation, pilots have beyond national scope, a transboundary scope, seeking real binational cooperation. Either by the joint implementation of actions or the transfer of knowledge and capacities.

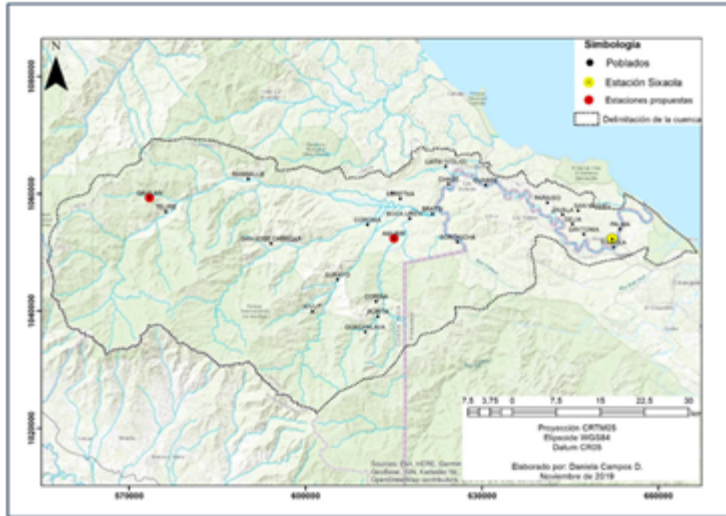
### Component 3. Flood and risk management improved

#### Outcome 3.1. Capacity of communities and local organizations to respond to flood risks in the Sixaola river margin is strengthened

84. This outcome seeks to capitalize on 20 years of flood risk management to build a binational early warning and monitoring system, with innovative approaches and citizen participation. The expected outcome of this component is to strengthen the capacity of local communities and organizations to respond to flood risks. This will be achieved through a scaling-up approach geared to the development of an early warning system (EWS) for floods to protect exposed communities.
  85. Previous efforts of EWS have been operating in the Sixaola river basin. The first EWS in the Sixaola began in 1988 on the Costa Rica side of the watershed, followed Hurricane Joan. As the impacts of this event became evident, the National Emergency Commission (CNE) of Costa Rica took the first steps towards establishing early warning processes in conjunction with the communities of Sixaola and Valle de la Estrella. Following the April 1991 Earthquake, whose epicenter was in the Estrella River valley, the monitoring systems for landslides and flash floods were reinforced. Efforts involved the implementation of the first radio communication systems that, together with the National Meteorological Institute of Costa Rica (IMN), that facilitated warnings and alerts for hydrometeorological phenomena. As of 2011, although Costa Rica did not have EWS for floods per se, an institutional communications network was available and operational in the Sixaola and Estrella river basins.[20]<sup>20</sup>
  86. The current institutional communication network focuses on flood monitoring and it is implemented by the CNE. Among the beneficiary communities in Costa Rica are: Chase, Delicias, Margarita, Olivia, Puerto Cocle, Para?so, Bribri, Guabito and Las Tablas, the latter two belonging to Panama. These binational hazard monitoring efforts, and in particular flood monitoring in the Sixaola River Basin, have stagnated in recent years, although records of flood loss and damage in urban areas and agricultural plots in the middle and lower basins continue to occur regularly. A baseline study was conducted during the project preparation phase, and a preliminary design and system of thresholds and triggering mechanisms for an improved EWS in the Sixaola Basin was proposed (see PRODOC Annex 12 for full report).
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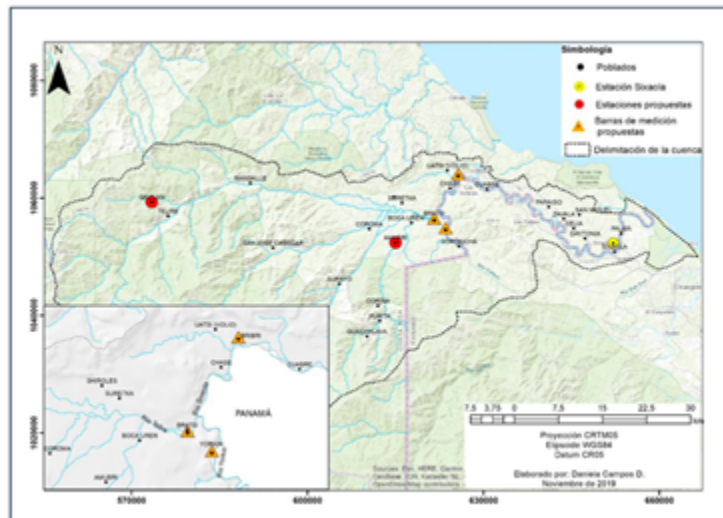
87. Main conclusions of this baseline study show that a community-rooted EWS could address a variety of hydrometeorological hazards, in order to facilitate public education and raise risk awareness, disseminate messages and warnings efficiently, and ensure that a constant state of readiness and early action is enabled. Additionally, more precise hydro-meteorological information is needed; currently there is only one meteorological station in the basin.
88. Moreover, the baseline study identifies many opportunities to improve the quality of information by using systematic observation methods along with information from remote sensors and drones and their translation into protocols and emergency communications. Figure 5 shows the location of the meteorological station in Sixaola community and other locations proposed: in Amubri (Indigenous Territory) and in Gavil?n Canta (in La Amistad International Park). The study also proposes the installation of a monitoring system to provide accurate information of the strengthening of the EWS (Figure 6).
89. The technical study highlights that in order to consolidate and upgrade the current monitoring system to an early warning system the project would need to:
- a. Improve knowledge of disaster risks. Through systematic data collection and analysis to understand the nature and behaviour of hazards, as well as the identification of related vulnerable groups, with special attention given to women and indigenous peoples. The localization of critical infrastructure and exposed assets, to design evacuation strategies that include evacuation routes and safe areas, and to expand warning messages to include the most vulnerable and isolated communities.
  - b. Improve capacity for detection, monitoring, analysis and forecasting of hazards and potential consequences. To provide forecasts and warnings, including the development of specific hydrometeorological models, as well as increasing automated hydrometeorological monitoring infrastructure to produce and deliver accurate thresholds for determining the activation of warnings at strategic sites in the binational basin.
  - c. Develop specific early warning dissemination and communication protocols. To ensure that warnings reach all people at risk in both countries with clear messages containing simple, useful and usable information to enable adequate preparedness and response of organizations and communities, using multiple communication channels and currently available technology.
  - d. Strengthen local capacities so that people understand their risks, respect alert services and know how to react to alert messages. Riparian communities need to be organized and trained to apply simple monitoring tools, such as drones, to monitor flood waters, to complement and support automated monitoring mechanisms. It is key to stimulate the co-responsibility of the inhabitants in the maintenance of the EWS, particularly through the participation of educational institutions, women and youth organizations that can help create solidarity among communities. This includes increasing the organization and training of existing local emergency committees in charge of disaster management plans, determining guidelines for self-protection and safe behaviour, identifying available evacuation routes to safe areas, locating shelter locations, among other to reduce risks, damages and property loss.

**Figure 5.** Location of the Sixaola station (yellow) and two other proposed stations (red dots) in Gavil?n Canta y en Amubri



Source. Project preparation documents.

**Figure 6.** Monitoring stations proposed to provide accurate information of the strengthening of the EWS. In orange the measuring bars.



Source. Project preparation documents.

90. Therefore, there are still significant needs for public and private investment to facilitate and strengthen disaster risk management and adaptation to climate change in the basin.
91. Based on the previous recommendations, this outcome propose the development of four outputs are proposed to strengthen and consolidate an early warning system (EWS) in the SBRB (Table 2).

#### Component 4. Knowledge management

Outcome 4.1: Improved knowledge, practice and aptitudes of key stakeholders regarding binational collaborative action to restore coastal and riverine ecosystems; control pollution and reduce vulnerability to flood risks.

92. The project will focus on knowledge management, ensuring broad stakeholder participation in defining and systematizing best practices and lessons learned. The knowledge documents will be culturally adapted and translated into the indigenous languages of the binational basin, and the technical documents will have English summaries to facilitate international access to them. Documentation will be shared via the project website, national and regional websites and IW: LEARN. The project website will be developed and maintained following the IW: LEARN guide. Project experience will be documented and disseminated using the GEF IW templates for experience notes and outcome notes. Country representatives and the project team will participate in IW: LEARN meetings and international water conferences.
93. This fifth outcome makes up component 4 of the project and constitutes an instrumental component that will work in the service of the first three components described above. It will seek to improve the quality of the information available on the basin and its water resources and make it available to a maximum number of users both within and outside the basin, in Costa Rica and in Panama. This outcome will be composed of four outputs:

#### 4) alignment with GEF focal area and/or Impact Program strategies

94. The project will contribute to objective 3 of the International Waters portfolio of GEF-7, Objective 3. Enhance water security in freshwater ecosystems and to strategic actions IW 3-5, 3-6 and 3-7. The project will contribute to formulate and formalise cooperative legal and institutional frameworks built on the TDA/SAP approach
95. The project will allocate GEF resources strategically to (i) develop a participatory process to generate an integrated diagnosis on the current situation of the binational basin (i.e. Transboundary Diagnostic Analysis - TDA) and a formal binding instrument adopted by both countries (i.e. Strategic Action Programme - SAP), (ii) implement four practical exercises (pilot projects) to generate learning on key issues (sustainable agricultural practices, multistakeholder dialogues, restoration of banks to reduce erosion), (iii) build a binational early warning and monitoring system, with innovative approaches and citizen participation to strengthen the capacity of local communities and organizations to respond to flood risks on the banks of the basin, and (iv) generate IWRM-relevant information to all stakeholders.

#### 5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

96. The baseline context described in depth in the PRODOC, indicates that the Binational Sixaola River Basin faces increasing environmental degradation regarding its freshwater ecosystems, due to the extended use of pesticides in agricultural practices, the limited management of environmental pollution to water from domestic, tourism and agricultural uses, and barriers in promoting joint efforts and common goals among public and private

sector, and Indigenous Peoples. The degradation impacts freshwater and coastal biodiversity, and the quality of its water resources (Annex 12).

97. The governments of Costa Rica and Panama have committed to the improvement of binational water governance and had made efforts to move forward a more sustainable model in the transboundary basin. The conformation of the Sixaola River Binational Commission (CBCRS) is a clear example of this, as well as the development of the Territorial Strategic Plan 2017-2021. However, transboundary basin governance is not free of challenges. The operationalization of the strategic plan and the binational governance mechanisms is dependent on external development cooperation funds. The Territorial Strategic Plan did not have assignment of budget resources, which limited the delivery of critical activities such as conducting assembly meetings of even commissioning joint monitoring missions. Regarding the implementation of IWRM, existing governance mechanisms certainly facilitate coordination among stakeholders and public entities, but the scope of binational decision-making and shared information is limited due to lack of capacities and appropriate institutional arrangements. Furthermore, existing management instruments are insufficient to deliver the implementation of actions to consolidate transboundary governance of the Sixaola River at the highest level of decision making

98. This GEF project will build upon the structure and governance mechanisms of the Sixaola River Binational Commission (CBCRS), its Assembly, and it will strengthen its operative mechanisms such as the current regulation. The project will also reactivate the working groups to implement pilot projects. Moreover, it will strengthen the representation and decision-making of Indigenous Peoples; as explained in the IPPF document (Annex 4c), the project will support the establishment of an Indigenous Peoples Consultative Commission.

99. The project activities around the TDA/SAP will build on the Territorial Strategic Plan 2017-2021, taking advantage of the several studies already prepared, and complementing/updating them, when required. In general terms, the project will focus on improving capacities on transboundary IWRM, including risk management, environmental information management and social inclusion, to address existing inadequate management of shared ecosystem and avoid further degradation, social conflicts and potential risk to Indigenous Peoples and/or differentiated to women. This will be done under the understanding that improved governance and technical capacities will contribute to build sound sustainable, fair and scalable ecosystem-based management. With timely information, addressing existing barriers and contributing with lessons to scale up solutions such as agrochemical pollution and the risks associated with periodic flooding. And to guarantee sustained actions in time, a Sustainability Strategy will be prepared from the very beginning of the project implementation.

100. The key contributions of this project will be:

? To prepare a participatory situation analysis (TDA) with gender and indigenous perspectives and to develop an strategic action plan (SAP) to respond to binational environmental and social pressures (outcomes 1, 2).

? To raise awareness of key stakeholders about IWRM (including groundwater management), ecosystem-based management and risk management.

? To improve capacities of local and regional institutions on, water quality management (i.e pollutants and sources) and monitoring, land use planning tools, such GIS, and indigenous-based knowledge management (outcomes 2, 3, 4 and 5).

? To gain hands-on experience on, water management (surface and groundwater), multistakeholder dialogues, restoration strategies, and gender-sensitive conservation strategies (outcomes 1, 2 and 3).

? To improve governance arrangements and mechanism to advance IWRM at the binational level (outcome 2).

101. The GEF contribution will accelerate progress towards IWRM in the binational basin by building the basis for collaborative regional management. GEF resources will be crucial to support institutional arrangements to sustain collaborative transboundary management (i.e., a Strategic Action Programme formally adopted by two countries). The TDA/SAP process will be the main tool. An exercise of participatory and inclusive analysis and strategic planning will warrant the mainstreaming the ecosystem approach for IWRM. The aim will be to have a formal instrument (the SAP) that has an adequate balance between the technical, social-gender, indigenous-inclusiveness and political dimensions of transboundary management.

102. Based on previous experience and ongoing initiatives, the project will contribute to strengthening the binational cooperation. The project will build upon a range of existing experience and ongoing initiatives from a range of entities. For example, the TDA development will use information generated from the previous GEF ID 25517 (Sustainable Environmental Management for Sixaola River Basin). Additionally, This project will coordinate actions and lessons learnt with GEF International Waters projects:

? GEF ID 9592: Catalysing implementation of a Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Humboldt Current System (HCS);

? GEF ID 9246: Integrated Environmental Management of the Bi-National R?o Motagua Watershed;

? GEF ID 9124 Coastal Fisheries Initiative;

? GEF Project IWeco led by UN Environment Implementing Integrated Land, Water & Wastewater Management in Caribbean SIDS;

? GEF ID 5271: Global Sustainable Supply Chains for Marine Commodities;

? GEF ID 9592: Catalysing implementation of a Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Humboldt Current System (HCS);

? GEF ID 5284 Integrated Management of Transboundary Water Resources in River Basins Puyango-Tumbes, Chira and Catamayo-Zarumilla;

? GEF ID 5542: Catalysing the implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean Large Marine Ecosystem of the Caribbean and Northern Brazil Shelf

(CLME+), executed by UNDP. Although this programme is about to conclude in 2021, a third phase is currently being discussed among member countries to continue supporting CLME+ SAP implementation.

103. Without a coordinated multinational management framework, Panama and Costa Rica will continue to manage their resources and activities without considering global environmental benefits and/or adaptation benefits, leading to an increased loss of biodiversity and climate-related risks. In the longer term, the project will contribute to integrated soil and water management, such as by advancing the nexus approach in watersheds and drainage basins, contributing to reducing water pollution, reducing land-based sources of marine pollution and contributing to ecosystem-based adaptation of vulnerable human populations.

104. The alternative scenario will consist of agreed binational measures and governance agreements to address the main common problems that threaten the coastal and marine biodiversity of the binational basin and adjacent areas. Joint action is expected to reduce risk factors and contribute to conserving valuable biodiversity and sustaining the range of ecosystem services this river basin provides to Costa Rica and Panama.

#### 6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCE/SCCF)

105. The project will implement demonstrative pilot interventions to generate global environmental benefits in the Binational Sixaola River basin. This initiative will deliver various global environmental benefits (GEBs) under the international waters objective 3, as described in the GEF-7 Programme Directions. The pilot interventions, as well as the TDA/SAP process and the correspondent coordination and governance required will contribute to the direct conservation of ecosystems through the restoration of 3,000 hectares and 1,000 hectares area landscapes area under improved practices (excluding protected areas).

106. Regarding the conservation of biodiversity, the project will contribute conservation and restoration of riverine and coastal forests, as key areas for interconnectivity among all basin ecosystems (ridge to coastal ecosystems) that sustain endemic and high conservation value fauna and flora. The pilot interventions, as well as the TDA/SAP process and the correspondent coordination and governance required will contribute to the direct conservation of ecosystems through the restoration of 3,000 hectares. Restoration will ensure the use of endemic species, as indicated in the SESP.

107. Efforts to reduce land degradation will be implemented through this project. The pilot interventions will promote sustainable use of biodiversity in productive landscapes, implementing over 1,000 hectares of agro-forestry systems with under improved practices (excluding protected areas) with the aim of improving the provision of agro-ecosystem goods and services.

108. The project will also contribute to reduce water pollution from land-based initiatives to protect human health and environment through the phase out of the use of Persistent Organic Pollutants (fertilizers). A permanent dialogue with the private sector will be established under pilot 2, to improve agricultural practices and reduce the amount of agro-toxics to improve water quality of the Sixaola river basin.

109. The project will strengthen international IWRM with a view of integrating the perspectives and cultural practices of the Naso, Bribri, Cabecar and Kɔbe Indigenous Peoples.

110. Risk management (under output 4), will improve the lives not only of the basin inhabitants, but also of economic and trade activities in the region.

111. Additionally, the project will contribute to sustain the livelihoods of around 20k people who live in the basin, including 40% of indigenous population that depend on the use of natural resources for water and food security.

112. The overall environmental benefits (GEFTF) of the Project will be achieved through increased regional cooperation, and it will be demonstrated through (i) enhanced protection of globally important biodiversity, (ii) reduction of transboundary and terrestrial pollution of marine ecosystems, and (iii) flood risk reduction and ecosystem-based adaptation to climate change.

7) innovation, sustainability and potential for scaling up. ?

The project will implement several innovations, around governance mechanisms, practices, technologies and participation. Main elements of innovation are:

1. The TDA/SAP process will be based on a multi-stakeholder process through a multidisciplinary approach to integrated water resources management, land use planning, community based and ecosystem-based adaptation. Binational institutions are strengthened, and the joint governance of a shared watershed is built through innovative approaches to institutional design and stakeholder participation.

2. Particular attention will be paid to working with local indigenous and traditional authorities to make sure that the decisions taken by the CBCSR are in line with existing national and international standards and safeguards. Important innovations will be developed in this area that will be systematized through the project and disseminated with the IW community through the IW learn and project website.

? The project will strengthen water governance in the framework of Indigenous Peoples rights, according to the Indigenous Peoples Plan.

? The design of restoration areas, corridors will consider indigenous scientific knowledge of vegetation architecture and its relationships with wildlife.

? An intercultural approach to risk prevention management considering indigenous knowledge of floods and their early warning systems.

3. Four working groups will help harness best available scientific knowledge from both countries and internationally, and apply this to develop guidelines and criteria for the management of water sources, aquifer recharge areas, wetlands and other critical freshwater and marine ecosystems. This process will provide key lessons learnt to the Ministries of Environment, Planning and Agriculture of both countries. Lessons of the multistakeholder dialogue platform (under pilot 2) will also be delivered to the the Green Commodities program implemented by UNDP



4. Innovative technologies for flood management, response and early warning systems will be applied. Groundwater
5. Environmental sustainability. The project aims to promote ecosystem-based management to address the key issues that threaten biodiversity and ecosystem services. This is in line with existing national and regional policies in the area and will be achieved by improving local and binational capacities for the integrated and transboundary management of water resources and coastal biodiversity.
6. Social sustainability: The project will deliver outcomes through a participatory approach that involves key stakeholders and makes emphasis on ensuring high levels of interaction by women and indigenous groups in decision making related to project implementation. The project will build on existing social capital and networks already established by binational basin actions in order to promote further collaborative actions, attract new partners so all sectors may support the implementation of the SAP. The project will serve as a key learning experience regarding the consultation and participation mechanisms for indigenous peoples. Legislation regarding indigenous consultation, has been recently approved in both countries, Costa Rica and Panama, so the institutional experience is still limited. The support provided by the project to consultation institutional processes and FPIC will contribute to strengthen the mechanism of both countries and to be implemented in their processes at national level. The learning will also be valuable for the international Waters community through output 5 and IW Learn.
7. Institutional sustainability: The long term governance of transboundary issues will be addressed by strengthening binational institutions such as the CBCSR, which will be involved in building a network of partner institutions on either side of the border between Panama and Costa Rica. This binational governance will be critical for the success of the project, and it will require close collaboration and well-established cooperation channels. The advantage of the project is that the institutional figure of the CBCSR already exists and can benefit from increased capacities and leverage to lead the project and become a critical binational feature in charge of the long-term management of the Sixaola River Basin.
8. The sustainability of the Talamanca and Changuinola municipalities will need to be addressed by local governments, civil society organizations and indigenous people's authorities.
9. Financial sustainability. At the binational level, this is guaranteed by the participation of critical institutions that already are supported by both national governments and regional institutions such as CABEI (BCIE) and other regional banks. At the local level, the working groups to be established with component one will develop a long-term financial sustainability strategy to cover costs of continuous replication of project interventions. This will entail close coordination with the BIOFIN teams in Costa Rica and Panama developing financial instruments to cover the financial gap in both countries to implement the NBSAP. The working groups will identify specific interventions that are aligned with NBSAP implementation so that these may benefit from the financial solutions being developed by BIOFIN, these may include but are not limited to crowd funding for continuous restoration; a

mechanism for connecting impact investors with organized productive enterprises in the binational basin.

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[1] Using a five-point scale: very low, low, medium, high, and very high.

[2] UNEP, 2010. Sixaola Factsheet. Transboundary Water Assessment Programme (TWAP). United Nations Environment Programme (UNEP). [Accessed online: TWAP RB Data Portal: <http://twap-rivers.org/>]

[3] GWP, 2016. Gestión integrada de los recursos hídricos en Centroamérica: Gestionando las aguas transfronterizas como desafío primordial. Technical Focus Paper.

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[6] GWP, 2016. Op Cit.

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[8] BID Costa Rica (2004) Programa de Desarrollo Sostenible de la Cuenca Binacional del Río Sixaola (CR-0150).

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[10] Barrantes, G. 2019 ?Estudios Preparatorios Para Formulaci?n De Un Componente De Proyecto Relativo A La Gest?n Del Riesgo Por Inundaci?n En La Cuenca Binacional Del Rio Sixaola?, PPG consultant report.

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[14] Biomarcc-SINAC-GIZ, 2013. In: Corrales, L. 2014. Adaptaci?n al cambio clim?tico en zonas costeras de Costa Rica: tarea pendiente. Blog.

[15] Cai, W., Borlace, S., Lengaigne, M., van Rensch, P., Collins, M., Vecchi, G., Timmermann, A., Santoso, A., McPhaden, M.J., Wu, L., England, M.H., Wang, G., Guilyardi, E. & F.F. Jin. 2014. Increasing frequency of extreme El Ni?o events due to greenhouse warming. Nature Climate Change 4: 111-116.

Cai, W., Wang, G., Santoso, A., McPaden, M.J., Wu, L., Jin, F.F., Timmermann, A., Collins, M., Vecchi, G., Lengaigne, M., England, M.H., Dommenges, D., Takahashi, K. & E. Guilyardi. 2015. Increased frequency of extreme La Ni?a events under greenhouse warming. Nature Climate Change 5: 132-137.

[16] For more information of the report by UNESCO on these World Heritage Sites, please see <https://whc.unesco.org/en/list/205/documents/>. The mission also included two other World Heritage Sites in Panama, Portbello and San Lorenzo, <https://whc.unesco.org/en/danger/>

[17] In Costa Rica the current Water Law dates from 1942 (Law Decree No 276). In Panama, the Law Decree No. 35 of 1966 regulates the use of surface and groundwater and the Law for the Integrated Management of River Basins addressed the management of watershed (Law Decree No 44 from 2002).

[18] GEF IW:LEARN, (2013). GEF Transboundary Diagnostic Analysis/Strategic Action Programme Manual.

[19] GEF IW:LEARN, (2013). GEF Transboundary Diagnostic Analysis/Strategic Action Programme Manual.

[20] UNESCO-CEPRENAC 2011 Best Practice on Tsunami and Coastal Hazards Community Preparedness and Readiness in Central America and the Caribbean, 11-13 August 2008, Panama City, Panama, 44pp. 2008 (IOC Workshop Report No 241, UNESCO 2011) (English)

#### **1b. Project Map and Coordinates**

**Please provide geo-referenced information and map where the project interventions will take place.**

Included in PRODOC Annex 1.

#### **1c. Child Project?**

**If this is a child project under a program, describe how the components contribute to the overall program impact.**

## 2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

**Civil Society Organizations** Yes

**Indigenous Peoples and Local Communities** Yes

**Private Sector Entities** Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

1. During project preparation, a stakeholder's analysis and engagement plan were elaborated (PRODOC Annex 4b). The PMU will coordinate this plan, and together with the monitoring and evaluation specialist will monitor and assess the indicators of the plan. The stakeholder's engagement plan includes the grievance mechanism for the project.

2. There are 77 institutions and local organizations that were listed as relevant to its implementation in both countries. Of these, most are private institutions and local NGOs. The least represented are social organizations and public local institutions and international cooperation. Both Costa Rica and Panama have national key stakeholders represented but there are existing binational institutions or instances, such as the Secretariat of the Binational Agreement for the Development of the Border Region between Costa Rica and Panama, and the CBCRS identified as relevant to the scope of incidence of the project. Most of these actors have an average influence on the project, just as most have a high interest in its implementation.

3. Within the 77 stakeholders identified, there are 3 most relevant groups, who should be given attention and establish a specific strategy for their follow-up during the different phases of project execution. For detailed information, refer to the Stakeholder Analysis of the Sixaola River Basin project (See PRODOC Annex 4b). The groups identified as key players due to their level of influence and interest in the project:

? Binational instances and national institution present of in Sixaola River Basin

? Local actors for the implementation of pilot interventions in each site.

? Indigenous Peoples

? Private sector

?

4. Representatives of the indigenous peoples of Panama and Costa Rica participate in the CBCRS. They are the following:

? The Ng?be people, represented by the chief of areas annexed to the Ng?be-Bugl? County.

? The Naso people, through their ancestral authorities, the Naso king and the Naso Tj?rdi General Congress.

? The Bribri people through their ancestral authorities, the Bulu and the Bribri General Council.

? Association for the Comprehensive Development of the Bribri Indigenous Territory (ADITIBRI).

? Association for the Comprehensive Development of the Kek?ldi Indigenous Territory (ADIKEK?LDI).

? Association for the Comprehensive Development of the Cab?car de Talamanca Indigenous Territory (ADITICA).

? Association for the Comprehensive Development of the Cab?car Indigenous Territory of Telire.

5. These organizations are integrated into the CBCRS and participate in its assemblies. However, this is not sufficient to ensure the fulfillment of their specific rights, both collective and individual.

6. In relation to the project, the integration of an Indigenous Peoples Consultative Commission (IPCC) is recommended. See more details in the IPCC regarding the functions suggested for the IPCC. Gender parity is recommended for the members of the IPCC as mentioned in the Gender Action Plan (PRODOC Annex 4d).

7. Please find the Stakeholder Analysis and Stakeholder Engagement Plan and draft Indigenous Peoples Planning Framework in PRODOC Annexes 4b and 4c.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

**Select what role civil society will play in the project:**

**Consulted only;**

**Member of Advisory Body; Contractor; Yes**

**Co-financier;**

**Member of project steering committee or equivalent decision-making body;**

**Executor or co-executor;**

**Other (Please explain)**

### **3. Gender Equality and Women's Empowerment**

**Provide the gender analysis or equivalent socio-economic assesment.**

1. The gender analysis shows how gender gaps persist in Panama and Costa Rica for indigenous, Afro-descendant and rural women living around the Sixaola River Basin. Despite the fact that they mostly work in agricultural production, their capacities to formalize in the market are limited, given the limited access to health and education services, they are more exposed to the impacts of disasters, rates of teenage pregnancy and intra-family violence prevail, less participation in local water resource management, among others.

#### *Summary of Gender Action Plan*

2. Beyond the importance of profound gender gaps in the basin, this project will focus on strengthening the role of women (indigenous, Afro-descendent and rural women in Costa Rica and Panama) in IWRM of the basin, with emphasis on their role on governance and decision making of future projects and investments in the basin. It will collect data on problems faced by indigenous women and women workers in the agricultural sector and local water management. It will also strengthen women capacities for restoration activities, the sustainable practices and early warning systems. (See GAP in PRODOC Annex 4d for details on activities).

3. A Gender Specialist will be hired to lead the implementation of the GAP and will coordinate with the PMU specialists to implement the activities. This specialist will also work jointly with the M&E specialist to ensure the proper monitoring of Gender Action Plan Indicators.

4. A specific budget has been allocated for the implementation of the Gender Action Plan. (see PRODOC Annex 4d),

5. Please find the Gender Action Plan in PRODOC Annex 4d.

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?**

Yes

**Closing gender gaps in access to and control over natural resources; Yes**

**Improving women's participation and decision making Yes**

**Generating socio-economic benefits or services or women** Yes

**Does the project's results framework or logical framework include gender-sensitive indicators?**

Yes

**4. Private sector engagement**

**Elaborate on the private sector's engagement in the project, if any.**

1. Several Outputs in the Results Framework for the project involve work and collaboration with the private sector and sustainable agricultural production (Output 3.1, 3.2, and 3.4). More details are included in the Stakeholders Engagement Plan (PRODOC Annex 4b).
2. The lower Sixaola river valley is also an area of intensive agricultural production, mostly of banana and plantain. This mainly monocropping activity also involves a number of private producers organizations, both large and small. These organizations account for almost a third (24) of the total of 77 stakeholders identified in the Sixaola river basin. These range from large international companies with similar production operations in other part of the region, to medium sized cooperative and associations of small holder producers. The diversity of agricultural systems range from large monocropping intensive export oriented production, through medium and small holder monocropping of banana plantain. These systems co-exist with, particular in the middle and upper sections of the Sixaola river basin, with small holder indigenous and afro-descendant traditional policulture of cacao, banana, plantain and fruit trees. These agroforestry systems are also increasing adopting modern techniques, including pesticide and fertilizer use.
3. Small community-based producers are also critical for strengthening existing traditional systems of agroforestry based on limited external inputs, organic and endemic varieties.

**5. Risks to Achieving Project Objectives**

**Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):**

See also: UNDP Risk Log in PRODOC Annex 5

Risk	Type	Level	Mitigation measures
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<p>Risk 1. Political instability could affect the implementation of actions at country or regional level</p>	<p>Political</p>	<p>Low</p>	<p>Both Costa Rica and Panama have for the past decades benefitted from political stability. The presence of UNDP Country Offices in both countries with direct access to senior government officials also will help to address emerging issues early on, through the project steering committee.</p>
<p>Risk 2. Lack of priority given to International River Basin Management in national policies and agency decision-making</p>	<p>Strategic</p>	<p>Medium</p>	<p>The Bilateral Cooperation Agreement for Border Development between Costa Rica and Panama provides a solid framework for the work of the Binational Commission of the Sixaola River Basin (CBCRS). This legal and political structure provides the basis for increased transboundary cooperation, which will be enhanced/strengthened through the implementation of the SAP 2022-2032.</p>
<p>Risk 3. The complexity of interventions for SAP preparation without effective coordination between both countries could limit the expected results</p>	<p>Organizational</p>	<p>Medium</p>	<p>The TDA will enable the project management to identify weaknesses in bilateral sectoral coordination mechanisms and will provide recommendations for specific remedial actions in order to strengthen capacities in both countries for the coordination of activities under the SAP.</p>
<p>Risk 4. The increase in the use of pesticides and fungicides to combat the spread of the Fusarium disease among banana and plantain producers in the lower Sixaola river basin.</p>	<p>Environmental</p>	<p>Moderate</p>	<p>The <i>Fusarium oxysporum</i> is a disease that produces the wilting of banana and plantain species. It is currently prevalent in Colombia, and there is fear of it spreading to Panama and Costa Rica. This would most likely constitute a direct threat to the aims of the project to contribute to reducing the amount of pesticide use in the Sixaola river basin. During its TDA phase, the project will need to focus on innovative approaches to combating this disease, which may include the introduction of fungus or disease-resistant plant varieties, and other techniques that do not require more intensive applications of pesticides and fungicides to banana plantation.</p>



<p>Risk 5. Poorly designed, including the disregard of indigenous knowledge, or not consulted activities in the pilot project N?1 could damage critical or sensitive habitats, including through the introduction of invasive alien species during forest restoration activities.</p> <p>The lack of consultation with indigenous peoples could affect the local appropriation and in consequence, the sustainability of restored areas.</p>	<p>Socio-Environmental risk (SESP Risk 1)</p>	<p>Moderate</p>	<p>The pilot project N?1, will invest in restoration actions along the river basin and will support the incorporation of land management tools (micro corridors, live fences, among others). For these activities, invasive alien species (IAS) will not be used. And for ensuring the IAS no use, during the design of this pilot project a selecting process to include the right species for ecosystem restoration, indigenous peoples will be consulted, and their ancestral knowledge of forest management and social water management will be considered as a technical input (see details in PRODOC Output 2.1.2) (all the previous based on the project?s Stakeholders Engagement Plan tools/actions ? PRODOC Annex 4b and for respecting Standard 6, a Indigenous People Planning Framework (IPPF) is included in ? PRODOC Annex 4c).</p> <p>The promotion of agricultural best practices will include knowledge kits to train producers and project partners on the impacts of invasive species on ecosystems and traditional indigenous tropical forest production systems, including water management knowledge.</p>
<p>Risk 6. Deforestation by foreign non-indigenous settlers in the upper watershed (protected areas and indigenous lands) continues and this reduces the benefits of ecosystem restoration and flood risk mitigation with a negative impact to all human settlements in the middle and lower part of the basin.</p>	<p>Socio-Environmental risk (SESP Risk 2)</p>	<p>High</p>	<p>The project will consider active coordination with environmental authorities and indigenous organizations to control deforestation resulting from illegal land occupation.</p> <p>The ESMP should give special consideration to this situation.</p>

<p>Risk 6: The risk that the Strategic Action Programme (SAP) is not properly consulted and appropriated by the population.</p>	<p>Socio-Environmental risk (SESP Risk 3)</p>	<p>Substantial</p>	<p>The process of formulating the SAP will consider participation and consultation with indigenous peoples, territories and communities, their rights to land and management of their natural resources. With this purpose, an Indigenous Peoples Consultative Commission (IPCC) will be set to facilitate a permanent dialogue with the project management team and to ensure that these participatory and consultation processes will be conducted with an intercultural approach that doesn't impact the rights and identity of indigenous peoples located in the Sixaola river (details are provided in the IPPF, included in PRODOC Annex 4c).</p> <p>Targeted activities to ensure gender equality and women's empowerment are included in the GAP (PRODOC Annex 4d) and will be carried out for the SAP development process.</p> <p>Inclusion of local stakeholders, especially women, and Afro-descendant's communities in the SAP consultation process will reduce the risk that rights-holders do not have the capacity to claim their rights. Therefore, content will be pedagogically mediated, to reach the local population, with an intercultural approach.</p> <p>Moreover, a Stakeholders Engagement Plan was also prepared during PPG (PRODOC Annex 4b), with main stakeholders that were categorized defining the best approach and tools to work with them.</p> <p>Finally, important to emphasize that the TDA/SAP process will be carried out following the Strategic Environmental and Social Assessment (SESA) approach (see PRODOC Output 1.1.1). The ESMP should give special consideration to this situation.</p>
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<p>Risk 7: The risk that the potential results or products of the project are vulnerable to the potential impacts of climate change.</p>	<p>Socio-Environmental risk (SESP Risk 4)</p>	<p>Substantial</p>	<p>The project will invest in restoration actions in previously prioritized areas through baseline investments (pilot N?1). IUCN has defined sites to restore in the basin (see PRODOC Output 2.1.2.). These sites will be selected once started project implementation using methodologies that include climate change variability as a selection input. The screening of possible risks related to pilot projects was analysed through the Environmental Social Management Framework (ESMF). Moreover, a SESA will be carried out during project implementation.</p> <p>The final areas for restoration located in indigenous territories should be consulted with the IPCC which will oversee participation and consultation processes.</p> <p>The previous will reduce the risk of future loss of investments due to climate change. Restoration efforts will be carried out using endemic species adapted to heavy rains and considering the cultural ecology of cultivated forests according to indigenous knowledge (see related actions mentioned above and correspondent actions in PRODOC Output 2.1.2.).</p>
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<p>Risk 8: The absence of FPIC and culturally adapted consultation processes on project activities, could lead to social conflict.</p>	<p>Socio-Environmental risk (SESP Risk 5)</p>	<p>Substantial</p>	<p>As proposed and agreed during the PPG (explained in the IPPF - PRODOC Annex 4c),</p> <p>during project implementation, an Indigenous Peoples Consultative Commission (IPCC) will be established under the Project Organization Structure (PRODOC section VII), which would provide permanent advice on consultation, inter-cultural approach, FPIC and conflict management in project implementation, including pilot projects.</p> <p>During the 6 first months of the project it will be determined which interventions will need consultation and/or FPIC, and the IPCC will continue during all project execution and will be responsible to evaluate the need of consultation and/or FPIC for all new activities.</p> <p>The Project will provide resources and technical supporting staff if required, for consultation and/or FPIC processes.</p> <p>The project participation and consultation system based on an IPCC, as included in the IPPF, corresponds to what is established in both legislations and it has been agreed with the national indigenous authorities (National Coordination of Indigenous Peoples of Panama and National Indigenous Board of Costa Rica and territorial organizations). And it complies with UNDP's SES requirements.</p>
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<p>Risk 9: Risk of producers disposing their no longer used chemicals in water sources.</p>	<p>Socio-Environmental risk  (SESP Risk 6)</p>	<p>Moderate</p>	<p>As indicated above, an ESMF was prepared in order to screen the possible risks associated. For pilot 2, the ESMF screening, indicated that the need for developing a waste management plan will be determined, during project implementation, according to discussions and agreements with the multistakeholder platform.</p> <p>The project participation and consultation system based on an IPCC, as included in the IPPF, corresponds to what is established in both legislations and it has been agreed with the national indigenous authorities (National Coordination of Indigenous Peoples of Panama and National Indigenous Board of Costa Rica and territorial organizations).</p> <p>In both countries, the right of consultation is defined in recent regulations (Law 37 of 2016 in Panama and Decree 40932 MP MJP of 2018 in Costa Rica). In Costa Rica through the Indigenous Consultation Technical Unit of the Ministry of Justice and Peace and the Territorial Consultation Bodies in the Sixaola River Basin and in Panama through the Vice-Ministry of Indigenous Affairs and the territorial authorities.</p>
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<p>Risk 10: Installation of an additional meteorological station without agreement with indigenous peoples may generate conflict (PRODOC outcome 3.1.).</p>	<p>Socio-Environmental risk <b>(SESP Risk 7)</b></p>	<p><b>Low</b></p>	<p>A proposed location for these stations as included in Figure 17 and 18, based on studies carried out during the project preparation.</p> <p>In the event that they are finally located in indigenous territories, consultation and/or FPIC will be required, which will be discussed with the IPCC.</p> <p>The project must ensure the surveillance and maintenance of hydro-meteorological stations, both in technical and financial terms <b>including an agreement with indigenous territorial organizations.</b></p> <p><b>The land where they are located must be outside flood risk areas.</b></p>
<p>Risk 11: Risk of economic displacement if activities to implement restoration practices under Pilot project 1 imply that productive activities must be displaced.</p> <p>The project finances restoration activities for non-indigenous entities or individuals in indigenous territories (i.e.: wood harvesting, livestock, forest food harvesting, among others that represent incomes).</p>	<p>Socio-Environmental risk <b>(SESP Risk 8)</b></p>	<p><b>Low</b></p>	<p><b>In coordination with the IPCC, the project will establish appropriate compensation measures in case of economic displacement.</b></p> <p><b>To mitigate risks related to economic displacement, the project will not finance non-indigenous persons or entities located within the limits of titled or claimed indigenous</b></p>

<p>Risk 12: Risk of unapproved access and traditional forms of knowledge without sharing benefits.</p>	<p>Socio-Environmental risk (SESP Risk 9)</p>	<p>Moderate</p>	<p>In all cases involving the use and dissemination of indigenous traditional knowledge, whether or not with commercial uses, the rules for the protection of rights shall apply and consultation through the IPCC shall be required.</p> <p>Moreover, in the case that benefits were foreseen through communication products, practices or solutions, based on indigenous knowledge, a benefit sharing process will be discussed with the IPCC.</p>
<p>Risk 13: If the Pandemic emergency is prolonged, it will affect the onset of the project implementation. Participatory and consultative processes foreseen during project implementation; if they do not consider the constraints posed by the pandemic, could lead to increased infections.</p>	<p>Socio-Environmental risk (SESP Risk 10)</p>	<p>Moderate</p>	<p>The impact of the COVID 19 virus has been global in scale and will impact most transboundary interactions between Costa Rica and Panama for months to come.</p> <p>During TDA preparation, team will work hand in hand with the Secretariat of the Bilateral Cooperation Agreement for Border Development between Costa Rica and Panama to assess the risks related with the closing of the border and the potential emerging barriers to the project implementation.</p> <p>The use of mask will be in place for pilot implementation, meetings and field visits, as any other sanitary restriction by Panama and Costa Rica. Moreover, exchanges of experiences will be carried out in smaller groups and/or virtually if necessary. Provisions should be made so that social bubbles are respected, and project officials move from one place to another considering the risks of virus spread. Particular attention will be paid to the protection of the most isolated indigenous communities and any activity on indigenous lands must be approved by the territorial authorities through the IPCC. As far as possible, virtual means of communication will be used. The project will support the different stakeholders to have access to them.</p>

<p>Risk 14: The Project may potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits.</p>	<p>Socio-Environmental risk (SESP Risk 11)</p>	<p>Moderate</p>	<p>During PPG a Gender Analysis was conducted and a Gender Action Plan (PRODOC Annex 4d) for the project was designed to reduce this risk and ensure the development of each activity ensures full and equal participation of women.</p> <p>As detailed in the GAP, environmental and social problems faced by indigenous women and women workers in the agricultural sector and local water management will be systematized. The project will also strengthen women capacities for restoration activities, and on the implementation of sustainable practices and early warning systems. (See GAP in Annex 4d for details on activities).</p> <p>A Gender Specialist will be hired to lead the implementation of the GAP. A specific budget has been allocated for the implementation of the Gender Action Plan.</p>
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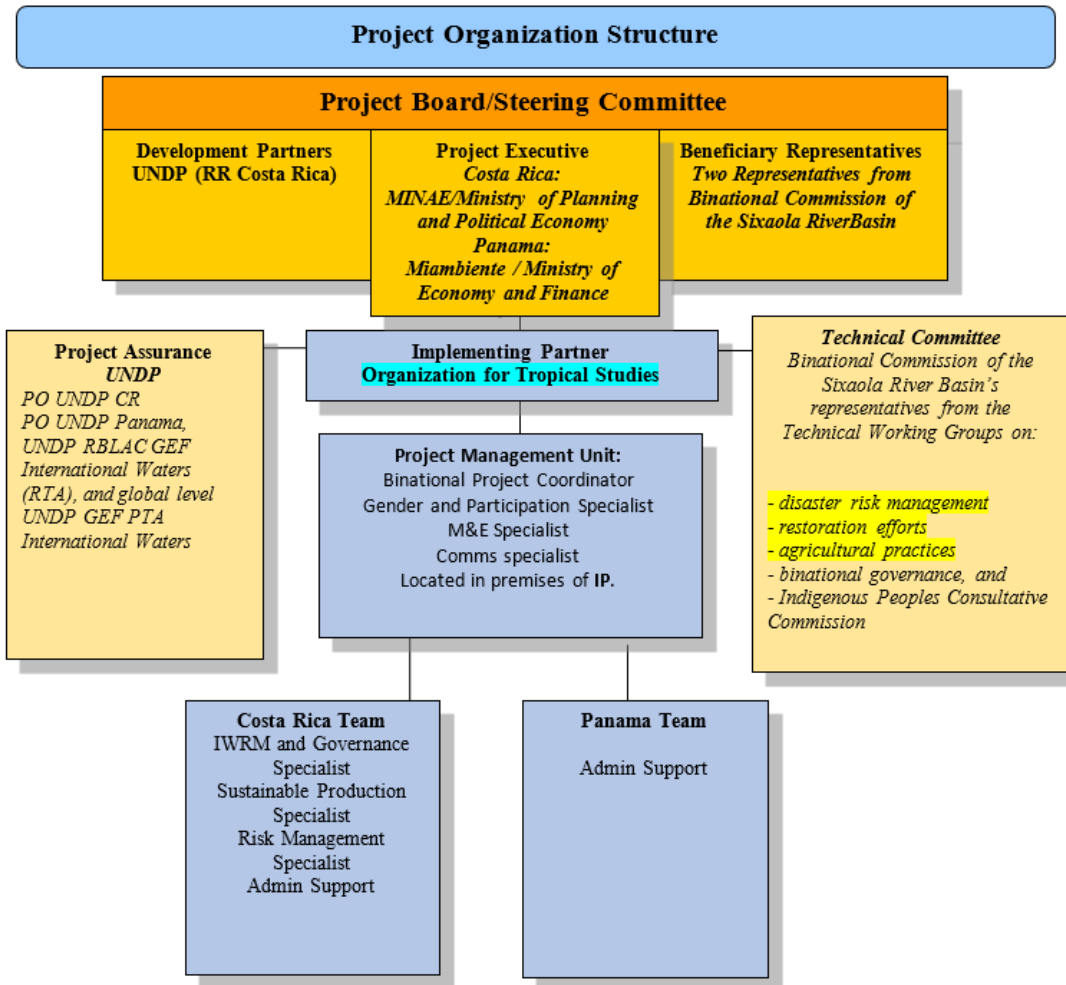


<p>Risk 15: The activities of pilot project 1 and 3 could imply disrespect for workers' labour rights.</p>	<p>Socio-Environmental risk (SESP Risk 12)</p>	<p>Moderate</p>	<p>Through the implementation of the ESMF and subsequent ESIA/ESMP, the project will ensure that workers in productive projects (pilot 3), ecosystem restoration (pilot 1) and stakeholders participating in dialogues to reduce the use of agrochemicals have all the rights granted to them by national and international legislation and that they are not subjected to health risks.</p> <p>Particular attention will be given to ensure that no child labour is involved in activities associated with pilot projects N°1, and N°3 implementation, through the following measures:</p> <p>The UNDP Country Office and the PMU will promote strict compliance with the UNDP SES, and national legislation that prohibits child labour, through awareness raising about this issue in the sites and communities of pilot activities (in particular inviting to the CBCRS members), and training to Project staff, partners and consultants.</p> <p>Communication of the child labour prohibition will be included in the Terms of Reference for consultancies and services and included in all contracts.</p> <p>The PMU will ensure that all actions and service contracts impose the prohibition of child labour. The UNDP will ensure adequate compliance. Implementation of the monitoring plan will ensure oversight and reporting on adequate compliance with these measures.</p> <p>Instructions will be provided, and follow-up carried out with the stakeholders involved, especially the Project team and the local organizations involved.</p>
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**6. Institutional Arrangement and Coordination**

**Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.**

See more details in PRODOC section VII ? Governance and Management Arrangements.



## 7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

1. The proposed project is consistent with the United Nations Sustainable Development Assistance Framework (UNDAF) in both Costa Rica and Panama, as well as with the 2030 Agenda, contributing mainly to the SDGs: 5, 6, 13, 14 and 15.
2. In Costa Rica, the Development Cooperation Framework (2018-2022) identified as a result of its Strategic Priority Area 3: Strengthening the capacities of the population for participation and enforceability of rights in order to accelerate compliance with the SDG for sustainable development with equality. Specifically, outcome 3.1 expects non-governmental organizations,

- social movements, environmental organizations and community-based or productive organizations to strengthen their capacity to organize and generate sectoral proposals for the enforceability of rights, mainly of the most excluded groups and in conditions of vulnerability.
3. In Panama, the UNDAF/Country Programme Outcome includes the Outcome 3.2: By 2020, the State has strengthened its capacities for the design and implementation of Policies, Plans and Programs that contribute to environmental sustainability and food and nutrition security, adaptation to climate change, reducing disaster risk and building resilience.
  4. Both countries bordering the Sixaola River Basin have common sustainable development goals and have had more than 25 years of bilateral cooperation in the border area. The CBCRS is a key body of the Bilateral Cooperation Agreement for Border Development that was agreed in 1992 by the presidents of Costa Rica and Panama.
  5. The project will be implemented in close coordination with the CBCRS. During the PPG, the specific links and roles of this and other stakeholders identified in the project as summarized in Annex 4. (See PRODOC Annexes: 4a) Social and Environmental Safeguards Screening Template-SESP; 4b) Stakeholder Analysis and Engagement Plan; the 4c) draft Indigenous Peoples Planning Framework (IPPF); and 4d) Gender Action Plan).
  6. During this preparatory stage, appropriate cultural sensitivity measures were incorporated in accordance with United Nations Development Programme (UNDP) and the Global Environment Facility (GEF) policies, considering the presence of indigenous peoples in the SBRB (See the draft IPPF in PRODOC Annex 4c). Section IV of this document will detail aspects related to coordination with local entities and Indigenous Peoples' organizations.

**The project is also consistent with national policies of Costa Rica:**

7. The Bicentennial National Development and Public Investment Plan (2019-2022) has set targets for Gross Domestic Product (GDP) growth, multidimensional poverty reduction, unemployment and carbon dioxide emissions, as well as to halt the growth of inequality. It includes more than 270 public investment programs and projects and specific interventions for climate change adaptation and risk prevention and for the implementation of the National Biodiversity Policy of Costa Rica 2015-2030. This policy highlights the need to enhance biodiversity by safeguarding ecosystems, species and genetic diversity; increases the benefits of biodiversity and ecosystem services for people; integrates biodiversity into productive landscapes and seascapes; and reduces the urban environmental footprint and improve implementation through participatory planning, knowledge management and capacity building.
8. Costa Rica's National Biodiversity Strategy (2016-2025) has prioritized the following themes (four of the eight priorities), which are directly related to the proposed project: a) the need to increase biodiversity resilience through connectivity, restoration of riparian forests and other threatened ecosystems that provide essential services (in strategic landscapes and seascapes, as well as in urban development); b) to integrate biodiversity into landscapes and seascapes and into priority sectors (e.g. industry, water management and finance); c) strengthen ecosystem services in spatial planning and cumulative impacts, including reduction of the urban footprint; and d)

strengthen biodiversity-related information for decision-making and law enforcement, including the development of land use monitoring systems.

#### Integrated Water Resources Management

9. Costa Rica has a variety of IWRM governance instruments to address water challenges. Firstly, the legal framework is established by the Water Law No. 276 of 1942. The IWRM Strategy (2005) established the guiding pillars for supporting economic and social development with respect to the environment; institutional strengthening; and modernization of the instrumental framework. Subsequently, the National Plan for IWRM (PNGIRH in Spanish) (2008) was developed and favourable conditions were defined in the legal, institutional and financial aspects. In addition, the PNGIRH defined action themes on institutional strengthening, capacity building, water resources infrastructure, water resources protection and water quality. In 2008, the government also developed the National Water Policy, with a particular scope in the IWRM, which implies recognizing water as a sector, and a perspective of water as a resource and also as a service. Through Executive Decree No. 30480-MINAE, the policy was approved with 10 guiding principles that incorporate the international scope of IWRM. In 2013, a Water Agenda was approved, setting out the objectives to be achieved by 2030, including ensuring clean water, allocating water for different uses, and universal access to water and sanitation. The agenda was the first instrument for recognizing the water challenges related to urban growth and climate change. The Agenda goes beyond an action plan, a political governance framework that seeks to build bridges between water users. The Agenda established an action plan that included efforts on clean rivers, protection of aquifers, better governance of water resources, efficient and equitable use for all users and a new water culture.
10. Water management and soil conservation are built around large hydrological units, but a decentralized institutional plan for river basin management is not fully implemented. Note that, even if the SBRB Commission is recognized by the Binational Agreement, this institution has not been legally recognized. This important process needs to be promoted by the project.
11. In the absence of an updated water law, Costa Rica's institutional context for IWRM is still complex, with a matrix of dispersed responsibilities and institutional competencies (**Table 4**). National Information System for IWRM (SINIGIRH) aims to articulate competencies led by MINAE, AyA and MAG-SENARA. SINIGIRH has made progress in unifying information on water management for decision-making; however, is an articulation mechanism, not an institution.

#### Climate change

12. Costa Rica has advanced in the last decade in planning for the mitigation and adaptation to climate change at the national level. These advances include the National Climate Change Strategy (2009) and its corresponding Action Plan (2012), as well as sectoral vulnerability assessments covering coastal zones, water resources, agriculture and food security, infrastructure, energy and biodiversity. Priorities for adaptation were identified in these early assessments, but only the biodiversity sector has developed a planning process to address this goal since 2012. The country launched its National Adaptation Policy in 2018 and is currently working on the

formulation of its National Adaptation Plan (NAP), as part of its commitments set out in the 2015 Nationally Determined Contribution (NDC).[1] In its 2015 NDC, Costa Rica focused its long-term strategy on climate change actions that seek to increase society's resilience to the impacts of climate change and to strengthen the country's capacity for long-term low-emission development. Costa Rica has a strong track record in climate change mitigation actions, and the NDC represents a turning point in strengthening national adaptation efforts that include assessing possible synergies and trade-offs between mitigation and adaptation. The NAP focuses on six priority sectors: infrastructure, agriculture, water resources, tourism, health and biodiversity. Costa Rica launched its National Decarbonization Plan in 2019, which sets out 10 lines of action to help steer the country towards a low-carbon development path. This Plan is an important step towards achieving the objectives in Costa Rica's NDC, as a key milestone in the country's climate policy. Moreover, this plan has been communicated to the United Nations Framework Convention on Climate Change (UNFCCC) as the long-term low-level GHG strategy, in accordance with Article 4 of the Paris Agreement.[2]

#### Disaster risk management

13. Emergency and risk management: In 2016, Costa Rica launched its National Policy for Disaster Risk Reduction (DRR) 2016-2030, which is one of the first national DRR policies aligned with the Sendai 2015 Framework for Action for Disaster Risk Reduction. This national policy is based on Costa Rica's long experience in disaster risk reduction, prevention and emergency response. Since 2006, Costa Rica has had a National Law for Disaster Risk Prevention and Emergency Management (No. 8488), which at that time was also fully aligned with the Hyogo Framework for Action for Disaster Risk Reduction (2005). In 2010, Costa Rica also developed its National Plan for Disaster Risk Management 2010-2015, which provided concrete lines of action and placed disaster risk management directly on the country's development agenda. The latest National Policy for Disaster Risk Reduction 2016-2030 offers a medium-term planning horizon up to 2030, aligned with the 2030 Agenda for Sustainable Development. It proposes five lines of action: i) Generation of resilience and social inclusion; ii) Participation and decentralisation of risk management; iii) Education, Knowledge Management and Innovation; iv) Financial Investment, Infrastructure and Sustainable Services; v) Planning, Mechanisms and Normative Instruments for Risk Reduction.[3]
14. In Costa Rica, the institutional framework for risk management has evolved since the late 1960s when the National Emergency Commission was created. In 2005, Law No. 8488 - the National Law on Emergencies and Risk Prevention was passed. The purpose is to establish an agile legal framework that allows for the reduction of risk conditions and the optimal management of emergencies or disasters that may arise, through the integration of the functions of the central government, decentralized institutions, public enterprises, local governments, the private sector and civil society organizations, which have participation in emergency prevention and care processes. As part of the mechanisms for executing the law, article 5 establishes the Risk Management Policy as "a transversal axis of the work of the Costa Rican State; it articulates the

instruments, programs and public resources in ordinary and extraordinary actions, institutional and sectoral, oriented to avoid the occurrence of disasters and emergency care in all phases".

15. The National Disaster Risk Management Policy 2016-2030 and the National Disaster Risk Management Plan 2016-2030 and their specific quality objectives of risk information have been improved by increasingly improving local and national decision-making processes.
16. Although the National Risk Management Policy 2016-2030 establishes axes and guidelines for its execution, in the National Risk Management Plan 2016-2020 these guidelines are grouped by scope. For example, within the Scope of Risk Reduction there are four guidelines: (1) Inclusion of disaster risk in social programmes, (2) Safe human settlements, (3) Social protection and compensation, and (4) Disaster recovery.

#### Indigenous rights

17. According with the draft IPPF, this project follows the regulations to ensure the participation of Indigenous Peoples, as indicated by the 169 Agreement and other National Policies.

#### **The project is consistent with the following public policies of Panama:**

18. The 2019-2024 Strategic Government Plan (PEG in Spanish) of Panama defines five key priorities: i) Good Government; ii) Rule of Law and a functioning Legal system; iii) A competitive economy generating income and decent jobs; iv) The struggle against poverty and inequality; v) Equitable access to integral and quality education

#### Integrated Water Resources Management

19. The National Water Security Plan (2050) has 5 goals, this project is aligned with goals 3, 4 and 5: Preventive management of risks associated with water, Healthy Watersheds and Hydrological Sustainability.
20. With the National Water Security Plan 2015-2050, the project meets goals No. 3: preventive management of water-related risks; No. 4 in healthy watersheds; and Goal 5 on water sustainability.

#### Climate change

21. Panama's National Climate Change Strategy (ENCCP), which aims to increase the adaptive capacity of the most vulnerable populations and promote the transition to a low-emission development model. In particular, the project contributes to its axes of water security; design and construction of infrastructure for flood control in the headwaters of rivers; recovering forest and

vegetation cover to regulate runoff; and the implementation of the Million Hectares Alliance to recover gallery forests.

#### Disaster risk management

22. Panama initiated risk management processes under a civil protection scheme aimed at emergency response and care, an approach characteristic of the 1960s and 1970s. When Law No. 7 of February 11, 2005 was approved, the National Civil Protection System was reorganized. It established as a fundamental purpose (in Article 2) to regulate the administration, direction and functioning of the National Civil Protection System (SINAPROC), understanding its scope of action as the entire Panamanian territory. According to article 3, SINAPROC would be the entity in charge of executing measures, dispositions and orders tending to avoid, cancel or diminish the effects that the action of nature or anthropogenic actions can cause on the life and goods of society as a whole.
23. In line with the above, Law No. 7 establishes in Article 9 that for the prevention and care of natural or anthropogenic disasters, SINAPROC must design the National Emergency Plan and the Risk Management Plan.
24. The National Policy for Comprehensive Disaster Risk Management was approved by Decree No. 1101 of December 30, 2010. This policy seeks to provide guidelines to develop a sustained process of disaster risk reduction as an integral part of sustainable development planning, and is also articulated with the guidelines of the Central American Policy on Integrated Risk Management (PCGIR), which was approved at the XXXV Ordinary Meeting of Heads of State and Government of the SICA countries, in June 2010, in Panama City.
25. The November 2010 National Policy for Comprehensive Disaster Risk Management consists of five articulating axes: a) Disaster risk reduction from investment to Sustainable Economic Development, b) Development and social compensation to reduce vulnerability, c) Environment and Climate Change, d) Territorial Management, Governability and Governance, and e) Disaster Management and Recovery.
26. .

#### Indigenous rights

27. According with the draft IPPF, this project follows the regulations to ensure the participation of Indigenous Peoples, as indicated by the 169 Agreement and other National Policies.
28. Overall, the proposed project will help implement this national policy framework by contributing to these lines of action applied to the Sixaola river basin and will provide an opportunity to explore new options for building resilience and social inclusion in a binational basin.

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[1] Ministry of Environment and Energy, Costa Rica's Intended Nationally Determined Contribution, 2015. <https://www4.unfccc.int/sites/submissions/INDC/Submission.Pages/submissions.aspx>.

[2] Godínez-Zamora, Victor-Gallardo, Angulo-Paniagua, Ramos, Howells, Usher, De León, Meza, Quirós-Tort's 2020. Decarbonising the transport and energy sectors: Technical feasibility and socioeconomic impacts in Costa Rica. Energy Strategy Reviews 32 (2020).

[3] Comisión Nacional de Emergencia 2016 Política Nacional de Gestión del Riesgo 2016-2030, San José: CNE

## 8. Knowledge Management

**Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.**

Component 4 of the proposed project focus on knowledge management. It has three outputs:

Outcome 4.1: Improved knowledge, practice and aptitudes of key stakeholders regarding binational collaborative action to restore coastal and riverine ecosystems; control pollution and reduce vulnerability to flood risks.

1. The project will focus on knowledge management, ensuring broad stakeholder participation in defining and systematizing best practices and lessons learned. The knowledge documents will be culturally adapted and translated into the indigenous languages of the binational basin, and the technical documents will have English summaries to facilitate international access to them. Documentation will be shared via the project website, national and regional websites and IW: LEARN. The project website will be developed and maintained following the IW: LEARN guide. Project experience will be documented and disseminated using the GEF IW templates for experience notes and outcome notes. Country representatives and the project team will participate in IW: LEARN meetings and international water conferences.
2. This fifth outcome makes up component 4 of the project and constitutes an instrumental component that will work in the service of the first three components described above. It will seek to improve the quality of the information available on the basin and its water resources and make it available to a maximum number of users both within and outside the basin, in Costa Rica and in Panama. This outcome will be composed of four outputs:

Output 4.1.1 Best practice and lessons from the pilots systematized, accessible and available to all stakeholders in the region, translated and in culturally adapted formats and shared through international platforms on International Waters such as IWLearn.



3. This output will seek to disseminate information and general knowledge to a broad public, both nationally and internationally. The lessons learned by the project will be systematized and good production practices with low water footprint and solid and liquid waste management in the basin will be documented. This Output will seek to disseminate these experiences, practices and tools generated by the project by a range of virtual media, printed documents, graphic arts, interactive maps, video documentaries, mobile applications. These knowledge products will also be disseminated internationally through specialised knowledge platforms such as IWLearn.
4. This output will seek to provide more specific information for a national and local audience, specifically aimed at decision-makers at the local level. This information will contain key data and information for IWRM on the climate and hydrology of the Sixaola River Basin, and on the risks and threats, populations and development assets exposed to periodic flooding as well as productive activities affecting water quality in the basin. This information will be translated into easy-to-understand formats and presentations for local actors. These lessons learned will also subsequently inform the formulation of the Strategic Action Programme.
5. The actors to whom the information will be directed include local actors such as mayors, municipal councils, district councils, community development associations, indigenous development associations, regional and provincial government agencies, high schools, technical colleges and schools. Dissemination mechanisms will include the use of communication media such as radio stations, public campaigns, posters, brochures and maps.
6. In terms of dissemination and training, it is expected to count on the collaboration of Public Universities with local facilities, such as the UNED, in the online training of local actors, as well as the 'Escuela para Todos' Radio Program of the Central American Institute for the Extension of Culture (ICECU).

Output 4.1.2. Monitoring and evaluation system of project impact indicators, including the technical design and piloting of a binational monitoring system for the basin water resources.

7. A critical element of integrated water resources management is timely and reliable information on the state of water resources, their availability and geographical distribution, and their quality. This output aims to design a permanent water quality monitoring system in the Sixaola River Basin. It will build on existing biomonitoring experience of the Basin that has been carried out since 1997 by the ANAI, a Non-Governmental Organization within the framework of the Talamanca-Caribbean Biological Corridor.
8. The National Water Laboratory of the National Institute of Aqueducts and Sewers (LA-AyA) of Costa Rica is responsible by law for conducting water quality analyses of drinking water sources in the basin and in particular of the rural aqueduct supply sources administered by ASADAS. The National Institute of Aqueducts and Sewers (IDAAN) of Panama is in charge of monitoring groundwater quality, in close coordination with the Directorate of Water Security of the Ministry of Environment of Panama (MiAMBIENTE). In the baseline established in the framework of the preparatory phase of the project, basin sampling points and a first analysis of surface water quality were established (see Annex 11 for full report). It is expected that project monitoring and

evaluation system generate gender differentiated information and impact indicators for decision making It is expected that the Monitoring System will be able to support public laboratories (Observatory of Water and Global Change, School of Geography-University of Costa Rica; Research Group on Stable Isotopes - School of Chemistry-National University, Regional Institute of Studies on Toxic Substances of the National University IRET- National University), particularly to analyse with isotopic tracers the characteristics of aquifer recharge and to carry out physical-chemical analysis to periodically determine the quality of surface waters and their load of persistent organic pollutants. The results of this collaboration will also provide key inputs for the National Water Laboratory of the National Institute of Aqueducts and Sewers in Costa Rica, and for the ETESA in Panama in their effort to standardize and increase the range and frequency of the water monitoring system.

Output 4.1.3. Website for dissemination of lessons and best practices, populated with information about the basin and its user, linked to partners portals and IW:LEARN.

9. This output will seek to create the official communication channel of the Binational Project, through a website dedicated to IWRM in the Sixaola river basin. The website will be managed from the project's main offices within the framework of the Sixaola River Basin Binational Commission. All the activities and initiatives conducted by the project can be disseminated from the website. Also, a geoportal service with all the cartographic and documentary information compiled and generated by the project will be hosted on the website. It is hoped that most of the data recollected from project activities will be differentiated by sex, and that the training and capacity development efforts set forth by the project will help increase the number of women involved in skills training programs.
10. The budget allocation for component 4 is USD 565,300.

## **9. Monitoring and Evaluation**

### **Describe the budgeted M and E plan**

1. Project outcomes, as described in the outcomes' framework, will be monitored annually and evaluated periodically during project implementation to ensure that the project effectively achieves these outcomes. Monitoring and evaluation at the project level will be carried out in accordance with UNDP requirements set out in the UNDP evaluation policy. While these UNDP requirements are not described in this project document, UNDP Costa Rica and Panama will work with project stakeholders to ensure that UNDP monitoring and evaluation requirements are met in a timely manner and meet high quality standards.
2. Additional mandatory GEF-specific M&E requirements (as described below) will be carried out in accordance with the GEF M&E policy and other relevant GEF policies. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support adaptive management at the project level will be agreed during the Project Kick-off Workshop and detailed in the Inception Report. This will include the exact role of the project target groups and other stakeholders in project monitoring and evaluation activities, including the GEF operational focal point and the national/binational institutions assigned to carry out project monitoring, i.e. MIDEPLAN, MEF, MINAE and MiAmbiente, and CBCRS.

3. The GEF Operations Focal Point will strive to ensure consistency of approach to the specific GEF monitoring and evaluation requirements (in particular the GEF monitoring instruments) in all GEF-funded projects in the country. This could be achieved, for example, by using a national institute to complete the GEF monitoring instruments for all GEF-funded projects in the country, including projects supported by other GEF agencies.
4. Project implementing partner: The implementing partner is responsible for providing all information and data necessary for the timely, complete and evidence-based submission of projects, including financial results and data, as necessary and appropriate. The implementing partner will endeavour to ensure that national institutes are responsible for monitoring and evaluation of projects and that projects are aligned with national systems so that the data used by and generated by the project does in fact support national systems.
5. UNDP Office: The UNDP Lead country office will support the Principal Advisor as required, including through annual monitoring missions. The annual monitoring missions will be carried out in accordance with the timetable set out in the annual work plan. The monitoring mission reports will be distributed to the project team and the Project Board within one month of the mission. The UNDP Lead country office will initiate and organize key GEF monitoring and evaluation activities, such as the annual GEF PIR, the independent midterm review and the independent Final Evaluation. The UNDP Office will also ensure that the standard M&E requirements of UNDP and GEF are met with the highest quality.
6. The UNDP Lead country office is responsible for complying with all UNDP project-level M&E requirements as described in the UNDP POPP. This includes ensuring that the evaluation of UNDP quality assurance during implementation is carried out annually; that annual output-level objectives are developed and monitored and reported using UNDP corporate systems; regular updating of the ATLAS risk register; and annual updating of the UNDP gender marker based on progress made in gender mainstreaming as reported in the GEF performance evaluation report and the UNDP results-oriented annual report. Any concerns about the quality noted during these M&E activities (e.g., the annual quality assessment ratings of the GEF PIR) should be addressed by the UNDP Lead country office and the Principal Advisor. The UNDP Lead country office will retain all monitoring and evaluation records for this project until seven years after the financial closure of the project, in order to support ex-post evaluations conducted by the Independent Evaluation Office (IEO) of UNDP and/or the IEO of GEF.
7. UNDP-GEF Unit: The UNDP-GEF Regional Technical Advisor and the UNDP-GEF Bureau will provide additional monitoring and evaluation support and quality assurance of implementation and problem-solving, as required.
8. Audit: The project will be audited in accordance with the UNDP Financial Regulations and Rules and audit policies applicable to project with national counterparts.
9. Inception workshop and report: Within two months of the signing of the project document by all interested parties, inter alia, a project kick-off workshop will be held:
  - (a) Reorient project stakeholders towards the project strategy and discuss any changes in the overall context that influence project implementation;

- (b) Discuss the roles and responsibilities of the project team, including information and communication lines and conflict resolution mechanisms;
  - (c) Revise the results framework and finalize the indicators, means of verification and monitoring plan;
  - (d) Discuss roles and responsibilities for reporting, monitoring and evaluation and finalize the monitoring and evaluation budget; identify national/regional institutes that should be involved in monitoring and evaluation at the project level; discuss the role of the GEF OFP in M&E;
  - e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk register; the Environmental and Social Management Plan and other safeguard requirements; the gender strategy; the knowledge management strategy; and other relevant strategies;
  - f) Review financial reporting procedures and mandatory requirements, and agree on arrangements for the annual audit; and g) Plan and schedule Project Board meetings and finalize the first year's annual work plan.
10. The Principal Advisor will prepare the inception report no later than one month after the inception workshop. The inception report will be approved by the UNDP Country Office and the UNDP-GEF Regional Technical Advisor, and will be approved by the Project Board.
  11. GEF Project Implementation Report (PIR): The Binational Project Coordinator, the UNDP Country Office and the UNDP-GEF Regional Technical Advisor will make an objective contribution to the annual GEF PIR, which will cover the reporting period from July (previous year) to June (current year) for each year of project implementation. The Binational Project Coordinator will ensure that the indicators included in the project results framework are monitored annually prior to the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.
  12. The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the inputs of the GEF Operations Coordinator and other stakeholders to the PIR, as appropriate. The quality index of the previous year's PIR will be used to inform the preparation of the next PIR.
  13. Lessons learned and knowledge generation: Project outcomes will be disseminated within and outside the project intervention area through existing networks and information exchange forums. The project will identify and participate, as appropriate, in scientific, policy-based and/or any other network that may be beneficial to the project. The project will identify, analyse and share lessons learned that may be beneficial to the design and implementation of similar projects and widely disseminate those lessons. There will be a continuous exchange of information between this project and other similarly focused projects in the same country, region and globally.

14. The GEF Core Indicators: The GEF Core indicators included as Annex will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent ground truthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF [website](#).
15. Independent mid-term and terminal evaluation: An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center.
16. The evaluation will be "independent, impartial and rigorous". The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.
17. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.
18. The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC . A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.
19. The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC). The evaluation will be "independent, impartial and rigorous". The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate. The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by (add date included on cover page of this project document). A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.
20. Final Project Evaluation (FEs): An independent final evaluation (FEs) will be carried out once all the main outputs and activities of the project have been completed. The final evaluation process will begin three months before the operational closure of the project, allowing the evaluation mission to continue while the project team is still in operation, but ensuring that the project is close enough to completion for the evaluation team to reach conclusions on key issues such as the sustainability of the project. The Principal Advisor will remain employed until the FE report and management response have been finalized. The terms of reference, the evaluation process and the final report of the FE will conform to the standard templates and guidance prepared by the UNDP

Independent Evaluation Office for GEF-funded projects available in the UNDP Evaluation Resource Centre. As stated in this guide, the evaluation will be "independent, impartial and rigorous". The consultants who will be hired to carry out the task will be independent of the organizations that participated in the design, implementation or advice on the project to be evaluated. The GEF operational focal point and other stakeholders will be involved and consulted during the final evaluation process. The UNDP-GEF Bureau provides additional support for quality assurance. The final report of the FE will be approved by the UNDP Country Office and the UNDP-GEF Regional Technical Advisor, and will be approved by the Project Board. The Final Evaluation report will be publicly available in English on the UNDP ERC.

21. The UNDP Country Office will include the final project evaluation foreseen in the UNDP Country Office evaluation plan, and upload the final evaluation report in English and the corresponding management response in the UNDP ERC. Once uploaded into the ERC, the UNDP IEO will conduct a quality assessment and validate the findings and ratings of the (Terminal Evaluation Report) TE Report, and rate the quality of the TE report. The UNDP IEO evaluation report will be sent to the GEF IEO along with the final project evaluation report.
22. Final report: The project terminal PIR, together with the TE report and the corresponding management response, will serve as the final project report package. The final project report package will be discussed with the Project Board during an end-of-project meeting to discuss lesson learned and opportunities for scaling up.
23. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information: To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy and the GEF policy on public involvement.

<b>Monitoring and Evaluation Plan and Budget:</b>			
<b>GEF M&amp;E requirements</b>	<b>Responsible Parties</b>	<b>Indicative costs (US\$)</b>	<b>Time frame</b>

<b>Monitoring and Evaluation Plan and Budget:</b>			
<b>GEF M&amp;E requirements</b>	<b>Responsible Parties</b>	<b>Indicative costs (US\$)</b>	<b>Time frame</b>
<b>Inception Workshop</b>	Implementing Partner  PM/Coordinator/ CTA	<i>USD 5,000</i>	Within 60 days of CEO endorsement of this project.
<b>Inception Report</b>	PM/Coordinator/ CTA	None	Within 90 days of CEO endorsement of this project.
<b>Monitoring of indicators in project results framework</b>	PM/Coordinator/ CTA	<i>USD 168,000. Monitoring &amp; evaluation Specialist (PMU)</i>	Annually prior to GEF PIR. This will include GEF core indicators.
<b>GEF Project Implementation Report (PIR)</b>	RTA  UNDP Country Office <sup>[1]</sup>  PM/Coordinator/ CTA	<i>None, under TOR of Binational coordinator</i>	Annually typically between June-August
<b>Monitoring all risks (UNDP risk register)</b>	UNDP Country Office  PM/Coordinator/ CTA	<i>Updating annually of project risk management matrix</i>	On-going.
<b>Monitoring of social and environmental safeguards (SESP)</b>  <b>For Indigenous peoples and afro-caribbean populations</b>  <b>For gender equity (see Annex 4a)</b>	<i>Project Safeguards Officer</i>	<i>USD 7,500</i>	On-going.
<b>Supervision missions</b>	UNDP Country Office	None <sup>[2]</sup>	Annually
<b>Oversight/troubleshooting missions</b>	RTA and BPPS/GEF	None 14	Troubleshooting as needed

<b>Monitoring and Evaluation Plan and Budget:</b>			
<b>GEF M&amp;E requirements</b>	<b>Responsible Parties</b>	<b>Indicative costs (US\$)</b>	<b>Time frame</b>
<i>Mid-term GEF and/or LDCF/SCCF Core indicators and METT or other required Tracking Tools</i>	<i>UNDP country office team Costa Rica and Panama and UNDP GEF RTA</i>	<i>USD 2,500</i>	<i>Before mid-term review mission takes place.</i>
<i>Independent Mid-term Review (MTR)</i>	Independent evaluators	<i>USD 15,000</i>	30 November 2022
<i>Terminal GEF and/or LDCF/SCCF Core indicators and METT or other required Tracking Tools</i>	List name of institution/agency that will collect this data	<i>USD 2,500</i>	Before terminal evaluation mission takes place
<b>Independent Terminal Evaluation (TE)</b>	Independent evaluators	<i>USD 20,000</i>	30 September 2024
<b>TOTAL indicative COST</b>		<i>USD 193,000</i> <i>Roughly 3 ? 5 % of GEF grant NOT total budget.</i>	<i>Add to TBWP component 4</i>

[1] Or equivalent for regional or global project

[2] The costs of UNDP CO and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

## 10. Benefits

**Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?**

- Regarding socio economic benefits, by the end of the project there will be a direct positive influence on **30,000 people (15,000 women and 15,000 men)** who will benefit from the enhanced govence in the river basin, as well as by the TDA/SAP process and the proposed pilot interventions.
- As result of project implementation, this initiative will deliver various global environmental benefits (GEBs) under the international waters objective 3, as described in the GEF-7 Programme



Directions. The pilot interventions, as well as the TDA/SAP process and the correspondent coordination and governance required will contribute to the protection of ecosystems through 3,000 hectares of area of land restored and 1,000 hectares of area of landscapes under improved practices (excluding protected areas).

3. There are a variety of socio economic benefits foreseen from the implementation of the project. First of all, the TDA preparation phase will allow a better understanding of environmental and social problems, faced primary by women and indigenous population. This information is key to search for solutions and allow advocacy processes.
4. There is also a political representation improvement foreseen. Indigenous peoples and Afro-descendant population will be represented in the General assembly of the Sixaola River Basin and will be part of an Indigenous Consultative Committee which will be able to revise all activities linked with the outcomes and the outputs of the project. The ICC will decide if consultation and/or FPIC is necessary and will check the inter-cultural approach and the respect of collective and individual rights of indigenous peoples and afro-descendant communities. Similarly, other civil society organizations such as agricultural producers organizations and private commodities producers also are represented in the CBCRS and will participate directly in activities under several project outputs.
5. Project activities will contribute both to provide socio-economic benefits through sound environmental practices in terms of sustainable agriculture and flood risk management. Risk related to floods and environmental pollution will be reduced. These benefits will also add up in terms of strengthening binational governance arrangements for the long term management of shared water resources. Lately, the SAP will provide a road map for achieving these global environmental benefits. The SAP, beyond a document, will be an enabler mechanism for advancing and invest on national development challenges and global (such as the SDGs).

## 11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

### Overall Project/Program Risk Classification \*

PIF	CEO Endorsement/Approva I	MTR	TE
<b>High or Substantial</b>			

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

### Project Information

<b>Project Information</b>	
1. Project Title	Towards the transboundary Integrated Water Resource Management (IWRM) of the Sixaola River Basin shared by Costa Rica and Panam?
2. Project Number	PIMS 6373
3. Location (Global/Region/Country)	Costa Rica- Panama

### Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

**QUESTION 1. How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?**

*Briefly describe in the space below how the Project mainstreams the human-rights based approach*

The project will create long-term conditions for an improved river basin governance, with timely information for the Integrated River Basin Management (IRBM) in the Sixaola River between Costa Rica and Panama, and will contribute to reduce agrochemical pollution and the risks associated with periodic flooding in the basin.

During preparation and along implementation, the project will be based on human rights and land and water governance approaches, containing actions facing the environmental challenges that affect the binational basin of the Sixaola river through a joint and coordinated action that will consider the sociocultural diversity of the population, its participation and the different land tenure and ownership regimes. It will also strengthen the Binational Commission of the Sixaola River Basin (CBCRS) as facilitator of joint actions for Integrated Water Resources Management (IWRM) by the public sector and civil society, including representation of ethnic and sociocultural diversity, women and the private sector.

The core of the project will be the preparation and adoption of the participatory binational strategic planning instruments: The Transboundary Diagnostic Analysis (TDA) and the Strategic Action Programme (SAP). The project will ensure that the processes to develop the mentioned instruments are participatory, inclusive and transparent. The TDA will identify the needs of local people and vulnerable groups, as well as the opportunities for inclusive growth and the promotion of sustainable livelihoods. The SAP will, as much as possible, be in accordance with national poverty-reduction strategies and local economy initiatives/opportunities/realities and will be fully aligned with the 2030 Sustainable Development Agenda. The project will support four pilot projects on: i) restoration of river banks to reduce erosion and contain pollution; ii) promotion of multistakeholder dialogue to reduce pesticide use in banana and plantain production; and, iii) scaling-up of sustainable production of organic cacao. These interventions are designed to be highly participative, ensuring that all stakeholders have a voice, raise concerns and contribute their experience, lessons and ideas.

In general terms, the project will also improve the availability, access, and quality of benefits and services for potentially marginalized individuals and groups, particularly women, Afro-descendant communities and indigenous peoples, territories, and communities, to ensure their participation in decisions that can affect them. This will be done by: i) promoting the participation of the mentioned stakeholders in the governance of their territories, and in the management of their goods and natural resources, giving special attention to water, as established by international standards of indigenous rights; ii) investing in demonstration projects aimed at promoting sustainable agricultural practices and environmentally friendly crops; and, iii) strengthening the capacity of local communities and organizations to respond to flood risks on the banks of the Sixaola River.

***Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment***

From the project's gender analysis, it is known that on one hand, many gender gaps persist in both countries along the area of intervention; and on the other hand, women are key stakeholders and will benefit from the interventions to be carried out in the project area. The project interventions range from participation in organized groups of women, cocoa, banana and plantain producers, particularly indigenous and Afro-descendant women, and as recipients of grants for pilot projects to support the adoption of best practices. The intersectional analysis shows how gender gaps persist in Panama and Costa Rica for indigenous, Afro-descendant and rural women living around the Sixaola River Basin. For example, they have higher rates of unemployment or informal work, despite the fact that they dedicate their work to agricultural production, their capacities to formalize in the market are limited, given the limited access to health and education services, they are more exposed to Impacts of natural disasters, rates of teenage pregnancy and intra-family violence prevail, less participation in local water resource management, among others. Therefore, through the Gender Action Plan (PRODOC Annex 4d) the project will focus its efforts on strengthening women's empowerment and will incorporate the gender perspective in all interventions around the Sixaola River Binational Basin. To this end, the project design included indicators and products that guarantee the incorporation of the gender perspective, and therefore equality and the empowerment of women, especially in situations of vulnerability. The project with this action plan will strengthen the integral incorporation of the gender perspective in all the project stages, i) will develop an integral understanding on the situation of indigenous women, afro descent women and rural women in around the Sixaola River Basin through the formulation of the Transboundary Diagnostic Analysis; ii) will strengthen the participation of women from the Sixaola River binational basin in the Sixaola River Basin Binational Commission (CBCRS); and also iii) will strengthen participation of women with pilot interventions that will generate global environmental benefits in the Sixaola River binational basin

The project will actively promote the balanced contribution of men, women, and representatives of ethnic and cultural diversity. This will be achieved through a sex-disaggregated invitation to meetings and workshops, a gender-based selection of project specialists/consultants, as well as members of the management unit team.

***Briefly describe in the space below how the Project mainstreams environmental sustainability***

The project seeks to promote an integrated river basin management of the Sixaola River through the strengthening of binational governance, and by proposing enabling actions to address some environment problems: i) unsustainable farming practices lead to the degradation of the quality of surface and groundwater; ii) inadequate liquid and waste management and iii) high flood and erosion of the basin due to climate variability and climate change. The superficial and groundwater quality is being affected by: i) intensification and inappropriate use of pesticides and fertilizers in both large and small farms; ii) mono-cropping production model; iii) emerging threats from plant diseases and fungi from exotic sources in the region that exacerbates pesticide use; iv) land use change and soil degradation; and, v) deforestation and degradation of riverine forest. On the other hand, solid and liquid wastes are being inadequately managed for: i) dispersed human settlements that limit coverage and frequency of solid waste collection; ii) limited local infrastructure and capacities for municipal solid waste management; iii) low fiscal revenues and limited public investment; and iv) high % of the population in the river basin which use septic tanks for their sewage treatment. And finally, in terms of the high flood and erosion of the basin, there are many causes beyond climate variability and climate change: i) vulnerability and exposure to floods in communities of the lower watershed; ii) lack of coverage by river gauges and weather stations; iii) frequent floods; iv) exposed development assets to periodic flooding; and, v) deficient early warning system for floods between both countries. It is not possible to address all these issues at the national level; therefore, the project will develop a participatory binational strategic planning process (the TDA/SAP process) that will strengthen the CBCRS for collaborative management of the river basin. The project will aim to have a collaboration agreement for SAP implementation built upon the framework of the CBCRS and signed by both participating countries. Four pilot interventions will be implemented; these will facilitate the binational actions on the main environment problems.

In summary the project will support the implementation of the national environmental sustainability priorities identified in the NBSAPs and the binational basin development plans of both countries. The project will also invest in activities that result in greater forest cover on the banks of the rivers of the Sixaola river basin through restoration with selected species for adaptation to climate change based on ecosystems; improved water quality and increased abundance of the manatee (*Trichechus manatus*), among other indicator aquatic species, in the Sixaola river basin. The project will also apply a precautionary approach to natural resources conservation by aligning the actions of local stakeholders in working groups led by public sector institutions that address best practices among producers to reduce contamination risks; programs for monitoring pollution of coastal ecosystems by stakeholders in the agricultural and tourism sector; and restoration campaigns and action plans for prioritized areas throughout the basin.

**Part B. Identifying and Managing Social and Environmental Risks**

<p><b>QUESTION 2: What are the Potential Social and Environmental Risks?</b></p> <p><i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 ? Risk Screening Checklist (based on any ?Yes? responses). If no risks have been identified in Attachment 1 then note ?No Risks Identified? and skip to Question 4 and Select ?Low Risk?. Questions 5 and 6 not required for Low Risk Projects.</i></p>	<p><b>QUESTION 3: What is the level of significance of the potential social and environmental risks?</b></p> <p><i>Note: Respond to Questions 4 and 5 below before proceeding o Question 6</i></p>	<p><b>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</b></p>
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<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
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<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
<p><b>RISK 1:</b> Poorly designed or executed activities, including the disregard of indigenous knowledge, in the pilot project N?2 could damage critical or sensitive habitats, including through the introduction of invasive alien species during forest restoration activities.</p> <p>The lack of consultation with indigenous peoples could affect the local appropriation and in consequence, the sustainability of restored areas.</p> <p><i>Standard 1, questions 1.1, 1.5 and 1.6.</i></p>	<p>I = 4</p> <p>P = 1</p>	Moderate	The introduction of invasive species is a risk as many non-native species are commercialized in areas near the project site.	<p>As the project is overall High risk, this downstream risk and all others will be further assessed and managed per the procedures established in the <b>Environmental and Social Management Framework (ESMF) and Indigenous Peoples Planning Framework (IPPF) (annexes 4c and 4e respectively)</b>. Both Frameworks were prepared before the start of project implementation (during PPG). At this stage, in light of the project?s structure/components, an overarching ESIA/ESMP is considered not appropriate and necessary for SES compliance; instead, site-specific ESIA/ESMPs are expected to be developed during project implementation according to the ESMF and IPPF.</p> <p>The pilot project N?1, will invest in restoration actions along the river basin and will support the incorporation of land management tools (micro corridors, live fences, among others). For these activities, invasive alien species (IAS) will not be used. And for ensuring the IAS no use, during the design of this pilot project a selecting process to include the right species for ecosystem restoration, indigenous peoples will be consulted, and their ancestral knowledge of forest management and social water management will be considered as a technical input (see details in PRODOC Output 2.1.1 (all the previous based on the project?s Stakeholders Engagement Plan tools/actions ? PRODOC Annex 4b).</p>

<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
<p><b>RISK 2:</b> The risk that the Strategic Action Programme (SAP) is not properly consulted and appropriated by the population.</p> <p><i>Principle 1, question 2 and question 6.</i></p>	<p>I = 4 P = 2</p>	Moderate	<p>The elaboration of a SAP could be done by a desk research approach that does not consider the indigenous territorial rights, knowledge and participation of the population in its formulation compromising its legitimacy and sustainability.</p>	<p>The process of formulating the SAP will consider participation and consultation with indigenous peoples, territories and communities, their rights to land and management of their natural resources. With this purpose, an Indigenous Peoples Consultative Commission (IPCC) will be set to facilitate a permanent dialogue with the project management team and to ensure that these participatory and consultation processes will be conducted with an intercultural approach that doesn't impact the rights and identity of indigenous peoples located in the Sixaola river (as indicated in the IPPF, Annex 4e).</p> <p>Targeted activities to ensure gender equality and women's empowerment are included in the GAP (PRODOC Annex 4d) and will be carried out for the SAP development process.</p> <p>Inclusion of local stakeholders, especially women, and Afro-descendant's communities in the SAP consultation process will reduce the risk that rights-holders do not have the capacity to claim their rights. Therefore, content will be pedagogically mediated, to reach the local population, with an intercultural approach.</p> <p>Moreover, a Stakeholders Engagement Plan was also prepared during PPG (PRODOC Annex 4b), including the SAP development activities, with main stakeholders that were categorized defining the best approach and tools to work with them.</p> <p>Finally, important to</p>



<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
<p><b>RISK 3:</b> The risk that the potential results or products of the project are vulnerable to the potential impacts of climate change.</p> <p><i>Standard 2, question 2.2.</i></p>	<p>I = 3</p> <p>P = 2</p>	Moderate	<p>The project will invest in restoration efforts along the river basin (pilot N?2). The projected impacts of climate change in the area will increase the likelihood of floods that could affect restoration areas and tree nurseries.</p>	<p>The project will invest in restoration actions in previously prioritized areas through baseline investments (pilot N?1). IUCN has defined sites to restore in the basin (see PRODOC Output 2.1.1.). These sites will be selected once started project implementation using methodologies that include climate change variability as a selection input, and for screening any possible risk related in the pilots interventions an Environmental Social Management Framework (ESMF) ? Annex 4c has been prepared. If located in indigenous territories, restoration areas must be consulted with indigenous peoples and will need FPIC through the IPCC (see details in IPPF ? Annex 4e).</p> <p>The previous will reduce the risk of future loss of investments due to climate change. Restoration efforts will be carried out using endemic species adapted to heavy rains and considering the cultural ecology of cultivated forests according to indigenous knowledge (see related actions mentioned above and correspondent actions in PRODOC Output 2.1.1.).</p>

<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
<p><b>RISK 4:</b> The absence of FPIC and culturally adapted consultation processes on project activities, could lead to social conflict.</p> <p><i>Standard 6, questions 6.1, 6.2, 6.3, 6.4 and 6.5.</i></p>	<p>I = 4</p> <p>P = 3</p>	High	<p>Indigenous peoples constitute the majority of the Sixaola river basin population.</p> <p>The basin is inhabited by about 20,000 persons from four different indigenous peoples: Naso, Bribri, Cabecar, and Ngäbe.</p> <p>Indigenous peoples are present in the Project area; and some pilot project interventions under Outcome 3 could take place within their land.</p> <p>In both countries, the right of consultation is defined in recent regulations (Law 37 of 2016 in Panama and Decree 40932 MP MJP of 2018 in Costa Rica). In Costa Rica through the Indigenous Consultation Technical Unit of the Ministry of Justice and Peace and the Territorial Consultation Bodies in the Sixaola River Basin and in Panama through the Vice-Ministry of Indigenous Affairs.</p>	<p>As proposed and agreed during the PPG, during project implementation, an Indigenous Peoples Consultative Commission (IPCC) will be established under the Project Organization Structure (PRODOC section VII), which would provide permanent advice on consultation, inter-cultural approach, FPIC and conflict management in project implementation, including pilot projects. This approach has been defined in the IPPF ? Annex 4e.</p> <p>According to IPPF it will also be required that, during the 6 first months of the project it will be determined which interventions will need consultation and/or FPIC, and the IPCC will continue during all project execution and will be responsible to evaluate the need of consultation and/or FPIC for all new activities.</p> <p>The Project will provide resources and technical supporting staff if required, for consultation and/or FPIC processes.</p> <p>The project participation and consultation system based on an IPCC corresponds to what is established in both legislations and it has been agreed with the national indigenous authorities (National Coordination of Indigenous Peoples of Panama and National Indigenous Board of Costa Rica and territorial organizations). Its compliance with UNDP's SES</p>

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<p><b>RISK 5:</b> Risk of producers disposing their no longer used chemicals in water sources.</p> <p><i>Standard 7, question 7.2 and 7.4</i></p>	<p>I = 4</p> <p>P = 2</p>	Moderate	<p>The project aims to reduce pollution of international waters sources by promoting agricultural best practices that foster the use of alternatives to fertilizers and pesticides/fungicides pollutants in banana, plantain production (pilot N? 2).</p> <p>This means a process of induction of cultural change concerning dangerous chemicals storage between the different production levels, from industrial plantations to family farms</p>	<p>As indicated above, an ESMF has been prepared for the pilot interventions in order to screen, assess and manage the possible risks associated. For pilot 2 (<i>Multi-stakeholder dialogue platform to promote and scale-up low polluting production best practices (banana and plantain)</i>), after ESMF screening the need for developing a waste management plan will be determined, and if needed the plan will be prepared and implemented during project implementation.</p>

<b><i>Risk Description</i></b>	<b><i>Impact and Probability (1-5)</i></b>	<b><i>Significance (Low, Moderate, High)</i></b>	<b><i>Comments</i></b>	<b><i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i></b>
<p><b>RISK 6:</b> Risk of economic displacement if restoration practices and other Land Management Tools (LMT) under pilot N° 3 do not consider traditional livelihoods (i.e.: wood harvesting, livestock, forest food harvesting, among others that represent incomes).</p> <p><i>Standard 5, questions 5.2, 5.4 ; Standard 6, question 6.6</i></p>	<p>I = 3 P = 2</p>	<p>Moderate</p>	<p>The pilot project N°3 will invest in restoration actions along the river basin and will support the incorporation of land management tools (micro corridors, live fences, among others). The design of these actions if traditional livelihoods are not considered can trigger this risk.</p>	<p>As indicated above an ESMF has been prepared for the pilot interventions in order to screen the possible risks associated. For details on pilot N°3, see mitigation measures in Risks 1 and 3.</p> <p>During the project preparation, indigenous organizations were identified to promote and implement Land Management Tools (LMT) with indigenous farmers (e.g. ACOMUITA or APPTA). The project will work and coordinate with these organizations, to define support mechanisms among individual farmers and other actions needed to avoid economic displacement.</p> <p>The project will also design allocation mechanisms in the pilot project, so that it is aligned with cultural norms and traditional mechanisms as well as UNDP policies. Protocols and due diligences will be in place according to the IPPF and the ESMF.</p>

<b><i>Risk Description</i></b>	<b><i>Impact and Probability (1-5)</i></b>	<b><i>Significance (Low, Moderate, High)</i></b>	<b><i>Comments</i></b>	<b><i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i></b>
<p><b>RISK 7:</b> Risk of unapproved access and traditional forms of knowledge without sharing benefits</p> <p><i>Standard 4, questions 4.1 and 4.2.</i></p> <p><i>Standard 6, question 6.9.</i></p>	<p>I = 3</p> <p>P = 3</p>	Moderate	<p>Communication products planned in Outcome 5, include sharing indigenous knowledge.</p>	<p>To be further assessed and managed per the ESMF.</p> <p>Communication products will be designed with an intercultural approach and will be discussed by the IPCC applying the procedures indicated in the IPPF (and/or subsequent Indigenous Peoples Plan).</p> <p>Moreover, in the case that benefits were foreseen through communication products, practices or solutions, based on indigenous knowledge, a benefit sharing process will be discussed with the IPCC.</p>

<b><i>Risk Description</i></b>	<b><i>Impact and Probability (1-5)</i></b>	<b><i>Significance (Low, Moderate, High)</i></b>	<b><i>Comments</i></b>	<b><i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i></b>
<p><b>RISK 8:</b> If the Pandemic emergency is prolonged, it will affect the onset of the project implementation. Participatory and consultative processes foreseen during project implementation; if they do not consider the constraints posed by the pandemic, could lead to increased infections.</p> <p><i>Standard 3, question 3.6</i></p>	<p>I = 3 P = 2</p>	<p>Moderate</p>	<p>During the execution period, the project foresees a permanent contact with the population and organized stakeholders in the basin.</p>	<p>To be further assessed and managed per the ESMF.</p> <p>The impact of the COVID 19 virus has been global in scale and will impact most transboundary interactions between Costa Rica and Panama for months to come.</p> <p>During TDA preparation, team will work hand in hand with the Secretariat of the Bilateral Cooperation Agreement for Border Development between Costa Rica and Panama to assess the risks related with the closing of the border and the potential emerging barriers to the project implementation. The use of mask will be in place for pilot implementation, meetings and field visits, as any other sanitary restriction by Panama and Costa Rica. Moreover, exchanges of experiences will be carried out in smaller groups and/or virtually if necessary. Provisions should be made so that social bubbles are respected and project officials move from one place to another considering the risks of virus spread. Particular attention will be paid to the protection of the most isolated indigenous communities and any activity on indigenous lands must be approved by the territorial authorities through the IPCC. As far as possible, virtual means of communication will be used. The project will support the different stakeholders to have access to them.</p>

<i><b>Risk Description</b></i>	<i><b>Impact and Probability (1-5)</b></i>	<i><b>Significance (Low, Moderate, High)</b></i>	<i><b>Comments</b></i>	<i><b>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</b></i>
<p><b>RISK 9:</b> The Project may potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits.</p> <p><i>Principle 2, question 2</i></p>	<p>I = 3</p> <p>P = 2</p>	Moderate	<p>Women are underrepresented in agriculture in the target region, due to long-standing social and cultural norms</p>	<p>To be further assessed per the ESMF (for site-level aspects of this risk) and managed through the SESA (for policy-level aspects).</p> <p>During PPG a Gender Analysis was conducted and a Gender Action Plan (PRODOC Annex 4d) for the project was designed to reduce this risk and ensure the development of each activity ensures full and equal participation of women.</p> <p>As detailed in the GAP, environmental and social problems faced by indigenous women and women workers in the agricultural sector and local water management will be systematized. The project will also strengthen women capacities for restoration activities, and on the implementation of sustainable practices and early warning systems. (See GAP in Annex 4d for details on activities).</p> <p>A Gender Specialist will be hired to lead the implementation of the GAP. A specific budget has been allocated for the implementation of the Gender Action Plan.</p>

<b><i>Risk Description</i></b>	<b><i>Impact and Probability (1-5)</i></b>	<b><i>Significance (Low, Moderate, High)</i></b>	<b><i>Comments</i></b>	<b><i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i></b>
<p>Risk 10. Child labour could be a practice of beneficiaries of pilot projects N?1, N?2 and N?3 related to agriculture activities</p> <p>Standard 3: 3.8</p>	<p><i>I:4</i></p> <p><i>P:1</i></p>	Moderate	<p>Even although in both countries Costa Rica and Panama child labour is not permitted, teenager work in Costa Rica has been an incidence in agriculture in both countries.</p>	<p>To be further assessed and managed at the site-level per the ESMF.</p> <p>Particular attention will be given to ensure that no child labor is involved in activities associated with pilot projects N?1, N?2 and N?3 implementation, through the following measures:</p> <p>The UNDP Country Office and the PMU will promote strict compliance with the UNDP SES, and national legislation that prohibits child labor, through awareness raising about this issue in the sites and communities of pilot activities (in particular inviting to the CBCRS members), and training to Project staff, partners and consultants.</p> <p>Communication of the child labor prohibition will be included in the Terms of Reference for consultancies and services and included in all contracts.</p> <p>The PMU will ensure that all actions and service contracts impose the prohibition of child labor. The UNDP will ensure adequate compliance. Implementation of the monitoring plan will ensure oversight and reporting on adequate compliance with these measures.</p> <p>Instructions will be given and follow-up carried out with the stakeholders involved, especially the Project team and the local organizations involved.</p>



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<p><b>RISK 11:</b> Deforestation by foreign non-indigenous settlers in the upper watershed (protected areas and indigenous lands) continues and this reduces the benefits of ecosystem restoration and flood risk mitigation with a negative impact to all human settlements in the middle and lower part of the basin.</p> <p>Standard 1: q. 1.2, 1.5, Standard 6: q. 6.5</p>	<p><i>I=4</i> <i>P=5</i></p>	High	Especially in the Panamanian side, a continuous flow of settlers occupying protected areas and indigenous lands has been repeatedly denounced during the PPG phase.	<p>The project will consider active coordination with environmental authorities and indigenous organizations to control deforestation resulting from illegal land occupation.</p> <p>The ESMP should give special consideration to this situation.</p>

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<p><b>Risk 12: The activities of pilot project 1 and 3 could imply disrespect for workers' labour rights.</b></p> <p><b>Standard 3: Q3.7</b></p> <p><b>Standard 7: Q. 7.1, 7.2,</b></p>	<p><i>I=2</i></p> <p><i>P=3</i></p>	Moderate	The region has a long history of conflicts related to the disrespect of labor rights, particularly the right of association, and damage to workers' health due to the application of harmful agrochemicals.	Through the implementation of the ESMF and subsequent ESIA/ESMP, the project will ensure that workers in productive projects (pilot 3), ecosystem restoration (pilot 1) and stakeholders participating in dialogues to reduce the use of agrochemicals have all the rights granted to them by national and international legislation and that they are not subjected to health risks.
<b>QUESTION 4: What is the overall Project risk categorization?</b>				
Select one (see <a href="#">SESP</a> for guidance)			Comments	
<i>Low Risk</i>			?	
<i>Moderate Risk</i>			?	

<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
		<b>High Risk</b>	<b>X</b>	<p>As the project is overall High risk, all downstream (on-the-ground) risks will be further assessed and managed per the procedures to be established in the Environmental and Social Management Framework (ESMF) and Indigenous Peoples Planning Framework (IPPF).</p> <p>In light of the project's structure/components, an overarching ESIA/ESMP is considered likely not appropriate and necessary for SES compliance; instead, site-specific ESIA/ESMPs are the appropriate and necessary approach, along with SESA for the upstream activities and FPIC for all relevant activities.</p> <p>The ESMF also outlines the requirements/procedures for these additional safeguards elements, among others:</p> <ul style="list-style-type: none"> <li>Comprehensive stakeholder engagement plan</li> <li>Project-level grievance redress mechanism (GRM)</li> <li>Public disclosure</li> </ul> <p>The project's upstream (policy-level) risks will be managed through the application of SESA.</p>

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		<b>QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?</b>		
Check all that apply			<b>Comments</b>	
<i>Principle 1: Human Rights</i>		X		The SAP preparation will be done through a participatory process and following the SESA approach. The Stakeholders Engagement Plan was prepared during PPG (PRODOC Annex 4b). Risk that triggers this principle: Risk 2.
<i>Principle 2: Gender Equality and Women's Empowerment</i>		X		Detailed gender analysis and plan (PRODOC Annex 4d) prepared during PPG will be used during implementation to guarantee gender equality and women's empowerment. Risk that triggers this principle: Risk 9
<i>1. Biodiversity Conservation and Natural Resource Management</i>		X		An ESMF has been prepared. Risks that trigger this standard: Risk 1
<i>2. Climate Change Mitigation and Adaptation</i>		X		Risk that triggers this standard: Risk 3
<i>3. Community Health, Safety and Working Conditions</i>		X		Risk that triggers this standard: Risk 8
<i>4. Cultural Heritage</i>		X		Risk that triggers this standard: Risk 7
<i>5. Displacement and Resettlement</i>		X		Risk that triggers this standard: Risk 6

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	<b>6. Indigenous Peoples</b>		X	The draft IPPF (PRODOC Annex 4e was prepared during PPG and will be used during implementation). Risks that trigger this standard: Risk 4, Risk 6, Risk 7
	<b>7. Pollution Prevention and Resource Efficiency</b>		X	Risk that triggers this standard: Risk 5

### Final Sign Off

<i>Signature</i>	<i>Date</i>	<i>Description</i>
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have 'checked' to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have 'cleared' the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

<b>Checklist Potential Social and Environmental Risks</b>	
<b>Principles 1: Human Rights</b>	<b>Answer (Yes/No)</b>
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	NO
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? [1]	YES
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	NO
4. Is there likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	NO
5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	NO
6. Is there a risk that rights-holders do not have the capacity to claim their rights?	YES
7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	NO
8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	NO
<b>Principle 2: Gender Equality and Women's Empowerment</b>	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	NO
2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	YES
3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	NO

<p>4. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?</p> <p><i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i></p>	NO
<p><b>Principle 3: Environmental Sustainability:</b> Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below</p>	
<p><b>Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management</b></p>	
<p>1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?</p> <p><i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i></p>	YES
<p>1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?</p>	YES
<p>1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)</p>	NO
<p>1.4 Would Project activities pose risks to endangered species?</p>	NO
<p>1.5 Would the Project pose a risk of introducing invasive alien species?</p>	YES
<p>1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation?</p>	YES
<p>1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species?</p>	NO
<p>1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water?</p> <p><i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i></p>	NO
<p>1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)</p>	NO
<p>1.10 Would the Project generate potential adverse transboundary or global environmental concerns?</p>	NO

<p>1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?</p> <p><i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i></p>	NO
<b>Standard 2: Climate Change Mitigation and Adaptation</b>	
<p>2.1 Will the proposed Project result in significant<sup>[2]</sup> greenhouse gas emissions or may exacerbate climate change?</p>	NO
<p>2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?</p>	YES
<p>2.3 Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)?</p> <p><i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i></p>	NO
<b>Standard 3: Community Health, Safety and Working Conditions</b>	
<p>3.1 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?</p>	NO
<p>3.2 Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?</p>	NO
<p>3.3 Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?</p>	NO
<p>3.4 Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)</p>	NO
<p>3.5 Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?</p>	NO
<p>3.6 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?</p>	YES
<p>3.7 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?</p>	YES



3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labour standards (i.e. principles and standards of ILO fundamental conventions)?	YES
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	NO
<b>Standard 4: Cultural Heritage</b>		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect, and conserve Cultural Heritage may also have inadvertent adverse impacts)	YES
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	YES
<b>Standard 5: Displacement and Resettlement</b>		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	NO
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions ? even in the absence of physical relocation)?	YES
5.3	Is there a risk that the Project would lead to forced evictions?[3]	NO
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	YES
<b>Standard 6: Indigenous Peoples</b>		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	YES
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	YES
6.3	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to the screening question 6.3 is ?yes? the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i>	YES
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	YES

6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	YES
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	YES
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	NO
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	NO
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	YES
<b>Standard 7: Pollution Prevention and Resource Efficiency</b>		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	YES
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	YES
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	NO
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	YES
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	NO

[1] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to ?women and men? or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

[2] In regard to CO<sub>2</sub>, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

[3] Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

#### **Supporting Documents**

Upload available ESS supporting documents.

<b>Title</b>	<b>Module</b>	<b>Submitted</b>
<b>6273 IPPF Sixaola 04052021</b>	<b>CEO Endorsement ESS</b>	
<b>6373 Annex 4c</b>	<b>CEO Endorsement ESS</b>	
<b>6373 Annex 4a</b>	<b>CEO Endorsement ESS</b>	

**ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).**

**This project will contribute to the following Sustainable Development Goal (s):** Goal 5: Achieve gender equality and empower all women and girls; Goal 6 (6.6): Ensure access to water and sanitation for all; Goal 13 (13.1, 13.3): Take urgent action to combat climate change and its impacts; Goal 15: Sustainably manage forests, combat desertification, halt & reverse land degradation & high biodiversity loss.

**This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD):**

**Costa Rica. Output 1.4.1** Solutions scaled up for sustainable management of natural resources, including sustainable commodities and green and inclusive value chains. **Output 3.1** expects non-governmental organizations, social movements, environmental organizations and community-based or productive organizations to strengthen their capacity to organize and generate sectoral proposals for the enforceability of rights, mainly of the most excluded groups and in conditions of vulnerability.

**Panama: OUTCOME 3.2:** By 2020, the State has strengthened its capacities to design and implement policies, plans and programs that contribute to environmental sustainability, food and nutrition security, adaptation to climate change, disaster risk reduction and resilience build-up.

	<b>Objective and Outcome Indicators</b>	<b>Baseline</b>	<b>Mid-term Target</b>	<b>End of Project Target</b>
<b>Project Objective:</b> Strengthen transboundary multi-stakeholder action in the Sixaola River Basin shared by Costa Rica and Panama to restore riverine and coastal ecosystems, reduce pollution from agricultural production and reduce risks from hydrometeorological disasters	<b><u>Indicator 1 (mandatory/ GEF core indicator 11):</u></b> # Direct project beneficiaries disaggregated by gender (individual people). <i>*See related indicator: SAPI 1</i>	<b>Total: 0</b>  CRI: women: 0; men: 0  PAN: women: 0; men: 0	<b>Total: 5,000</b>  CR: women: 2,000; men: 2,000  PAN: women: 500; men: 500	<b>Total: 30,000</b>  CR: women: 12,000; men: 12,000  PAN: women: 3,000; men: 3,000
	<b><u>Indicator 2 (mandatory):</u></b> # Indirect project beneficiaries disaggregated by gender (individual people) <i>*See also related indicator: SAPI 2</i>	<b>Total: 0</b>  Costa Rica: women: 0; men: 0  Panama: women: 0; men: 0	<b>Total: 6,000</b>  CR: women: 2,400; men: 2,400  PAN: women: 600; men: 600	<b>Total: 37,000</b>  CR: women: 13,000; men: 13,000  PAN: women: 5,500; men: 5,500
	<b><u>Mandatory GEF-7 Core Indicators</u></b>			
	<b><u>Indicator 3 (GEF7 Core Indicator 3):</u></b> Area of land restored (Million hectares)	0 Ha	1,000Ha	3,000Ha

	<b>Indicator 4 (GEF7 Core Indicator 4):</b> Area of landscapes under improved practices (Million hectares)	0 Ha	300Ha	1,000Ha
	<b>Indicator 5 (GEF7 Core Indicator 7):</b> Number of shared water ecosystems under new or improved cooperative management (7.1. Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation).	1 = No TDA/SAP	2 = TDA finalized	3 = SAP endorsed at ministerial level
<b>Project Component 1</b>	Governance instruments improved for joint integrated management of the Sixaola Binational River Basin.			
<b>Project Outcome 1.1.</b> <i>Common understanding of the transboundary water and environmental issues, challenges and opportunities with gender perspective affecting the SBRB and agreed strategy for basin restoration and protection</i>	<b>Indicator 6:</b> Level of access to and common understanding of transboundary environmental and IWRM related problems all key stakeholders, as a result of the elaboration of the TDA. <i>*See also related indicator: GAPI 1 and SAPI 3.</i>	There is not updated information on the transboundary environmental and IWRM related problems of the SBRB: Moreover, the available transboundary information (generated by previous GEF project) is not publicly accessible.	The formulation of the Transboundary Diagnostic Analysis with gender perspective has been completed with updated inputs from all stakeholders involved.	The Transboundary Diagnostic Analysis is accessible with gender perspective serves as a key input for the formulation of the Strategic Plan for the Sixaola River Binational Basin 2022-2032.
<b>Outputs to achieve Outcome 1.1.</b>	<u>Output. 1.1.1</u> Transboundary Diagnostic Analysis (TDA) of the Sixaola River Basin prioritizes threats to this bi-national watershed identifying their immediate and root causes as technical input to preparation of the SAP; <u>Output 1.1.2</u> Transboundary Diagnostic Analysis available at the national (Costa Rica and Panama), sub-national, municipal and community levels			

<p><b>Outcome 1.2.</b> The Binational Commission of the Sixaola River Basin (CBCRS) role as a facilitator of IWRM actions by public and private sector stakeholders is strengthened and builds upon an and agreed strategy to attend the environmental issues, challenges and opportunities affecting the Sixaola river basin.</p>	<p><b>Indicator 7:</b> Number of binational projects identified together with key stakeholders and included in the Strategic Action Programme 2022-2032. <i>*See also related indicators: GAPI 2 and SAPI 4</i></p>	<p>The baseline refers to the existence of a Strategic Plan for Transboundary Territorial Development 2017-2021</p>	<p>At least 3 joint projects identified to be included in the SAP. <i>(See also GAP indicator 2)</i> At least 1 project proposed in the SAP, address issues affecting differently women and/or impact positively their empowerment for IWRM.</p>	<p>At least three other joint projects with gender perspective have been identified, and a total of 6 have been incorporated through participatory and consensus processes into the Strategic Action Programme.</p>
	<p><b>Indicator 8:</b> The Strategic Action Programme including a chapter to increase women's participation and key stakeholders for the strengthening of the IWRM in the Sixaola river basin has been designed , validated with stakeholders, and endorsed at the ministerial level.</p> <p>-</p>	<p>Existence of a Strategic Plan for Transboundary Territorial Development 2017-2021.</p>	<p><b>Mid-term Targets:</b> A technical team is commissioned with formulating the Strategic Action Programme (2022-2032)  Key stakeholders, including women, are involved in design of SAP</p>	<p><b>End of Project Target:</b> The Strategic Action Programme (2022-2032) has been designed, validated through a participatory process, and endorsed at ministerial level.  Key stakeholders with emphasis in women involved in consultation process of SAP.</p>
	<p><b>Indicator 9:</b> A new legal framework for CBCRS enables joint public and private investment, ensuring gender empowerment and reducing differentiated risks and impacts on women in the SBRB. <i>*See also related indicator: GAPI 3</i></p>	<p><i>Rating for legal framework: 0 The current CBCRS needs formal legal mandate to enable joint, binational, public and private investment with gender equality in the Sixaola river basin.</i></p>	<p><i>Rating for legal Framework: 2</i> Legal agreement under development</p>	<p><i>Rating for Legal Framework: 4</i> Legal agreement ratified and functional</p>

<p><b>Outputs to achieve Outcome 1.2</b></p>	<p><u>Output 1.2.1</u> Strategic Action Programme (SAP) for the period 2022-2032 developed and <b>endorsed at ministerial level</b> by the Permanent Binational Commission of the Border Development Agreement (the commission is chaired by the Ministers of MIDEPLAN and MEF).</p> <p><u>Output 1.2.2</u> Four inter-institutional and multisectoral coordination working groups <i>convened</i> by the CBCRS;</p> <p><u>Output 1.2.3</u> Strategy for awareness raising and engagement for discussion, consultation (if needed) and review of the SAP among key decision-makers, Indigenous Peoples, local governments and civil society.</p> <p><u>Output 1.2.4</u> Training of key stakeholders (public and private) on issues such as: ecosystem-based management of coastal and riverine ecosystems; indigenous peoples, and gender mainstreaming.</p> <p><u>Output 1.2.5</u> Collaborative framework elaborated for financial sustainability and binational investments to ensure long term funding of bi-national, national and local coordination structures and operations</p>			
<p><b>Project Component 2</b></p>	<p>Demonstrative pilot projects stimulate collaborative work, replication and implementation and build capacity, experience and support for SAP implementation.</p>			
<p><b>Outcome 2.1</b> Demonstrative pilot interventions implemented by local stakeholders and community-based organizations advance targets of the SAP and generate global environmental benefits in the SBRB.</p>	<p><b>Indicator 10:</b> Improved management of the river margins of the Sixaola river basin through forest landscape restoration action</p>	<p>Number of improved land management tools implemented:0</p>	<p>Number of improved land management tools implemented: 10</p>	<p>Number of improved land management tools implemented:20</p>
	<p><b>Indicator 11:</b> Improved farms with improved management thanks to the articulation of the Multi-stakeholder dialogue platform mentoring program.</p>	<p>0 farms with improved low polluting production best practices implemented</p>	<p>25 farms with improved low polluting production best practices with gender equality</p>	<p>50 farms with improved low polluting production best practices with gender equality implemented</p>

	<p><b>Indicator 12:</b> Improved water quality in the Sixaola river basin.</p> <p>See PPG baseline analysis of water quality in Annex 11.</p>	<p>BMWP Index: 110 (Telire river)</p> <p>BMWP index: 5 (Bridge between Sixaola and Guabito)</p> <p>BMWP index: 7 (Gandoca lagoon)</p> <p>BMWP Index: 9 (San San Pond Sak lagoon)</p> <p>Gandoca Lagoon (2019 Value of 1,324?g/l)</p> <p>Sixaola-Guabito bridge (2019 Value of 0,0877 ?g/l)</p> <p>San San Pond Sak Lagoon (2019 value of 0.0646 ?g/l).</p>	0%	<p>25% of sample points show an improvement in the presence of macro-invertebrates in surface waters, with total count above 60 in the BMWP index</p> <p>25% of sample points measurements reach legally acceptable concentration levels of pollutants, with no sample points with measurements of total pesticide concentrations of above 0.05 ?g/l</p>
	<p><b>Indicator 13:</b> Level of knowledge and skills to adopt best environmental practices in plantain and banana production with gender perspective (from 0 to 4)</p>	<p>No best practices (adopted)</p>	<p>2 best practices with gender equality partially adopted</p>	<p>4 best practices with gender equality broadly adopted and shared</p>



	<p><b>Indicator 14:</b> Percentage of women participating in pilot demonstration interventions</p> <p>*See also related indicators: GAPI 5, GAPI 7, and SAPI 6</p>	<p>There are civil society organizations active in the Sixaola river basin with significant participation of women. But few are working in an articulated fashion. This baseline will be completed during the TDA.</p>	<p>Increase by 50% in the number of smallholder female agricultural producers involved in pilot demonstration projects.</p>	<p>Increase by 100% in the number of smallholder female agricultural producers involved in pilot demonstration projects.</p>
<p><b>Outputs to achieve Outcome 3</b></p>	<p>Output 2.1.1 Pilot 1. Restoration strategy implemented to reduce erosion and pollution; Output 2.1.2 Pilot 2. Multi-stakeholder dialogue platform to promote and scale-up low polluting production best practices (banana and plantain); Output 2.1.3 Pilot 3. Scaling up agroforestry systems (with cocoa, banana and plantain production in the binational basin).</p>			

## **ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).**

According to STAP screening: ?STAP is satisfied with the scientific and technical quality of the proposal and encourages the proponent to develop it with same rigor. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design.? STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodological issues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to:

- (i) Open a dialogue with STAP regarding the technical and/or scientific issues raised;
- (ii) Set a review point at an early stage during project development including an independent expert as required. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.

Significant improvements have indeed been included during PPG in terms of methodologies used, barriers and other omissions that were not included in the PIF; unfortunately, an official dialogue with STAP was not requested, nor was an independent expert hired to address the points indicated in the STAP review. The PPG team focused insufficiently on the comments and didn't provide the

corresponding attention, due to many reasons, starting with PPG operations disruption due to turnover and covid-19 issues. So, UNDP has proposed to STAP to proceed with the CEO Endorsement submission/review during which stage the GEF review can verify if the issues raised by the STAP review were addressed or persist, so then UNDP can proceed with addressing any remaining gaps following receipt of the GEF review sheet.

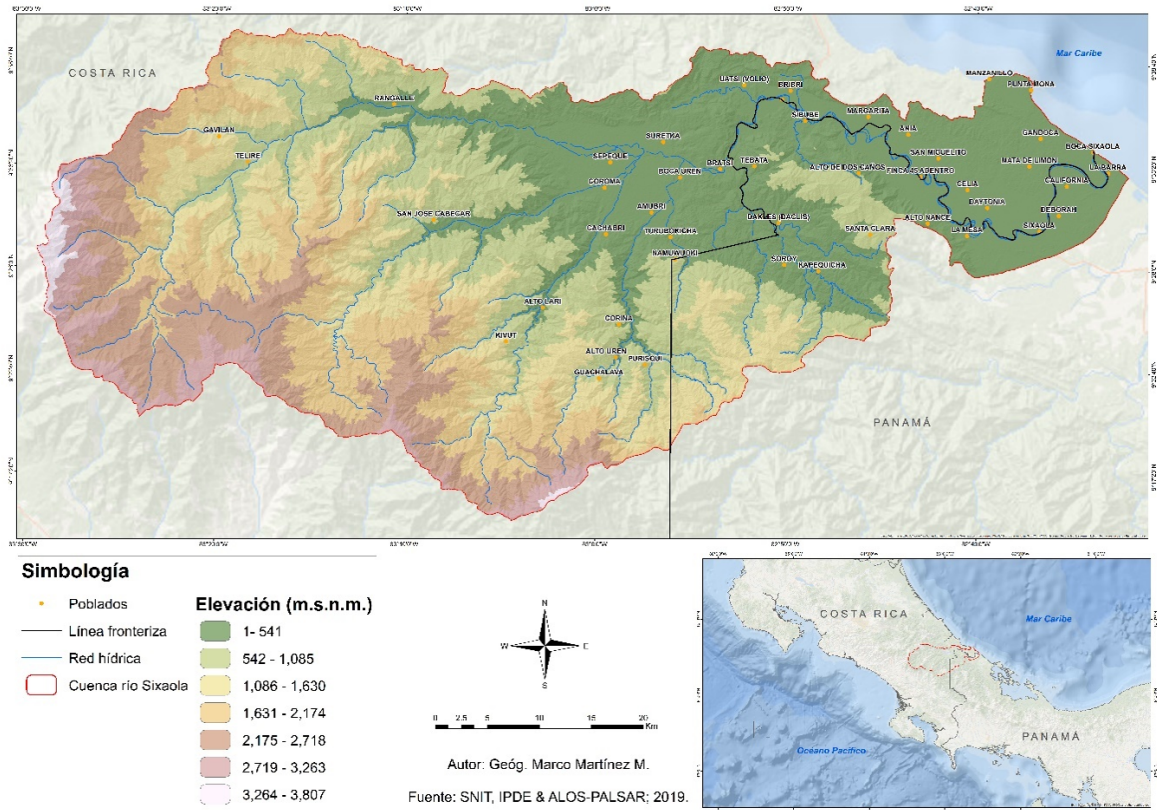
**ANNEX C: Status of Utilization of Project Preparation Grant (PPG).  
(Provide detailed funding amount of the PPG activities financing status in the table below:**

PPG Grant Approved at PIF: <b>150,000</b>			
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent Todate</i>	<i>Amount Committed</i>
<b>Project preparation grant to finalize the UNDP-GEF project document for project ?Towards the transboundary Integrated Water Resource Management (IWRM) of the Sixaola River Basin shared by Costa Rica and Panama?</b>	150,000	145,559.49	4,440.51
<b>Total</b>	<b>150,000</b>	<b>145,559.49</b>	<b>4,440.51</b>

**ANNEX D: Project Map(s) and Coordinates**

**Please attach the geographical location of the project area, if possible.**

Elevation map showing the delimitation of the SBRB.



Source: Project preparation documentation.<sup>30</sup>

## ANNEX E: Project Budget Table

Please attach a project budget table.

### Annex H: Analysis of the risks and opportunities of the COVID Pandemic on the project.

The COVID-19 pandemic had a wide range of impacts on the basin populations; not only on social and health aspects, but also on the economic dynamics: the export chain, the tourism sector, public sectors, financial stability of municipal and national authorities, impediments to entertainment and restoration sector.

A meeting was held with national authorities of each country on the 9 of February 2021, to identify barriers and opportunities that the COVID-19 pandemic poses to the project. Table 1 summarized the discussion and recommendations.

Short, medium and long term risk and opportunities.

Risks	Opportunities
<p><u>Short term</u></p> <p>? Limitation of presential meetings. Therefore, convening meetings have been disrupted.</p> <p>? The digital gap among actors in the basin is evident, mainly among indigenous populations and those more vulnerable. Lack of connectivity access has limited virtual meetings.</p> <p>? Public staff requires special permit to travel to other countries.</p> <p>? The CBCRS's internal regulation does not consider virtual meeting of assemblies. This is a pending issue to be resolved.</p> <p>? Loss of jobs related to tourism sector.</p>	<p>? The need to amend the internal regulations due to COVID-19 of the CBCRS opens an opportunity to strengthen its Rules of Procedure.</p> <p>? IUCN is supporting the governance process, in order to identify a mechanism to hold a virtual assembly.</p> <p>? Real possibility to include other actors in the CBCRS, e.g. Water Directorate; and Ministry of Health with new capacities strengthened during the pandemic.</p> <p>? Virtuality has supported coordination between institutions. Pandemic has shown that coordination is possible.</p>
<p><u>Medium term</u></p> <p>? The participation and engagement of the different social actors has been affected by the pandemic and has not yet been recovered, due to sanitary restrictions.</p> <p>? Budgets for local or international missions have been shorten. In Costa Rica during 2021 there is no budget for tours or mobilisation for all public sector institutions. In Panama, only strictly strategic calls that would be attended, and those need to be approved by the Ministry.</p>	<p>? The project could help to address the digital gap in the Sixaola basin.</p> <p>? Rebuild with new economic</p>
<p><u>Long term</u></p> <p>? Decrease in engagement of local stakeholders.</p> <p>? Decreased economic growth</p>	

Expenditure Category	Detailed Description	Component (US\$Eq.)							Total (US\$Eq.)	Responsible Entity  (Executing Entity receiving funds from the GEF Agency)[1]
		Component 1		Component 2	Component 3	Sub-total	M&E	PMC		
		Sub-component 1.1	Sub-component 1.2							
Equipment	13,000.00 Materials required for hydrogeological studies, including material for hydrogeological sampling.	13,000				13,000			13,000	OET
Equipment	28,000.00 IT equipment and software to support development and use of groundwater and surface water databases. Computer (4) and software for National Project Specialists and Admin Support (IWRM, Risk Management, and Sustainable Production) IT equipment (hardware and software) to enhance the capability of the Environmental Information Systems for using remote-sensing technology to monitor water quality and share information.	9,000				9,000			9,000	OET
Equipment	28,000.00 IT equipment and software to support development and use of groundwater and surface water databases. Computer (4) and software for National Project Specialists and Admin Support (IWRM, Risk Management, and Sustainable Production) IT equipment (hardware and software) to enhance the capability of the Environmental Information Systems for using remote-sensing technology to monitor water quality and share information.		19,000			19,000			19,000	OET
Equipment	13,000.00 Desks (3) (pilot projects in Costa Rica) and equipment for the indigenous chairs, and other office equipment (pilot projects in Costa Rica) Desks (2) for pilot projects PM Computer and Printer (2) for pilot projects.			13,000		13,000			13,000	OET
Equipment	26,500.00 Digital camera or web camera (3) for pilot projects. Computer and Printer (3) for pilot projects. Computer (2) and software for National Project Specialist and Admin Support Computer (1), printer, scanner, software, video beam and screen / Panama IT maintenance, software licences per year (pilot projects), per year for 4 computers			26,500		26,500			26,500	OET
Equipment	9,300.00 Computer (4), printer, scanner, software and video beam and screen (PMU office) / Project coordinator, Gender Sp., M&E Sp., Comm Sp.					-	9,300		9,300	OET
Contractual services-Individual	781,000.00 Binational Project Coordinator (PMU): coordination support to diagnostic analysis of the surface and groundwater resources of the Sixaola River Basin. Gender and Participation specialist (PMU): to conduct a detailed assessment of gender aspects and gathering of baseline data on agreed upon gender indicators. National Project Specialist (CR) / IWRM and Governance Specialist: in charge of conducting and overseeing integrated water resources management work under all components of the project and of providing technical assistance to the binational governance structures (CBCRS) of the Sixaola river basin Social and Human Rights Expert (with background on Social Sciences) to develop the IPP final document, as well as a binational capacity building plan on governance and provide support to the IPCC on Indigenous Peoples, with gender perspective. This person, provides support the grievance mechanism. He/she will also develop the training program for the PMU, CBCRS, institutional and local partners. IWRM and Governance Specialist (PMU) Technical Assistant on watershed management (based in MiAmbiente, Panama)		504,000			504,000			504,000	OET
Contractual services-Individual	263,000.00 Binational Project Coordinator (PMU): coordination support for implementation of innovative pilot initiatives for the IRM and oversight of outputs for Component 3. National Project Specialist (CR) / Sustainable Production Specialist National Project Specialist (PAN) / Rural / Agricultural Specialist			263,000		263,000			263,000	OET
Contractual services-Individual	373,000.00 Binational Project Coordinator (PMU): coordination support to diagnostic analysis of the surface and groundwater resources of the Sixaola River Basin. Gender and Participation Specialist (PMU): to conduct a detailed assessment of gender aspects and gathering of baseline data on agreed upon gender indicators. National Project Specialist (CR) / IWRM and Governance Specialist: in charge of conducting and overseeing integrated water resources management work under all components of the project and of providing technical assistance to the binational governance structures (CBCRS) of the Sixaola river basin National Project Specialist (CR) / Risk Management Specialist: to develop a series of flood response protocols that will form the legal and technical basis for a binational Early Warning System. Communications Specialist PMU: Communication activities and documentation and systematization of lessons learnt and best practices, including cost of documentation and systematization of lessons learnt and best practices.				373,000	373,000			373,000	OET
Contractual services-Individual	190,000.00 Binational Project Coordinator (PMU, Costa Rica): project planning, day-to-day management of project activities, project reporting, maintaining key relationships among stakeholders. Financial/Administrative Support (PMU, Costa Rica): financial management of the project, accounting, purchasing, and reporting and Administrative and logistical support for implementation of innovative pilot initiatives for the IRM of the Sixaola River Basin and implementation outputs. Financial/Administrative Support (Panama): financial management of the project, accounting, purchasing, and reporting.					-	190,000		190,000	OET
Contractual services-Company	381,000.00 Company to analyze (using GIS and Landscape Analysis Tools) the status and dynamics of changes in degradation that take place at the landscape level in the Sixaola river basin as well as to assess the impact of sustainable agriculture production on reducing deforestation and water pollution. Company to provide detailed maps of current land use using aerial imagery through remote sensing and drones. Company on Groundwater Analysis to analyze aquifer recharge rates through the application of new isotopic tracer analysis techniques to determine recharge times at different sites in the basin. Company for physical, chemical and bacterial surface water quality analyses. Company on Disaster Risk Management: to design the establishment of weather stations and flood monitoring stations in the Sixaola River Basin. Company on environmental toxicity to design a monitoring program of human and environmental health effects of U-POPs emissions and organic wastes disposal, including key indicators. Company to develop a Restoration Plan plan for the restoration of river banks throughout the basin (identifying species, techniques, and implementation mechanisms with local stakeholders). Company to develop a groundwater water quality monitoring system for drinking water aqueducts in Costa Rica. Agriculture/food systems company to analyze the different production systems in the basin and develop a typology of farming systems according to their impact on human development and water quality. It will use GIS and integrate information from other social experts of the project.	146,000				146,000			146,000	OET

Contractual services-Company	<p>510,000.00 Pilot 1. Implementation of the ecosystem restoration programme. Identification and monitoring of degraded areas through the definition of qualitative and quantitative monitoring variables (restoration and self-sustainability). GIS analysis. Strengthening the agroforestry nurseries capacities in both countries.</p> <p>Pilot 1. Sustainable production programme (Musa spp.) focused on women groups</p> <p>Pilot 1. Identification and monitoring of degraded areas. Implementation of biological corridors in indigenous territories in both countries.</p> <p>Pilot 2. Company support to identify priorities for research, information transfer and extension services on alternatives to agrochemicals and/or on good practices in the use of agrochemicals, as well as on best sustainable production and practices for pollution prevention in Costa Rica and Panama. Extension services design specifically design for farmer women and indigenous farmers will be included.</p> <p>Pilot 2. Company (Green Commodities Program) to provide strategic orientation to increase private sector involvement in the processes needed to address the root causes of the environmental and social externalities of banana production, by securing corporate engagement services with banana buyers to ensure alignment between banana purchasing policies in the binational basin and best practices in Costa Rica and Panama.</p> <p>Pilot 3. Company to design an investment plan in post-harvest management processes, processing and agro-industrial production of cocoa derivatives for community-based enterprises (indigenous farmers)</p> <p>Pilot 1. Local communication plan and public campaign design and implementation for sustainable agriculture and transition systems</p> <p>Pilot 1. Company organization to implement coastal wetland restoration efforts</p>				510,000		510,000		510,000	OET
Contractual services-Company	<p>80,000.00 Company to design the systematic data collection and analysis to understand the nature and behavior of flood hazards, as well as the identification of related vulnerable groups, critical infrastructure and exposed assets, to design evacuation strategies that include evacuation routes and safe areas, and to expand warning messages.</p> <p>Company specialized in Applied Hydrometeorology to provide technical assistance to expand the network of hydrometeorological stations located in the Sisaola river basin and to provide guidelines for the early detection, monitoring, analysis and forecasting of flood hazards and potential consequences to provide forecasts and warnings, including the development of specific hydrometeorological models, as well as increasing automated hydrometeorological monitoring infrastructure to produce and deliver accurate thresholds for determining the activation of warnings at strategic sites in the binational basin.</p>					80,000	80,000		80,000	OET
International Consultants	<p>166,000.00 TDA Senior Expert: gathering, analysis and consolidation of information and writing of TDA, facilitation of meetings to validate accuracy of information in TDA, development of materials to summarize TDA for different stakeholders, provision of reliable data to GIS expert for inclusion in database, which includes data analysis and harmonization of information, (15% of time dedicated to gender-activities)</p> <p>Water pollution consultant. To produce a diagnosis on transboundary waste and wastes disposal mechanism in Costa Rica and Panama with differentiated information for men and women, as well for indigenous populations. (15% of time dedicated to gender-activities)</p> <p>International Law Expert to prepare recommendations for updating the statutes and norms for the strengthening the regulations of the CBCRS, to include gender considerations and the protocols FPIC.</p> <p>International consultant to develop an Environmental and Social Impact Assessment (ESIA)</p> <p>International consultant to develop an ESMP</p>	80,000					80,000		80,000	OET

International Consultants	<p>166,000.00 TDA Senior Expert: gathering, analysis and consolidation of information and writing of TDA, facilitation of meetings to validate accuracy of information in TDA, development of materials to summarize TDA for different stakeholders, provision of reliable data to GIS expert for inclusion in database, which includes data analysis and harmonization of information, (15% of time dedicated to gender-activities)</p> <p>Water pollution consultant. To produce a diagnosis on transboundary waste and wastes disposal mechanism in Costa Rica and Panama with differentiated information for men and women, as well for indigenous populations. (15% of time dedicated to gender-activities)</p> <p>International Law Expert to prepare recommendations for updating the statutes and norms for the strengthening the regulations of the CBCRS, to include gender considerations and the protocols FPIC.</p> <p>International consultant to develop an Environmental and Social Impact Assessment (ESIA)</p> <p>International consultant to develop an ESMP</p>				66,000		66,000		66,000	OET
International Consultants	24,000.00 Pilot 2. Expert on multistakeholder dialogues and private sector engagement to support actions in Panama				24,000		24,000		24,000	OET
International Consultants	36,000.00 Finance Expert to design a Binational investment plan for flood risk management in the basin, including needed infrastructure and mechanism to avoid risk to indigenous populations					36,000	36,000		36,000	OET
International Consultants	33,000.00 Mid-term project review. Terminal project independent evaluation.						-	33,000	33,000	OET
Local Consultants	<p>206,750.00 Environmental toxicology/pollution consultant to produce an inventory of specific or diffuse sources of pollution and support the implementation of environmental education activities regarding human and environmental health effects of U-POP's emissions and plastic wastes disposal. Helzhe will also deliver capacity building to Ministries of Environment and local staff from Talamanca municipalities.</p> <p>Groundwater consultant for the identification of water recharge areas and the implementation of the National Irrigation and Drainage Service (SENAIRA) methodology.</p> <p>Socio-economic consultant for collection and analysis of socioeconomic information and gathering of baseline data on agreed upon socioeconomic indicators, including disaggregated gender information, indigenous peoples, with a differentiated analysis for of urban and rural context. (15% of time estimated to gender-related activities)</p> <p>GIS consultant for development of GIS database to consolidate hydrogeological information, socio-demographic information and environmental pollution inventory of point and diffuse sources of pollution.</p> <p>Communication specialist (with experience on multicultural approaches) to develop a grievance mechanism, as well as socialize and train key stakeholders.</p> <p>Consultant with background on Social Sciences to discuss Project Components (pilot projects final location and rest of components) with all key stakeholders in order to develop a final ESMP document. This person will also be a trainer of the Training Program for the PMU and the CBCRS and institutional partners.</p> <p>ESIA/SESA Consultant - Development of binational ESIA study (SESA Study developed by a consultant in Panama)</p> <p>ESIA/SESA Consultant - Development of binational SESA study</p> <p>Public Finance Expert for reviewing options and designing a 10-year binational investment plan for the Strategic Action Plan. Helzhe will support binational task group to ensure technical, scientific, and economic support for SAP implementation.</p> <p>Information Management Expert to assess and update existing Environmental Information Systems in Costa Rica and Panama, and to design a strategy on the Sisaola river basin to generate and share information with key stakeholders.</p> <p>Rural development and agriculture/food systems consultants, in the framework of the SAP elaboration, to support the discussion on the transition of production systems in the basin according to recommendations, existing farming systems and their impact on human development and water quality.</p> <p>Capacity building instructors to deliver capacity building plan given to MiAmbiente and local staff from Changuinola municipalities.</p> <p>Workshop facilitator for 2 events/ information exchanges on sustainable food/agriculture production system on sat the local level in Costa Rica and Panama.</p> <p>Policy consultant for incorporating the principal findings of the TDA in the Municipal and Regional Development Plans and/or Investments planning in Costa Rica and Panama.</p> <p>ESIA/SESA Consultant - Development of binational SESA study</p>	81,500					81,500		81,500	OET

Local Consultants	<p>208,750.00 Environmental toxicology/pollution consultant to produce an inventory of specific or diffuse sources of pollution and support the implementation of environmental education activities regarding human and environmental health effects of U-POP's emissions and plastic wastes disposal. He/she will also deliver capacity building to Ministries of Environment and local staff from Talamanca municipalities.</p> <p>Groundwater consultant for the identification of water recharge areas and the implementation of the National Irrigation and Drainage Service (SENARA) methodology.</p> <p>Socio-economic consultant for collection and analysis of socioeconomic information and gathering of baseline data on agreed upon socioeconomic indicators, including disaggregated gender information, indigenous peoples, with a differentiated analysis for of urban and rural context. (5% of time estimated to gender-related activities)</p> <p>GIS consultant for development of GIS database to consolidate hydrogeological information, socio-demographic information and environmental pollution inventory of point and diffuse sources of pollution.</p> <p>Communication specialist (with experience on multicultural approaches) to develop a grievance mechanism, as well as socialize and train key stakeholders.</p> <p>Consultant with background on Social Sciences to discuss Project Components (pilot projects final location and rest of components) with all key stakeholders in order to develop a final ESMP document. This person will also be a trainer of the Training Program for the PMU and the CBCRS and institutional partners.</p> <p>ESIA/SESA Consultant - Development of binational ESIA study (SESA Study developed by a consultant in Panama)</p> <p>ESIA/SESA Consultant - Development of binational SESA study</p> <p>Public Finance Expert for reviewing options and designing a 10-year binational investment plan for the Strategic Action Plan. He/she will support binational task group to ensure technical, scientific, and economic support for SAP implementation.</p> <p>Information Management Expert to assess and update existing Environmental Information Systems in Costa Rica and Panama, and to design a strategy on the Sisaola river basin to generate and share information with key stakeholders.</p> <p>Rural development and agriculture/food systems consultants, in the framework of the SAP elaboration, to support the discussion on the transition of production systems in the basin according to recommendations, existing farming systems and their impact on human development and water quality.</p> <p>Capacity building instructors to deliver capacity building plan given to MiAmbiente and local staff from Changuinola municipalities.</p> <p>Workshop facilitator for 2 events/information exchanges on sustainable food/agriculture production system sat the local level in Costa Rica and Panama.</p>	115,250	115,250	115,250	OET
Local Consultants	<p>Policy consultant for incorporating the principal findings of the TDA in the Municipal and Regional Development Plans and/or</p> <p>168,000.00 Pilot 1: Conservation Biology / Agroforestry Expert to identify productive nature based solutions restoration approaches for the riverine forest of the Sisaola River. He/she will also identify potential option to restore wetlands.</p> <p>Pilot 1: Indigenous Peoples Ecology/Agroforestry Expert to identify sites and communities to implement conservation practices for the establishment of biological corridors and restoration of river banks, using traditional knowledge and native species. 100% estimated to indigenous territories - related budget</p> <p>Pilot 2: Political sociology expert to develop a stakeholder analysis, as a baseline to establish the multistakeholder dialogue platform roadmap in Costa Rica and Panama.</p> <p>Pilot 2: Agricultural Extensionist consultant to document best practices among agricultural MUSA spp. producers (including groups or individual female farmers) to reduce pollution risks (from agrochemicals) and mitigate the impact on shared marine, coastal and freshwater ecosystems in the Sisaola river basin.</p> <p>Pilot 3: Community based agriculture expert to develop a road map and options for the rescue and protection of traditional cocoa varieties and expansion of native organic cocoa production under agroforestry systems in indigenous territories of the binational basin. 100% estimated to indigenous territories - related budget</p> <p>Pilot 4: GIS expert to develop cartography and erosion model for the basin, in order to design the restoration practices.</p> <p>Pilot 4: Environmental legislation expert to develop a transboundary wetland management system, supporting international initiatives to declare the Gandoca Manzanillo and Sapoa Floodplain as binational wetlands of international importance</p>	168,000	168,000	168,000	OET
Local Consultants	<p>93,000.00 Communications specialized in community-based approaches to develop specific early warning dissemination and communication protocols to ensure that warnings reach all people at risk with clear messages containing simple, useful and usable information to enable adequate preparedness and response of organizations and communities, indigenous peoples using multiple communication channels, languages and currently available technology</p> <p>Consultant to provide assistance to riparian communities and train them to apply simple monitoring tools, such as drones, to monitor floodwaters to complement and support automated monitoring mechanisms.</p>		93,000	93,000	OET
Local Consultants	<p>7,000.00 Mid-term GEF Tracking Tools update.</p> <p>Terminal GEF Tracking Tools update.</p>			7,000	OET

Training, Workshops, Meetings	<p>78,200.00 TDA Participatory process (informative event): Two participatory workshops with stakeholders identified in the Stakeholders Plan, Gender Action Plan and PPPI to inform about the TDA and collect key information (two events per country) 15% estimated to indigenous peoples - related budget (usd 2000 per event)</p> <p>TDA Participatory process (informative meetings in indigenous territories): Six informative meetings (in each of the indigenous territories to inform about the TDA and collect key information.</p> <p>TDA Participatory process (final presentation and validation): Two national events for TDA Presentation with key stakeholders in each country (as identified in the Stakeholder Plan, the Gender Action Plan and the IPP). 15% estimated to indigenous peoples - related budget</p> <p>TDA Participatory process (final presentation meetings in indigenous territories): Six meetings to present TDA results (in each of the indigenous territories)</p> <p>Workshops and/or meetings costs regarding the participative process on gender mainstreaming to prepare and elaborate of proposals for the SAP. (Special considerations regarding specific needs, such as childcare services, will be included under this budget line)</p> <p>Workshops and/or Meetings associated with participative process for SAP elaboration regarding the dialogue processes for SAP discussion with Indigenous Peoples to be defined with the IPCC during first semester of project implementation. An estimation of two events/meeting per territory are foreseen.</p> <p>Potential indigenous participatory, consultative or FPIC process: Meetings costs for needed participative, consultative of FPIC process with indigenous peoples on pilot projects (pilot 1 and 3) final location (unitary cost: \$5,000 for participatory and dialogue process related to consultation and FPIC)</p> <p>Training program for the PMU, CBCRS, institutional partners, and local partners (local governments, NGOs, workers unions, private sector) around the following themes: (i) legal framework of indigenous peoples' rights; (ii) ancestral knowledge and indigenous worldview and the relationship of indigenous peoples with their natural heritage, and (iii) identification of opportunities to reduce inequalities based on gender and age. Two events in Costa Rica</p> <p>Workshops/Meetings to present and validate the ESMP with key stakeholders and Indigenous Peoples territorial authorities (in their territories) and deliver training on the grievance mechanism.</p> <p>Workshops with national authorities to discuss and approve proposals for updating the regulatory framework for preventing non-point source pollution.</p> <p>Workshop costs for IvRM training in Costa Rica and Panama (10 training events with target stakeholders included in the Stakeholder Plan)</p> <p>Training program for the PMU, CBCRS, institutional partners, and local partners (local governments, NGOs, workers unions, private sector) around the following themes: (i) legal framework of indigenous peoples' rights; (ii) ancestral knowledge and indigenous worldview and the relationship of indigenous peoples with their natural heritage, and (iii) identification of opportunities to reduce inequalities based on gender and age. Two events in Panama.</p>	18,600	18,600	18,600	OET
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Training, Workshops, Meetings	<p>79,200.00 TDA Participatory process (informative event): Two participatory workshops with stakeholders identified in the Stakeholders Plan, Gender Action Plan and PPPI to inform about the TDA and collect key information (two events per country) 15% estimated to indigenous peoples - related budget (usd 2000 per event)</p> <p>TDA Participatory process (informative meetings in indigenous territories): Six informative meetings (in each of the indigenous territories to inform about the TDA and collect key information.</p> <p>TDA Participatory process (final presentation and validation): Two national events for TDA Presentation with key stakeholders in each country (as identified in the Stakeholder Plan, the Gender Action Plan, and the PPPI) 15% estimated to indigenous peoples - related budget</p> <p>TDA Participatory process (final presentation meetings in indigenous territories): Six meetings to present TDA results (in each of the indigenous territories)</p> <p>Workshops and/or meetings costs regarding the participative process on gender mainstreaming to prepare and elaborate of proposals for the SAP. (Special considerations regarding specific needs, such as childcare services, will be included under this budget line)</p> <p>Workshops and/or Meetings associated with participative process for SAP elaboration regarding the dialogue processes for SAP discussion with Indigenous Peoples to be defined with the IPCC during first semester of project implementation. An estimation of two events/meeting per territory are foreseen.</p> <p>Potential indigenous participatory, consultative or FPIC process: Meetings costs for needed participative, consultative of FPIC process with indigenous peoples on pilot projects (pilot 1 and 3) final location (unitary cost: \$5,000 for participatory and dialogue process related to consultation and FPIC)</p> <p>Training program for the PMU, CBCRS, institutional partners, and local partners (local governments, NGOs, workers unions, private sector) around the following themes: (i) legal framework of indigenous peoples' rights; (ii) ancestral knowledge and indigenous worldview and the relationship of indigenous peoples with their natural heritage; and (iii) identification of opportunities to reduce inequalities based on gender and age. Two events in Costa Rica.</p> <p>Workshops/Meetings to present and validate the ESMP with key stakeholders and Indigenous Peoples territorial authorities (in their territories) and deliver training on the grievance mechanism.</p> <p>Workshops with national authorities to discuss and approve proposals for updating the regulatory framework for preventing non-point source pollution.</p> <p>Workshop costs for IvRM training in Costa Rica and Panama (10 training events with target stakeholders included in the Stakeholder Plan)</p> <p>Training program for the PMU, CBCRS, institutional partners, and local partners (local governments, NGOs, workers unions, private sector) around the following themes: (i) legal framework of indigenous peoples' rights; (ii) ancestral knowledge and indigenous worldview and the relationship of indigenous peoples with their natural heritage; and (iii) identification of opportunities to reduce inequalities based on gender and age. Two events in Panama.</p>	62,600			62,600		62,600	OET
Training, Workshops, Meetings	<p>8,000.00 Pilot 2. Workshop costs for the reduction of harmful chemicals through training and environmental education with stakeholders included in the Stakeholders Plan, Gender Action Plan and IPP</p> <p>Pilot 1. A training/exchange programme (four events, 2 of them binational) for women to discuss and improve the understanding of Land Management Tools (i.e. micro-corrideros, live fences, protection zones, establishing nurseries of endemic species), their ecosystem services and benefits, and potential risks. 15% estimated to indigenous peoples - related budget</p>	8,000			8,000		8,000	OET
Training, Workshops, Meetings	<p>9,600.00 Workshop on Hydrometeorological monitoring and flood prevention and early warning for 40 participants from Costa Rica and Panama. Two days, equivalent to 80 field mission days</p>			9,600	9,600		9,600	OET
Training, Workshops, Meetings	<p>20,900.00 Project Inception Workshop</p> <p>Organization Binational exchange spaces for women from Panama and Costa Rica to skills and knowledge to accessing the information platform on the Sisaola River Basin on website.</p> <p>Workshop/meeting for monitoring (m&amp;e) safeguards and addressing grievances.</p> <p>Pilot Project Inception Workshop (2) Panama</p> <p>Mid-term review related workshops.</p> <p>Terminal evaluation related workshops.</p>				20,900		20,900	OET
Travel	<p>105,890.00 Travel costs (DSA and ground transportation) for ESMP, IPFF, SESA and ESIA consultants:</p> <ul style="list-style-type: none"> <li>*Travel costs (workshop/meetings) associated with the socializing and training of the grievance mechanism. 10 field mission days.</li> <li>*Travel costs (workshop/meetings) regarding the collection of socioeconomic information. 20 field mission days.</li> <li>*Travel costs (workshop/meetings) regarding the development of the ESIA y SESA. 20 field mission days.</li> <li>*Travel costs (workshop/meetings) regarding the development of the ESMP. 30 field mission days.</li> </ul> <p>Travel costs (DSA and ground transportation) for Groundwater and TDA consultants to gather baseline data and carry out consultations and meetings for preparation of TDA.</p> <ul style="list-style-type: none"> <li>-&gt; 50 field missions days in total.</li> </ul> <p>Travel cost (DSA and ground transportation) for Binational Project Coordinator in oversight of Component 1.</p> <ul style="list-style-type: none"> <li>-&gt; Twenty 2-day trips: \$150/day, during 24 months</li> </ul> <p>Travel cost (only ground transportation) for National Project Specialists to oversee and coordinate logistics of Component 1.</p> <p>Travel cost for policy expert to support municipalities in incorporating the principal findings of the TDA in the Municipal Development Plans and/or Investment Plans in Costa Rica and Panama.</p> <ul style="list-style-type: none"> <li>-&gt; Six 3-day trips: \$120/day, during 9 months</li> </ul> <p>Travel costs (missions) of Binational Project Coordinator and National Specialists to prepare the NSAP for Costa Rica ensuring articulation and participation indicated in the Stakeholder Plan, PPPI and following guidelines from the Gender Action Plan</p> <p>Travel costs (missions) for Binational Project Coordinator and National Specialists to participate on meetings to prepare, share drafts and agree upon SAP.</p> <p>Travel costs (missions) of Binational Project Coordinator and National Specialist regarding the coordination with the Sisaola Binational Commission (initiation of the project, establishment of coordination mechanisms, the IPCC, and other to follow up and maintain a smooth coordination and communication)</p> <p>Travel costs of Binational Project Coordinator and M&amp;E Specialist associated with obtaining consensus on M&amp;E indicators.</p> <p>Travel costs (missions) of Binational Project Coordinator and International Law Expert regarding the strengthening the Sisaola Binational Commission.</p> <p>Travel costs (workshop/events) for the Social and Human Rights Expert regarding the participative process with indigenous people to prepare the SAP in Costa Rica (10 field mission days).</p> <p>Travel costs (workshop/events) regarding the participative process for SAP elaboration with relevant stakeholders as indicated in the Project Stakeholders Plan.</p> <p>Travel costs (workshop/events) regarding the participative process for SAP elaboration on gender mainstreaming, to elaborate of proposals to address issues affecting differently women and/or impact positively their empowerment for IvRM (as identified in the TDA), with target groups and competent institutions.</p> <p>Travel costs (workshop/events) related to the implementation of a binational environmental education plan for IvRM.</p> <p>Travel costs (workshop/events) associated with the implementation of environmental education activities regarding human and environmental health effects of U-POP's emissions.</p> <p>Travel costs (workshop/events) associated with the technical support process to incorporate environmental management of harmful chemicals.</p>	33,360			33,360		33,360	OET



Training, Workshops, Meetings	<p>79,200.00 TDA Participatory process (informative event): Two participatory workshops with stakeholders identified in the Stakeholders Plan, Gender Action Plan and PPPI to inform about the TDA and collect key information (two events per country) 15% estimated to indigenous peoples - related budget (usd 2000 per event)</p> <p>TDA Participatory process (informative meetings in indigenous territories): Six informative meetings (in each of the indigenous territories to inform about the TDA and collect key information.</p> <p>TDA Participatory process (final presentation and validation): Two national events for TDA Presentation with key stakeholders in each country (as identified in the Stakeholder Plan, the Gender Action Plan, and the PPPI) 15% estimated to indigenous peoples - related budget</p> <p>TDA Participatory process (final presentation meetings in indigenous territories): Six meetings to present TDA results (in each of the indigenous territories)</p> <p>Workshops and/or meetings costs regarding the participative process on gender mainstreaming to prepare and elaborate of proposals for the SAP. (Special considerations regarding specific needs, such as childcare services, will be included under this budget line)</p> <p>Workshops and/or Meetings associated with participative process for SAP elaboration regarding the dialogue processes for SAP discussion with Indigenous Peoples to be defined with the IPCC during first semester of project implementation. An estimation of two events/meeting per territory are foreseen.</p> <p>Potential indigenous participatory, consultative or FPIC process: Meetings costs for needed participative, consultative of FPIC process with indigenous peoples on pilot projects (pilot 1 and 3) final location (unitary cost: \$5,000 for participatory and dialogue process related to consultation and FPIC)</p> <p>Training program for the PMU, CBCRS, institutional partners, and local partners (local governments, NGOs, workers unions, private sector) around the following themes: (i) legal framework of indigenous peoples' rights; (ii) ancestral knowledge and indigenous worldview and the relationship of indigenous peoples with their natural heritage; and (iii) identification of opportunities to reduce inequalities based on gender and age. Two events in Costa Rica.</p> <p>Workshops/Meetings to present and validate the ESMP with key stakeholders and Indigenous Peoples territorial authorities (in their territories) and deliver training on the grievance mechanism.</p> <p>Workshops with national authorities to discuss and approve proposals for updating the regulatory framework for preventing non-point source pollution.</p> <p>Workshop costs for IvRM training in Costa Rica and Panama (10 training events with target stakeholders included in the Stakeholder Plan)</p> <p>Training program for the PMU, CBCRS, institutional partners, and local partners (local governments, NGOs, workers unions, private sector) around the following themes: (i) legal framework of indigenous peoples' rights; (ii) ancestral knowledge and indigenous worldview and the relationship of indigenous peoples with their natural heritage; and (iii) identification of opportunities to reduce inequalities based on gender and age. Two events in Panama.</p>	62,600			62,600		62,600	OET
Training, Workshops, Meetings	<p>8,000.00 Pilot 2. Workshop costs for the reduction of harmful chemicals through training and environmental education with stakeholders included in the Stakeholders Plan, Gender Action Plan and IPP</p> <p>Pilot 1. A training/exchange programme (four events, 2 of them binational) for women to discuss and improve the understanding of Land Management Tools (i.e. micro-corrideros, live fences, protection zones, establishing nurseries of endemic species), their ecosystem services and benefits, and potential risks. 15% estimated to indigenous peoples - related budget</p>		8,000		8,000		8,000	OET
Training, Workshops, Meetings	<p>9,600.00 Workshop on Hydrometeorological monitoring and flood prevention and early warning for 40 participants from Costa Rica and Panama. Two days, equivalent to 80 field mission days</p>			9,600	9,600		9,600	OET
Training, Workshops, Meetings	<p>20,900.00 Project Inception Workshop</p> <p>Organization Binational exchange spaces for women from Panama and Costa Rica to skills and knowledge to accessing the information platform on the Sisaola River Basin on website.</p> <p>Workshop/meeting for monitoring (m&amp;e) safeguards and addressing grievances.</p> <p>Pilot Project Inception Workshop (2) Panama</p> <p>Mid-term review related workshops.</p> <p>Terminal evaluation related workshops.</p>				20,900		20,900	OET
Travel	<p>105,890.00 Travel costs (DSA and ground transportation) for ESMP, IPFF, SESA and ESIA consultants:</p> <ul style="list-style-type: none"> <li>*Travel costs (workshop/meetings) associated with the socializing and training of the grievance mechanism. 10 field mission days.</li> <li>*Travel costs (workshop/meetings) regarding the collection of socioeconomic information. 20 field mission days.</li> <li>*Travel costs (workshop/meetings) regarding the development of the ESIA y SESA. 20 field mission days.</li> <li>*Travel costs (workshop/meetings) regarding the development of the ESMP. 30 field mission days.</li> </ul> <p>Travel costs (DSA and ground transportation) for Groundwater and TDA consultants to gather baseline data and carry out consultations and meetings for preparation of TDA.</p> <ul style="list-style-type: none"> <li>-&gt; 50 field missions days in total.</li> </ul> <p>Travel cost (DSA and ground transportation) for Binational Project Coordinator in oversight of Component 1.</p> <ul style="list-style-type: none"> <li>-&gt; Twenty 2-day trips: \$150/day, during 24 months</li> </ul> <p>Travel cost (only ground transportation) for National Project Specialists to oversee and coordinate logistics of Component 1.</p> <p>Travel cost for policy expert to support municipalities in incorporating the principal findings of the TDA in the Municipal Development Plans and/or Investment Plans in Costa Rica and Panama.</p> <ul style="list-style-type: none"> <li>-&gt; Six 3-day trips: \$120/day, during 9 months</li> </ul> <p>Travel costs (missions) of Binational Project Coordinator and National Specialists to prepare the NSAP for Costa Rica ensuring articulation and participation indicated in the Stakeholder Plan, PPPI and following guidelines from the Gender Action Plan</p> <p>Travel costs (missions) for Binational Project Coordinator and National Specialists to participate on meetings to prepare, share drafts and agree upon SAP.</p> <p>Travel costs (missions) of Binational Project Coordinator and National Specialist regarding the coordination with the Sisaola Binational Commission (initiation of the project, establishment of coordination mechanisms, the IPCC, and other to follow up and maintain a smooth coordination and communication)</p> <p>Travel costs of Binational Project Coordinator and M&amp;E Specialist associated with obtaining consensus on M&amp;E indicators.</p> <p>Travel costs (missions) of Binational Project Coordinator and International Law Expert regarding the strengthening the Sisaola Binational Commission.</p> <p>Travel costs (workshop/events) for the Social and Human Rights Expert regarding the participative process with indigenous people to prepare the SAP in Costa Rica (10 field mission days).</p> <p>Travel costs (workshop/events) regarding the participative process for SAP elaboration with relevant stakeholders as indicated in the Project Stakeholders Plan.</p> <p>Travel costs (workshop/events) regarding the participative process for SAP elaboration on gender mainstreaming, to elaborate of proposals to address issues affecting differently women and/or impact positively their empowerment for IvRM (as identified in the TDA), with target groups and competent institutions.</p> <p>Travel costs (workshop/events) related to the implementation of a binational environmental education plan for IvRM.</p> <p>Travel costs (workshop/events) associated with the implementation of environmental education activities regarding human and environmental health effects of U-POP's emissions.</p> <p>Travel costs (workshop/events) associated with the technical support process to incorporate environmental management of harmful chemicals.</p>	33,360			33,360		33,360	OET



**ANNEX F: (For NGI only) Termsheet**

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

**ANNEX G: (For NGI only) Reflows**

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

**ANNEX H: (For NGI only) Agency Capacity to generate reflows**

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).