TERMINAL EVALUATION OF THE UNDP GEF PROJECT 83398

INTEGRATED WATER RESOURCES MANAGEMENT IN THE PUYANGO-TUMBES, CATAMAYO-CHIRA AND ZARUMILLA TRANSBOUNDARY AQUIFERS AND RIVER BASINS

Alex Pires

June 2020

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Title of UNDP supported GEF financed project:
Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Transboundary Aquifers and River Basins

UNDP Ecuador project ID# 00091894

UNDP Peru project ID# 00092113

GEF project ID# 08898

Evaluation time frame and date of evaluation report: From February 28 to June 18 2020

Region and countries included in the project:
Latin American and the Caribbean - Ecuador and Peru

GEF Operational Program/Strategic Program: International Waters

Implementing Partner and other project partners:
The National Water Secretariat of Ecuador (SENAGUA) and
The National Water Authority of Peru (ANA)

Evaluation consultant: Dr. Alex Pires (alexpires.br@gmail.com) LinkedIn: /alexpires

Cover photo: Chira River at Zapotillo canton in the border of Ecuador-Peru (Catamayo-Chira Basin) / Photo Credit: PCU 2019

Note: This TE was done remotely due to COVID-19 travel restrictions

ACKNOWLEDGEMENTS

This Terminal Evaluation was prepared for the UNDP by Alex Pires, as the Independent Evaluator. I would like, first of all, to thank Sebastián Izquierdo, Lorena Vargas, Jorge Álvarez, Carlos Montenegro and Ana María Núñez for their relevant support to the work, very often going well beyond the call of duty to ensure success.

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ii. EXECUTIVE SUMMARY

Project Summary Table

Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Transboundary Aquifers and River Basins

GEF Project ID:	83398		*at endorsement (Million US$)*	*at completion (Million US$)*
UNDP Project ID:	UNDP Ecuador: 91894 UNDP Perú: 92113	GEF financing:	**3,960,000**	
Country:	Ecuador - Perú	IA/EA own:	BIN / EC 2´625.000 PERÚ 1´335.000	2´073,939,90 916.599,03
Region:	Latin America and the Caribbean	Government:	Bin / EC 10´000.000 Perú: 10´000.000	5.000.000 5.000.000
Focal Area:	Energy and Environment Management for Sustainable Development	Other:	ECUADOR 104.100 track y ART 132.500 capnet PERÚ 114.500 132.500 capnet	 48.022,92 0,00 0,00 0,00
FA Objectives, (OP/SP):	OP5	Total co-financing:	20´483.600	10,048.022,92
Executing Agency:	Secretariat of Environmental Policy, Climate Change and Sustainable Development (SPACCyDS, for its Spanish acronym), Ministry of Environment and Sustainable Development (MAyDS) National Authority of Water (ANA in Peru)	Total Project Cost:	24´443.600	13´038.561,85
Other Partners involved:	National Institute of Agricultural Technology (INTA); Government of the provinces of Chaco, Formosa, Entre Ríos and Misiones Ministry of Environment (MINAM)	ProDoc Signature (date project began):		24/08/2015
		(Operational) Closing Date:	Proposed: 31/08/2019	Actual: 30/06/2020

Brief Project Description

The project was designed to strengthen the institutional, policy, legal and scientific-technical capacities to implement Integrated Transboundary Water Resources Management in Puyango-Tumbes, Catamayo-Chira and Zarumilla River Basins and Aquifers, integrating climate variability concerns. The project aims to enhance binational efforts of Peru and Ecuador for Integrated Transboundary Water Resources Management (ITWRM) in the three main aquifers and basins shared by the two countries in the Pacific Ocean drainage basin — Puyango-Tumbes, Catamayo-Chira and Zarumilla. It was expected to give special attention to integrating groundwater concerns and opportunities and extreme manifestations of climate variability and change in the area. The aquifers and linked river basins "Zarumilla", "Puyango-Tumbes" and "Catamayo-Chira" contain an important, but often highly variable, water supply that is essential to the region´s socio-economic development and to the integrity of its ecosystems. These resources are threatened by overexploitation, pollution and inefficient management, as well as by climate variability and change.

The project followed a three-pronged approach consisting of improving the common understanding of these shared water resources and their environmental and socioeconomic status; strengthening institutional capacities and cooperation mechanisms between the two countries sharing these aquifers and basins; and applying and disseminating IWRM demonstrations in targeted site interventions. The project had a strong emphasis on capacity development and, through the TDA/SAP process, was expected to support countries in the identification of the required legal, policy and institutional reforms that could deliver global, regional and national environmental benefits. The project applied the most recently validated GEF International Waters Transboundary Diagnostic Analysis (TDA) and Strategic Action Programme (SAP) methodology to achieve project objectives and outcomes.

The Project start date was August 24, 2015 and it was originally planned to close at August 31, 2019. The project execution required one no cost extension, and currently it is planned to close on June 30, 2020. The total original budget of the project was US $ 24,443,600, of which US $ 3,960,000 (16%) was in the form of a grant from the GEF and the rest was co-financing from project partners. The Executing Agencies were the National Water Authority (ANA) in Peru, and the National Water Secretariat (SENAGUA) in Ecuador. UNDP was the Implementing Agency.

Evaluation Rating Table

1. Monitoring and Evaluation	*rating*	*2. IA & EA Execution*	*rating*
M&E design at entry	*MU*	*Quality of UNDP Implementation*	*MS*
M&E Plan Implementation	*S*	*Quality of Execution - Executing Agency*	*MS*
Overall quality of M&E	*MS*	*Overall quality of Implementation / Execution*	*MS*
3. Assessment of Outcomes	*rating*	*4. Sustainability*	*rating*
Relevance	*R*	*Financial resources*	*ML*
Effectiveness	*S*	*Socio-political*	*MU*
Efficiency	*MS*	*Institutional framework and governance*	*MU*
Overall Project Outcome	*S*	*Environmental*	*ML*
Impact	*S*	*Overall likelihood of sustainability*	*MU*

Note - Ratings are: Highly Unsatisfactory (HI), Unsatisfactory (U), Moderately Unsatisfactory (MU), Moderately Satisfactory (MS), Satisfactory (S) and Highly Satisfactory (HS) /Relevance ratings are: Relevant (R) or Not Relevant (NR) / Sustainability ratings are: Unlikely (U), Moderately Unlikely (MU), Moderately Likely (ML) and Likely (L) / Impact ratings are: Significant (S), Minimal (M) and Negligible (N).

Summary of conclusions, recommendations and lessons

The evaluation identified eight recommendations for the design, implementation, monitoring and evaluation of GEF IW projects. These recommendations are in relation to: knowledge management, communication, stakeholder engagement, replication and scaling up, links with other interventions, risk management, implementation plan, and guidelines for co-finance.

Fourteen follow up actions are proposed aiming to reinforce initial benefits from the project and to keep in motion the change process generated by the project:

1. *To build a proposal for the second phase of the project*
2. *To measure the impact of the capacity building activities*
3. *To implement the management models for W&S*
4. *To follow up the construction of Paimas' WWTP*
5. *To commit to declaring four water protection zones*
6. *To foster the gender approach on the follow-up actions*
7. *To inform readers about some limitations of TDA and SAPs*
8. *To work toward the endorsement of the SAPs and NAPs*
9. *To put in place a targeted knowledge sharing strategy*
10. *To increase inter-ministerial engagement with project outcomes, especially SAPs and NAPs*
11. *To promote the implementation of SAPs and NAPs, and to leverage sources at scale*
12. *To continue working on the intersectional period*
13. *To engage key stakeholders on the construction of the exit strategy, and design for second phase (PIF/ProDoc)*
14. *To continue supporting the work of the Binational Commission for IWRM of the transboundary river basins between Ecuador-Peru*

Two proposals for future direction underline the main objectives of the project are presented in this TE report. The first proposal is to increase the integrate approach of ecosystem-climate-land-water-livelihoods. It is composed of six recommendation related to: i) integrated natural resources management; ii) source-to-sea approach; iii) poverty-environment nexus; iv) mining and agriculture; v) climate change; and v) the economic value of ecosystems. The second proposal is to take to the next level relevant processes already taking place at the basin. It is also composed of six recommendation related to: i) hydrogeological studies; ii) gender approach; iii) capacity development; iv) ITWRM framework; v) engagement of key stakeholders; and vi) mainstreaming of SAPs and NAPs.

This evaluation extracted relevant lessons and presented three best practices and two opportunities for improvements (worst practices). These lessons highlight strengths or weaknesses in preparation, design, and implementation that affect performance, outcome, and impact. The opportunities for improvements are related to: i) the relevance of the assessing capacity of the executing partners and major stakeholders with active role in the project; and ii) the need to provide to the PCU staff and key EA personal capacity building and training for the on the management of a GEF PNUD IW project. The best practices highlighted on this TE are: i) the project adopted management arrangements that promoted strong country ownership; ii) due to the complexity of ITWRM the project partners continue working together; and iii) water can be an element of cooperation and helps to build peace.

The evaluation recognizes the effort and dedication of the project partners to design and implement this project. This GEF Project should be seen as a first phase of a long and complex work toward the integrated and sustainable management of the transboundary water resources of the Puyango-Tumbes, Catamayo-Chira and Zarumilla river basins and aquifers.

iii. LIST OF ACRONYMS AND ABBREVIATIONS

ANA	Autoridad Nacional de Agua (National Water Agency)
APPR	Annual Project Performance Report
CAF	Coorporación Andina de Fomento
CPAP	UNDP Country Programme Action Plan
COs	UNDP Country Offices
EA	Executing Agency
GEF	Global Environment Facility
GIRHT	Gestión Integral de Recursos Hídricos Transfronterizos (ITWRM)
GCF	Green Climate Fund
HQ	Head Quarter
IA	Implementing Agency
IDB	International Development Bank
IUCN	International Union for Conservation of Nature
IRAGER	Instituto Regional de Apoyo a la Gestión de los Recursos Hídricos
IW	International Waters
IWRM	Integrated Water Resources Management
IWTT	International Waters Tracking Tool
LAC	Latin America and the Caribbean
ITWRM	Integrated Transboundary Water Resource Management
M&E	Monitoring and Evaluation
M&R	Monitoring and Reporting
MTE	Mid-Term Evaluation
MTS	Medium Term Strategy
NAP	National Action Plan
NGO	Non-Governmental Organization
NCI	Naturaleza y Cultura Internacional
PC	Project Coordinator
PCU	Project Coordination Unit
PIF	Project Identification Form
PIR	Project Implementation Review
ProDoc	Project Document
RTA	Regional Technical Adviser
QPR	Quarterly Progress Reports
SAP	Strategic Action Program
SC	Steering Committee
SMART	Specific, Measurable, Assignable, Realistic and Time-specific
SENAGUA	Secretaría Nacional de Agua (National Secretary of Water)
TDA	Transboundary Diagnostic Analysis

TE	Terminal Evaluation
ToC	Theory of Change
ToR	Terms of Reference
UNDAF	UN Development Assistance Framework
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
W&S	Water and Sanitation
WB	World Bank
WOGP	Water and Ocean Governance Programme
WWTP	Waste Water Treatment Plant

1. INTRODUCTION

Purpose of the Evaluation

1. In accordance with the 'Guidance for Conducting Terminal Evaluation of UNDP-supported, GEF-financed Projects', this Terminal Evaluation (TE) had the following purposes:
   - 'To promote accountability and transparency, as well as to assess and disclose the extent of project accomplishments.
   - To synthesize lessons that can help to improve the selection, design, and implementation of future GEF (Global Environmental Facility)-financed activities implemented by United Nations Development Programme (UNDP).
   - To provide feedback on issues that are recurrent across the UNDP portfolio and need attention, and on improvements regarding previously identified issues.
   - To contribute to the overall assessment of results in achieving GEF strategic objectives aimed at global environmental benefit.
   - To gauge the extent of project convergence with other United Nations (UN) and UNDP priorities, including harmonization with other UN Development Assistance Framework (UNDAF) and UNDP Country Programme Action Plan (CPAP) outcomes and outputs.'
2. The evaluation also had the aim to contribute to two relevant processes that were taking place at the same time of this evaluation: i) the construction of the exit strategy of this GEF intervention, and ii) the development of the PIF (Project Identification Form) for a second phase of the project.

Scope & Methodology

3. This TE was done according to the guidance, rules, and procedures established by UNDP and GEF, as reflected in the UNDP Evaluation Guidance for GEF Financed Projects. The evaluation was conducted based on sound principles of integrity, honesty, confidentiality, systematic inquiry, and cultural sensitivity.
4. The evaluation provides credible, reliable, useful, and relevant evidence-based information using triangulation methods for validating findings. The evaluation adopted a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Offices (COs), project team, Executing Agencies (EAs), UNDP GEF Regional Technical Adviser (RTA) based in the region and key stakeholders. This TE was done remotely due to COVID-19 travel restrictions. The evaluation was framed using the criteria of relevance, effectiveness, efficiency, monitoring and evaluation implementation, impact, and the likelihood that the results can be sustained.
5. The evaluation involved four stages of data collection using both primary and secondary methods:
   A. Preparation – Inception Phase: initial desk review, production of the Inception Report with its evaluation criteria matrix and introductory meetings with project staff
   B. Data Collection: Desk review, Stakeholders' interviews, Surveys, and Presentation on initial findings
   C. Draft Evaluation Report: Data Analysis-Triangulation and Report-writing
   D. Final Evaluation Report: Final review and 'audit trail' on the received comments

Phase A – Preparation

6. All relevant sources of information were reviewed, including the project document, project reports, project budget revisions, progress reports, GEF focal area tracking tools, project files, Midterm Evaluation (MTE) report, national strategic and legal documents, and as many other useful materials available for this evidence-based assessment. See Annex 3 “Documents Consulted”.

7. Inception meetings, via teleconference, were carried out with the participation of the major stakeholders, including UNDP Country Offices, project team, and Steering Committee members. During the inception phase, the evaluation consultant conducted introductory interviews with project staff and exchanged messages (e-mail and instant messaging application, specially WhatsApp) with key project partners.

8. The Inception Report was approved on March 06, 2020. It indicated how each evaluation question was going to be addressed according to the evaluation criteria matrix (see Annex 4 “Evaluation Criteria Matrix”). This report described the evaluation methods, the sources of data, and the data collection procedures. It also included the schedule of tasks, activities, and deliverables.

Phase B –Data Collection

9. The data collection phase happened between March 06 and April 28, 2020. The declaration of the **Covid-19** pandemic by the World Health Organization on March 11th and the closure of the boarders of Ecuador and Peru affected the evaluation mission planned for late March / early April. The evaluation consultant, the Project Coordination Unit (PCU), UNDP COs and RTA agreed on a strategy to mitigate the impact of the cancelation of the evaluation mission. The evaluation methodology was adapted according to the guidance of UNDP Independent Evaluation Office *“Evaluation planning and implementation during Covid-19”*.

10. The adjustments on the evaluation methods aimed at guaranteeing the principals of the evaluation, its utility for the target audience, and the commitment to quality and the schedule. To do so, it was necessary to increase the emphasis on desk reviews and conduct all stakeholder meetings virtually. This strategy-shift allowed to increase the number of interviews with key actors: from around 40 actors initially planned to 64 actors interviewed. The communication strategy with the stakeholders was adapted according to the platform (i.e. Skype, WhatsApp, Zoom and phone call) that was most suitable to each stakeholder. Because these interviews were carried out at home, interviewees engaged in a more relaxed and easygoing conversation with the evaluation consultant than it would have been in a work environment, potentially increasing the flow, quality, frankness and usefulness of the information provided.

11. Likewise, extending the desk review process guaranteed a proper analysis of socio-economic-environmental-political-cultural conditions of the project area. There was an increment of about 20% in the number of documents analyzed. Videos, photographs, and satellite images were exhaustedly reviewed with google maps and google earth tools. These tools were used instead of field visit in the pilot sites as an adaptation measure due to the restrictions imposed by the pandemic. The project partners considered that with these adaptations and due to the active engagement of the people consulted (who contributed significantly to this process), the data collection was done properly, guaranteeing the principals of integrity, honesty, confidentiality, systematic inquiry and cultural sensitivity, as well as the quality and usefulness of the evaluation.

12. In total, sixty-four **people were consulted** during this evaluation (see Annex 2 “Individuals Consulted”). The criteria for the selection of interviewees considered the role they played in the project and their availability/interest in contributing to the evaluation. The evaluation aimed to

include, as much as possible, an appropriate representation of **gender** and social groups: 50% of the interviewees were female, and all stakeholders' groups involved in the project were interviewed, including academics, NGOs, local governments, local farmers, and local communities. All responses from interviewees were treated in confidence, with anonymity maintained.

13. **Individual and in-group interviews** were carried out with project implementing and executing agencies, representatives of the countries, members of the Project team, national and local government officials, relevant project partners, project beneficiaries, as well as key actors involved in Integrated Water Resources Management. The interview protocols, questionnaires and the selection of the interviewees were carried out using the evaluation criteria matrix (annex 4).
14. **Semi-structured interview protocols and questionnaires** were designed for each interview and used as initial guidance. The interviewer aimed to build trust and make the interviewee feel as comfortable as possible. Interviews started with an opening question, followed by a limited number of questions, allowing the interviewer to adapt during the meeting and avoid long interviews. A thank you e-mail was sent after the interviews with the commitment to send a copy of the TE report once it is published.
15. The **methodology for data** collection and triangulation was based on three categories of information/sources: a) in-depth interviews with project stakeholders, b) structured surveys and c) exhaustive desk review of documents. Both quantitative and qualitative evaluation methods were adopted to contrast project achievements with expected outputs, outcomes, and impacts.
16. **Structured surveys** were used, with a limited number of key stakeholders, in a late stage of the data collection. These stakeholders were invited to answer a simple electronic survey, with 5 to 6 questions, using a MS Word document sent by e-mail. The surveys were used to widen the collected data and to validate some project findings.
17. By the end of the data collection phase (April 28, 2020), the evaluation consultant delivered by Zoom a **presentation with the initial findings**, with the participation of major stakeholders of the project. This process helped to enhance the participation of the project team, who acted as a mean to ensure all information sources had been accessed, providing an opportunity to verify emerging findings.

Phase C – Draft Evaluation Report

18. **Data analysis** involved transcribing, translating, coding, and organizing the findings according to a thematic analysis approach. Data were triangulated using all available sources to provide evidence for the evaluation. The evaluation sought to identify not only what happened in the project but, where possible, to explain underlying issues influencing why it happened, by exploring various complex dynamics related to project performance and presenting diverse perspectives about project challenges and successes. The evaluation took into consideration the baseline conditions, trends, and counterfactuals of the intended project outcomes and impacts.
19. Data analysis was conducted in a **systematic manner** ensuring that findings, conclusions, and recommendations were substantiated by evidence. Appropriate tools were used to ensure proper analysis, including a data analysis matrix whose entries were recorded for each evaluation question/criteria, information, and data collected from different sources.
20. An assessment of **project performance** of the expectations set out in the Project Logical Framework/Results Framework was carried out: 30 indicators, 3 outcomes and 1 general objective were assessed. The evaluation covered the criteria of relevance, effectiveness,

efficiency, sustainability, and impact. Ratings were provided on these performance criteria according to UNDP guidelines.

21. The evaluation also assessed the **key financial aspects** of the project, including the extent of co-financing planned and realized. Project cost and funding data were analyzed. Planned annual and actual expenditures were assessed and explained. Results from the two financial audits were taken into consideration. The evaluator consultant counted with the assistance of the Project Team to obtain financial data to complete the co-financing table (see Table 1).

22. The evaluation assessed the extent to which the project was successfully mainstreamed with countries' environmental priorities, and other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender. It also assessed the extent to which the project is moving towards the achievement of its planed impacts.

23. The draft TE **report** was written following the UNDP guidelines and templates, including the outline described at the Terms of Reference (ToR) for the consultancy and the 'Guidance for Conducting Terminal Evaluation of UNDP-supported, GEF-financed Projects'. The draft TE report was submitted on May 08, 2020.

Phase D – Final Evaluation Report

24. The draft TE report was circulated to major project stakeholders, including SC members, GEF Operational Focal Points of both countries, UNDP COs and UNDP RTA aiming to receive their comments. The comments were registered on a TE Comment Matrix. On June 09, 2020 the comments on the draft report were received from the UNDP CO. They were processed and the evaluation consultant produce the new version of the TE report (Final Evaluation Report) and provided an 'audit trail', detailing how all received comments have and have not been addressed in the final evaluation report. The Final TE report was submitted on June 18, 2020.

Structure of the evaluation report

25. At the beginning of the report the reader can find the executive summary and other pretextual elements. The body of the report is structured in four sections: 1. Introduction (this current section), 2. Project description and development context, 3. Findings and 4. Conclusions, Recommendations and Lessons. Section 2 presents basic information of the project, including the problems it seeks to address, and its immediate and development objectives. Section 3 "Findings" is composed of three sub-sections: 3.1 Project Design, 3.2 Project Implementation and 3.3. Project Results. The last section of the report presents proposals for corrective actions, best practices, actions to reinforce initial benefits from the project, and proposals for future directions. The report also has a set of annexes.

2. PROJECT DESCRIPTION AND DEVELOPMENT CONTEXT

Project start and duration

26. The GEF UNDP project '*Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Transboundary Aquifers and River Basins'* (hereafter called 'the project', 'the GEF project', or 'the 3 Basins project'[1]) was approved for implementation on December 11, 2014, started on August 24, 2015 and it was originally planned to close at August 31, 2019 (48 months). The MTE took place from August to October 2018. The project execution required one no-cost extension to close on June 30, 2020. Due to the Covid-19 crises the project partners are currently negotiating a second no-cost extension.

Problems that the project sought to address

27. According to the Project Document (ProDoc), the GEF intervention sought to ensure the conservation, restoration and integrated management of surface and groundwater resources including maintenance of ecological flows, associated with the water cycle in the Puyango-Tumbes, Catamayo-Chira and Zarumilla river basins. The project aimed to address three major problems: a) deficiencies in water resource knowledge and its environmental status; b) institutional deficiencies related to Integrated Transboundary Water Resource Management (ITWRM); and c) insufficient demonstration of appropriate practices and technologies for reducing negative impacts from anthropic activities in the watersheds and aquifers.

Immediate and development objectives of the project

28. The immediate objective of the project was to strength institutional, policy, legal and scientific-technical capacities to implement ITWRM in Puyango-Tumbes, Catamayo-Chira and Zarumilla River Basins and Aquifers, integrating climate change and variability concerns.

29. The Project was expected to contribute to development objectives, under the UNDAF, related to environmental sustainability in Peru and Ecuador:

    - Ecuador: UNDAF 2015-2018 Outcome 5 - relevant public institutions and local stakeholders have strengthened skills and tools to ensure their rights to a healthy and safe environment and environmental sustainability, including biodiversity conservation, integrated natural resource management and environmental management.
    - Peru: UNDAF 2012-2016 Outcome 4 - the state, with the participation of civil society, the private sector, scientific and academic institutions, will have designed, implemented and/or strengthened policies, programs and plans focusing on environmental sustainability, for the sustainable management of natural resources and biodiversity conservation

30. The project aimed to contribute to GEF International Waters Focal Area Objective IW-3 ‘Support foundational capacity building, portfolio learning, and targeted research needs for joint, ecosystem-based management of trans-boundary water systems’.

Baseline Indicators established

31. At an early stage of project implementation, it was identified that the indicators and baselines defined at ProDoc were not SMART (Specific, Measurable, Achievable, Relevant and Time-bound). The PMU adjusted the logical framework which was reviewed by UNDP COs and government technical teams and approved by the Steering Committee in May 2017 (see detailed information at section 3.2).

Main stakeholders

32. The main stakeholders involved in the project were: ANA (National Water Agency), Executing Agency for Peru; SENAGUA (National Secretary of Water), Executing Agency for Ecuador; UNDP, through its COs of Peru, Ecuador and Regional Center; and the Ministries of Foreign Affairs and the Ministries of the Environment of both countries, Ecuador and Peru. In addition, local governments, users’ organizations and communities were expected to participate during the implementation of the pilot projects. The ProDoc indicated other relevant stakeholders that were expected to have a role on the project implementation, including Binational Commission for the Management of the Zarumilla River basin; Ministry of Agriculture and Irrigation (Peru); Ministry of Agriculture, Aquaculture, Livestock Ranching and Fisheries (Ecuador); National Institute of Meteorology and Hydrology (Ecuador); Public Service for Hydrogeological Information (Peru); both the Tumbes and the Chira Piura Water Resources Basin Councils in Peru; National Universities of Piura, Tumbes and Loja; private sector and NGOs.

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transboundary basins'; and Output 2.4. Capacity Building 'Targeted capacity building for national and local stakeholders strengthens implementation of ITWRM and related decision-making'.

39. **Outcome 3. 'Pre-SAP demonstrations** in IWRM implemented and investment needs identified' was expected to be reached by the delivery of four outputs: Output 3.1 'Pilot projects established in Ecuador to promote ITWRM by controlling pollution from multiple sectors and increasing water access in Catamayo-Chira & Zarumilla river basins'; Output 3. 2 'Pilot projects established in Peru to promote ITWRM by reducing pollution from multiple sectors and increasing water access in Catamayo-Chira, Puyango-Tumbes and Zarumilla river basins'; Output 3.3 'Knowledge management and dissemination increase uptake of best practices'; and Output 3.4 'Pre-feasibility studies identify investments required for ITWRM in the three shared basins during SAP implementation'.

40. In general terms, the project objectives and components were clear, practicable and feasible within its time frame. But some consideration should be made regarding the results framework. For Output 1.1 Hydrological studies, the project did not consider the actual complexity of studies of this nature (i.e. uncertainties in observing methods) and evidence indicates that the budget was underestimated. A participatory development, validation, and adoption by diverse stakeholders of a binational TDA/SAP (Outputs 1.2 and 2.1, respectively) usually requires more time and resources than the ones originally allocated in the project. The pilot projects in Ecuador and Peru (Outputs 3.1 and 3.2, respectively) were also dependent on co-finance and close coordination with stakeholders (such as local governments, and other governmental institutions). Although this close coordination increased local ownership it led to some delays on the implementation. In 2017, these outputs and their indicators were adjusted to consider better the specific context of the selected sites. In the design phase the definition of the pilot projects was very specific (each pilot project had a kind of sub-project), but no agreement was signed with the relevant institution that would act as executing partners (i.e. Loja local government). In part due to the long time between project design and actual implementation of the project (more than a couple of year), many changes happened (i.e. some potential partners identified in the ProDoc did not show interest/capacity to actually collaborate to the implementation of the pilot projects – see in table 4). It is relevant to consider strategies to minimize this risk. Among them there could be considered: to guarantee that all agreements necessary for the pilot project were in place by project approval and keep this relationship monitored/managed between project design and it's in caption; or at ProDoc just briefly indicate the expected results of the pilot projects and leave the definition of details for the inception phase.

41. The project was built with foundational blocks of GEF-5 IW principles. It was expected that the development of a TDA would facilitate agreement on key transboundary concerns, and the development of SAPs would serve as high-level political agreements on shared commitments for joint actions and cooperation mechanisms. The project would foster local pilot demonstrations addressing priority transboundary issues to replicate and scale-up. The project would integrate surface and groundwater, taking into consideration climatic variability and change. The project also would increase national and binational capacities in IWRM, facilitate the establishment of National Inter-ministerial Committees, establish/strengthen Binational Commissions for management of the 3 shared basins and promote knowledge management.

42. The ProDoc described the project's logic, including the main environmental problems, their causes, and barriers. But the ProDoc did not present a robust and clear rationale description of the change process that the project was expected to generate. A Theory of Change was not produced at ProDoc nor at MTE. The 3 Basins project was design under GEF-5 guidelines. Back then it was not necessary to develop a **Theory of Change** (ToC) and the project adopted a results framework. ToC is a method and an approach that, in recent years, has been increasingly used for designing and monitoring development interventions. A ToC of the project

intervention was constructed by the evaluation consultant (Figure 2). The ToC of the 3 Basin project described the processes of change by outlining the causal pathways from outputs (goods and services delivered by the project) through direct outcomes (changes resulting from the use of outputs by key stakeholders) towards expected impact (environmental benefits target by the project). Changes are mapped as a set of interrelated pathways, showing a credible sequence of events that includes major barriers and enablers to transformation. The construction of a Theory of Change at the inception of the ITWRM project could have contributed to increase the efficiency, effectiveness, sustainability, and impact of the intervention.

Assumptions and Risks

43. Nine assumptions and eight risks were set out in the ProDoc. Five were considered low risk and three medium risk. They were classified as financial, strategic, operational, political, and regulatory risk. Managing risks should had been an integral part of the project design, instead the risk assessment was superficial and did not reflect the complex nature and interrelated transboundary mechanisms of this intervention. A proper risk assessment should have considered a risk matrix, including both the likelihood of the event and the potential impact on the project. It also should have included hazards identification, vulnerability and exposure assessment, and a solid mitigation plan integrated into the core of project design.

44. At ProDoc, political and institutional risks inside and outside the project's sphere of influence were not comprehensively identified and the mitigation strategies were weak. For example, political changes and staff turnovers were underestimated, they were only considered as medium risk. It proved to be of high risk / high likelihood of concurrency and generated high impact in the project implementation (see paras 63 and 95). The ProDoc lacked to properly allocated resources to give a robust response to the most relevant risks.

45. The risk of lack of participation of actors in the development of the TDA/SAP was also not identified properly. In general, the stakeholders should be properly motivated and mobilized to voluntarily participate in diagnostic and planning processes. This proved to be one of the factors that impacted the development of the technical products of the project.

46. External shocks, such as global economic crises and diseases outbreaks, were not identified at the ProDoc, consequently, there was no mitigation plan in the case of their occurrence. Risk in relation to climate variability and change was mentioned in the ProDoc as an element to be considered in the planning process (i.e. TDA/SAP). The climate risks associated with the pilot projects were not identified at project-design.

47. Optimistic assumptions set out on the ProDoc, such as the preexistence of capacities and articulation between ANA and SENAGUA to implement a multi-country GEF project, were identified in the MTE as one of the factors that contributed to the slow start of the project. The creation, at the inception phase, of a 'favorable environment for cooperation and teamwork between two institutions' should be a key element at project design.

Lessons from other relevant projects incorporated into project design

48. The incorporation of lessons from other relevant projects was not explicitly described in the ProDoc. Nevertheless, it is noticed that the 3 Basins project draw on the lessons learned from GEF IW portfolio: such as TDA-SAP, surface and ground water integration, demonstrative pilot projects, communication and capacity building activities, Inter-Ministerial Committee, and participation of diverse stakeholders. Other lessons and recommendations from prior projects, such as inception strategies for fast start, strengthening of project team and actions toward the mitigation of impact regarding the turnover of partners and project staff, if incorporated into

project design would have brought more effectiveness and efficiency at the project implementation stage.

Planned stakeholder participation

49. ProDoc identify and briefly described a diverse range of stakeholders with active roles in the project (more than 50 institutions at binational, national, regional, and local levels – see para. 32, and 63 to 69). Nevertheless, their capacities for the execution of the project were not assessed at project design. For several of them, their expected role and responsibilities on the project implementation was indicated, but for most of them, the partnership arrangements were not described in detail nor established prior project approval.

Replication approach

50. At project design, no replication strategy was developed. The ProDoc did not assign resources, indicated activities, or proposed instruments to foster lessons learned and replicate best practices derived from the project. The Replicability was addressed at ProDoc as a consequence of achieving the Outcomes 2 and 3, and it highlighted the relevance of Output 3.3 '*key element of the project's replication strategy'*. Nevertheless, these considerations cannot be sufficient nor effective at achieving replicability, especially considering the nature and relevance of the ITWRM project.

UNDP comparative advantage

51. The comparative advantages of UNDP were well described at the ProDoc. In 2015, UNDP had one of the largest GEF IW portfolio, specifically for developing and implementing TDAs and SAPs. The ProDoc indicated that UNDP's Water and Ocean Governance Programme (WOGP) had a wide range of staff with expertise in water resources management at HQ, in its Regional Centers, and through its network of Country Offices. In addition, UNDP had been working on the implementation of several GEF IW projects, strengthening or establishing 20 river, lake basin and marine/coastal management agencies or commissions. Furthermore, UNDP hosts Cap-Net, a relevant international network for capacity development in sustainable water management, which was expected to support the project with in-kind co-finance. UNDP's experience on transboundary water governance was also strengthened by the integration of UNDP WOGP with its GEF International Waters cluster, and also by the parallel full integration of the UNDP Water Governance Facility at the Stockholm International Water Institute with UNDP's corporate water and ocean governance activities. The ProDoc states that UNDP RTA and UNDP Principal Technical Advisor for Water and Ocean Governance Programme would be directly supporting the project.

52. The ProDoc also indicated several competitive advantages regarding UNDP country offices in Ecuador and Peru. In total, four Specialists/Experts on environment (two per country) would provide technical support, and two Program Associates (one per country) would provide administrative/ financial support to the project. The ProDoc also informed about 'the experience of UNDP Ecuador in implementing multi-country projects' but omit the name of the projects. It also presented as a competitive advantage that UNDP Ecuador would be implementing the UNDP-GEF IW project ID5271 'Global Sustainable Supply Chains for Marine Commodities', a multi-regional project involving four countries (Ecuador, Costa Rica, Indonesia and the Philippines) approved for implementation on January 21, 2016. Nevertheless, the ProDoc did not described how these projects would be linked. It is relevant to include in the project design mechanisms to favor that the comparative advantages of the IA, described at ProDoc, will actually be made available for the project's partners during project implementation.

Linkages between project and other interventions within the sector

53. The ProDoc briefly describes links of the project with other five interventions in Peru, three in Ecuador and three at multi-country/binational scale.

54. In Peru, the project was expected to:

- Take into consideration the outcomes of the project 'Towards Low-emission and Climate-Resilient Development in the regions of Piura and Tumbes in Peru' (2012- 2014).
- Consider the lessons learned on integrated basin management and technical studies on hydrological ecosystem services from the UNEP-IUCN project 'Ecosystem-based Adaptation of High Mountain areas in the Nor Yauyos Cochas Landscape Reserve' (2013-2015), even if this project focus was on a different geographic area and ecosystems.
- Make use of some of the methodologies developed and the data produced by the UNDP project "Integrating Ecosystem and Community based Management in Communal Reserves" (2013-2017). This project also focused on a different geographic area and ecosystems (Madre de Dios and Amazonas).
- Promote inter-project learning with UNDP GEF ID3749 project 'Towards Ecosystem Management of the Humboldt Current Large Marine Ecosystem' (2009-2018). Despite focusing on marine ecosystem, the project included substantial capacity building on the TDA and SAP approach.
- Draw from the experience of the UNDP BIOFIN project 'Building Transformative Policy and Financing Frameworks to Increase Investment in Biodiversity Management' for the identification of investment needs in the three shared aquifers and basins during the SAP implementation phase.

55. In Ecuador, the project was expected to:

- Coordinate closely with the UNDP-GEF ID2931 project "Adaptation to Climate Change through Effective Water Governance" Project (PACC) (2008-2014). The PACC project was executed by the Ministry of Environment and targeted seven basins, including Jubones and Catamayo, which are part of the ITWRM project. Nevertheless, the PACC project was already closed before the ProDoc approval of the 3 Basins project.
- Take into consideration the lessons learned from the ART (Articulation of Regional Networks) programme for El Oro Province developed by UNDP (2009-2013)
- Review the main findings of the project for the Updating and Alignment of the National Desertification Plan (2014-2015), UNDP GEF Enabling Activity.

56. At multi-country/binational scale, the project design indicated linkages with three initiatives, therefore the project was expected to:

- Coordinate with the UNDP GEF Small Grants Program to glean lessons learned from projects working at the community-level or in conflict resolution management and to apply them during the pilot projects.
- Share information with the IUCN project "BRIDGE: Water Governance in transboundary basins - Andes component" (2011-2016). Zarumilla and Catamayo-Chira basins were targeted by this project. The project developed technical tools and updated policies to promote harmonized transboundary water resource management.
- Coordinate closely with UNDP Cap-Net as an established delivery mechanism to enhance national capacities in IWRM.

57. Nevertheless, the project at design failed to identify and establish linkages with at least three GEF projects that were of great relevance to the 3 Basins project:

    - UNEP-ACTO GEF IW 2364 project 'Integrated and Sustainable Management of Transboundary Water Resources in the Amazon River Basin Considering Climate Variability and Climate Change' (2011-2018). SENAGUA, ANA and other stakeholders of the 3 Basins project participated actively in the UNEP-ACTO project. This project, as well as the 3 Basins project was developed under the TDA-SAP approach and had similar expected outcomes. Its SAP was approved in 2016 by the 8 Member Countries of ACTO, including Ecuador and Peru.
    - UNIDO GEF-5 IW-POP ID 4799 project 'Implementing Integrated Measures for Minimizing Mercury Releases from Artisanal Gold Mining' implemented in Ecuador and Peru in the mining region of Portovelo-Zaruma within the Puyango-Tumbes River basin (2012-2018).
    - IFAD GEF ID 3717 project 'Sustainable Management of Biodiversity and Water Resources in the Ibarra-San Lorenzo Corridor' in Ecuador (2011-2017)

58. Interactions among the GEF projects foster synergetic contributions to the achievement of global environmental benefits as well as durability of the interventions. It is recommended that future projects properly identify and define concrete mechanisms to promote collaboration, exchange of best practices during project design, implementation and closure, and, if it is the case, synergies on deliverables / activities between sisters GEF projects, even if they are not implemented by the same IA. IW:LEARN, a unique platform for sharing best practices, lessons learned, and innovative solutions to common problems across the GEF IW portfolio, offers some tools to facilitate process , such as "Twinning" and "Learning Exchange Service Center". It should be noted that despite its relevance, very few of the people interviewed had proper knowledge about IW:LEARN and the way it could contribute towards overcoming the challenges described above.

Management arrangements

59. The roles and responsibilities of the IA were described, but the ones of the EAs were not properly described in the ProDoc. The project design indicated the mechanisms for governance composed of five bodies: Steering Committee (SC), Project Coordination Unit (PCU), Binational Technical Committee (for technical support and binational coordination), National Inter-Ministerial Committees (for national crosscutting coordination during the project and implementation of SAP after the project) and Committees for Pilot Projects. The ProDoc, nevertheless, did not describe in detail the composition and management arrangements of the Binational Technical Committee, the National Inter-Ministerial Committees and the Committees for Pilot Projects.

60. The project governance architecture was designed based on best practices for GEF IW projects but lacked a more complete definition of roles, operation mechanisms, and management arrangements. In addition, it did not indicate which of the existing local committees could have supported the pilot projects. Furthermore, the project at design did not analyze the capacity of the executing partners and major stakeholders with active roles in the project delivery. The risk of lacking capacity and the absence of responses to overcome the former before the project began increased the probability of delays and shortcomings during the implementation of the project.

61. Enabling legislations were in place at project entry (i.e. both countries had solid IWRM policies, legislation, and norms). Counterpart resources (staff, and facilities) were partially in place at project entry, but evidence indicates that they were not enough to guarantee prompt implementation of the project.

3.2. PROJECT IMPLEMENTATION

Adaptative Management

62. It was not necessary to implement adaptative management measures into the core of the project, and therefore, there was no change on the environmental and development objectives of the project during its implementation. However, Outputs 3.1 and 3.2 (Pilot Projects) and their indicators were adjusted in 2017 to adapt better to the specific context of the selected sites for the implementation of the demonstrative pilot projects. These changes were formally approved at the 3rd meeting of SC (May 16, 2017).

Partnership arrangements

63. The **main stakeholders** of the project were the members of the SC (ANA, SENAGUA, UNDP, Ministries of Foreign Affairs and Ministries of the Environment), who participated actively in the implementation and decision-making of the project. During project implementation there have been a significant number of staff turnovers in ANA and SENAGUA (more than 6 different project directors), that brought delays to some processes (i.e. approvals, decisions, etc.). As noticed on the MTR in the first half of the project implementation *'specific spaces were needed to maintain a shared reading about the project, among the different stakeholders'*. At project closure, this gap was overcome, and it was noticed fluid communication and commitment among the main stakeholders.

64. At the ProDoc, the **Stakeholder Involvement Plan** for the Project Implementation Phase indicated an active involvement of several stakeholders with the project (i.e. Binational Development Plan for the Ecuador-Peru border region; Ministries of Health and Agriculture; Meteorological and Hydrological Services). The ultimate goal of the stakeholder involvement plan was the long-term sustainability of the project achievements, based on transparency and the effective participation of key stakeholders. At project implementation, some of these institutions had a superficial involvement with the project (i.e. participation on capacity building workshops delivered by the project), and they did not assume a structured role as planed on ProDoc.

65. Local Governments (such as the regional governments of Tumbes and Piura, district and provincial municipalities from Peru, and the Decentralized Autonomous Governments-GADs of the provincial level of Loja, the canton and parish-level GADs of Ecuador) and user organizations (including farmers associations, irrigation boards and potable water boards) participated on the **implementation of the pilot projects, capacity building activities and consultations for TDA/SAP**. These partnership arrangements for implementation increased the ownership of the outcomes by local communities, but generated some delays regarding to the original schedule.

66. The **Binational Commission** for the Integrated Regional Water Management of the Transboundary Basin of the Zarumilla, entity created to implement joint actions between Ecuador and Peru in the Zarumilla River Basin, was expected to participate in the project as a technical-political body to endorse project activities. Despite not have entirely fulfilled their planned role, the Binational Commission of the Zarumilla served as a reference for the creation of Binational Commission for IWRM of the transboundary river basins between Ecuador and Peru (hereafter called 'Binational Commission of the nine river basins', or 'BC9RB'). The BC9RB scope is broader than the 3 Basins of the GEF project and includes also other 6 basins shared between Ecuador and Peru that drain to the Amazon River basin. The ad hoc partnership between the GEF 3 Basins project and the **BRIDGE III (IUCN) project** contributed on the process toward the creation of the Binational Commission of the nine river basins.

67. The **Water Resources Basin Councils of Tumbes and Chira Piura**, both in Peru, were considered key stakeholders to promote IWRM in these two basins. The pilot projects in Peru were specifically designed to support actions proposed by these councils. Through its technical secretariat, hosted by ANA, they participated in the implementation of the pilot projects and were considered relevant stakeholders for the sustainability of the pilot projects in Peru. It is recommended to foster the interaction with these bodies, not only with its technical secretariat but also with its members. It should be noted that, in Ecuador, since the approval of the 2014 Water Law, Basin Councils at DH level (Hydrographic Demarcation) and at UPHL level (Local Hydrographic Planning Unit) have been established. The Puyango and Catamayo Basin Councils are collegiate advisory bodies made up of elected representatives of User Organizations, with the aim of participating in the formulation, planning, evaluation and control of water resources. The Basin Councils can contribute to the construction of the exit strategy of the project, incidence, and the development of PIF/ProDoc for the second phase.

68. The Stakeholder Involvement Plan also indicated an active role of **Universities** located in the basins. It was foreseeing that they could promote various programs and training modules on IWRM in partnership with the Project, in addition to encouraging research on IWRM in transboundary basins. To some extent the PCU tryed to engage with two Universitites of the region: UTPL - Technical Private University of Loja and the National University of Loja. Meetings and discussions were held with representatives from these institutions to explore and identify common interest for collaboration, however they were not successful. Representatives from local universities participated on some capacity building activities of the project, and laboratories services from UTPL were hired to conduct water quality analysis. Nevertheless, the Universities were not actively involved in the project design and implementation. The project will end without establishing formal agreements for capacity building, collaboration, and information exchange with these relevant institutions. The project area hosts four relevant Universities (National University of Tumbes, National University of Piura, Technical Private University of Loja and the National University of Loja) that have active projects and expertise on water resources and environment in relation to IWRM of these three basins and aquifers. The active involvement of these universities on the development of the PIF and the implementation of the second phase of the 3 Basins project could contribute to promote longer-term sustainability of the outcomes currently achieved by the project.

69. Farmer and rancher associations were identified at project design as the major representatives of **private sector** on the project area. They were also identified as stakeholders that would enhance sustainability of the project, particularly project activities working with sustainable agriculture and livestock management. Nevertheless, the project design did not properly map these stakeholders, and the Stakeholder Involvement Plan lacked to indicate how they would be involved in the project. Consequently, these stakeholders had limited involvement in the project implementation, their participation was mostly in capacity building meetings and on pilot projects related to the protection of water sources from pasturing. Nor at project design nor at project implementation the private sector actors relevant for IWRM were properly mapped. The evaluation identified that there was a broader and diverse system of private entities related to water resources use, such as private and public water and sanitation companies, formal mining companies, aquaculture projects at the low part of the basins, and one of the largest irrigated agriculture project of the pacific region (the Chira-Piura Irrigation Project) with over 100,000ha irrigated with water from Catamayo-Chira basin and energy generation on the Chira-Piura river.

70. The ProDoc identified several **NGOs** working in the project area promoting the conservation and the sustainable use of water resources. Their expertise in providing training was highlighted and several of their activities and initiatives were consistent with the objectives of the 3 Basins project. As mentioned on paragraph 66, the project partnered with IUCN BRIDGE III project

contributing to the creation of the BC9RB. Nevertheless, the project did not engage in a structured way with the relevant NGOs of the region. The evaluation identified that NGOs, such as NCI, IRAGER, FORAGUA, and *Fondo del Agua Quizos-Chira*, were actively working in this region with themes relevant for the project. The engagement, communication and/or articulation with these NGOs could have contributed positively to the results, impact and sustainability of the project.

71. It was evident that the **Stakeholder Involvement Plan** had limitations (failure in properly identifying relevant stakeholders, lack of mechanisms to promote stakeholder engagement, etc.) that impacted the results of the project. Furthermore, the ProDoc did not present a Communication Strategy, only it addressed communication activities under some components (i.e. output 3.3). A Communication Strategy was developed one year after the beginning of project implementation (May 2017). During the first half of the project, it was noticed a relatively low level of priority given by the project partners regarding the communication strategy. In 2019, a communication specialist was hired, the Communication Strategy was updated, and the project began to implement it. The implementation of a robust **communication strategy** from the very beginning of the project would have contributed to information dissemination and to facilitate the participation of stakeholders in the project. Nevertheless, during the last year, the communication efforts of the project improved significantly, with increased presence in social networks, preparation of newsletters with permanent dissemination and production of videos.

Feedback from M&E activities used for adaptive management

72. The project, on its second half, actively used the M&E reports Project Implementation Reviews (PIRs), and Annual Project Reports (APRs), to follow-up actions and conduct adaptative management, especially aiming to increase execution rate. The MTE identified discrepancies between the PIR self-evaluation for 2017 (that indicated the progress toward objective as Moderately Satisfactory and implementation as Moderately Unsatisfactory) and the actual situation of the project (considered by the MTE as progress toward results as Moderately Unsatisfactory and execution as Unsatisfactory). These issues were discussed on SC5 (December 17, 2018), and adaptative measures, such as improvement of the M&E instruments (see detailed information at para. 88), were adopted.

Project Finance

73. The total project budget was US$ 24,443,600, of which US$ 3,960,000 (16%) was in the form of grants from the GEF. The difference was in-kind contributions from the governments of the Ecuador and Peru (US$ 10,000,000 each), by UNDP Cap-net (US$ 132,500 for each country), by UNDP CO Ecuador (US$ 104,100) and by UNDP CO Peru (US$ 114,500) - see Table 1. The project had a tripartite division of the budget (Ecuador, Peru and regional). SENAGUA in Ecuador with the support of UNDP CO Ecuador was responsible for the financial management of the regional and Ecuadorian component. ANA in Peru with the support of UNDP CO Peru was responsible for the financial management of the Peruvian component.

74. The project adopted a set of instruments for financial management that were constantly updated (i.e. AOPs – Annual Operation Planning, CDRs – Combined Delivery Reports (annual), procurement plans, and 2 audits). These instruments allowed the project managers to make informed decisions regarding the constantly updated budget, promoting timely flow of funds and contributing to track in a satisfactory manner the payment of project deliverables.

75. The evaluation verified the proper application of financial management standards and adherence to UNDP financial management policy, as well as due diligence for expenses in comparison to the approved budget of GEF funds across the life of the project.

76. There was no significative variance between planned and actual expenditures by components (Outcomes 1, 2, 3 and Project Management) and country/regional. By February 2020, based on the last financial update presented to the evaluation consultant, the project had disbursed 83% of the GEF grants (US$ 3,300,662[2]) and had projected to disburse the rest of the grants (US$ 659,338) until the project operational closure (planned for 30 June 2020). According to the last PIMS AOP (December 2019), the highest disbursements rates were regarding Outcome 2 and project management in Peru (94% and 97%, respectively) – see Table 2. The lowest disbursement rates were regarding Outcome 3 in Peru (66%) and Outcome 1 in Regional/Ecuador component (74%), due partially to the fact that activities under these outcomes were currently under development and their payments were planned for the next months. These components represented major challenges that the project will have to face during its last months of execution.

77. After a slow start in 2016 and 2017, the project showed a significant increase of the financial **execution rate** since 2018 (Figure 1). But the challenge to disburse almost one-fifth of the project grants remained during the last months of project operation. There was a firm commitment of the project team to reach a high execution rate by the end of the project.

78. There were two **audits**, one for the funds/activities of Peru for 2018 and one for the funds/activities of Ecuador/Binational for 2017 (until 31 December in both cases). Both audits approved (without qualifications) the disbursements of the GEF grants assigned to their respective year, the status of assets and equipment, and the cash situation report. In total, the audit analyzed US$ 712,973 of disbursements (18% of GEF grants) and indicated that they were made according to the budgets of the approved project, in accordance with the regulations and standards of UNDP policies and procedures, and held by duly approved supporting documents. Nevertheless, four recommendations related to the design and operation of internal controls were brought by the Ecuadorian/Binational audit: differences between the CDR and transitional report (PDT), budget execution, breach of agreements, and insufficient project staff. The last two were accepted by the project team who took action and hire the technical staff necessary for project execution and commit to improve the internal controls for the remaining budget execution.

79. **Co-finance** resources were administered directly by their contributors and their expenses were not reported in detail for the Project Management. From the planned co-financing, US$ 7,845,320 (from UNDP CO Ecuador and the Government of Ecuador) were reported, corresponding to 38% of the co-financed resources committed at the ProDoc (see Table 3). However, the evaluation noticed evidence of the in-kind support of UNDP Peru and the Government of Peru, such as staff time and office space and facilities, that was not reported. UNDP Cap-Net was expected, according to co-financing letter, to support capacity building on IWRM through national workshops and information sharing. This support was not materialized, mainly because of the lack of communication between IA/EA and Cap-Net. It is relevant to develop approaches towards recognizing, valuing, and reporting co-financing, including in-kind contributions[3].

Table 1 – Project Budget by source of funding and country/regional component

Source of Funding	Ecuador	Peru	Regional Component	Total
GEF	1.335.000	1.335.000	1.290.000	3.960.000
Sub-total GEF	***1.335.000***	***1.335.000***	***1.290.000***	***3.960.000***
National financing (SENAGUA / ANA)	10.000.000	10.000.000	-	20.000.000
UNDP COs (Ecuador and Peru)	104.100	114.500	-	218.600
UNDP Cap-Net	132.500	132.500	-	265.000
Sub-total co-financing	***10.236.600***	***10.247.000***	-	***20.483.600***
TOTAL	**11.571.600**	**11.582.000**	**1.290.000**	**24.443.600**

Table 2 – Project Disbursement in US$ by project component and country/regional assignment

Components	Regional and Ecuador			Peru			Total		
	Planned	Disbursedment*	Disbursement rate	Planned	Disbursedment*	Disbursement rate	Planned	Disbursedment*	Disbursement rate
Outcome 1	507.500	376.814	74%	24.888	21.921	88%	**532.388**	**398.735**	**75%**
Outcome 2	475.752	383.283	81%	101.380	95.300	94%	**577.132**	**478.583**	**83%**
Outcome 3	1.338.824	1.227.513	92%	1.135.368	751.166	66%	**2.474.192**	**1.978.678**	**80%**
Project Managemnt	302.924	261.811	86%	73.364	71.236	97%	**376.288**	**333.047**	**89%**
TOTAL	**2.625.000**	**2.249.421**	**86%**	**1.335.000**	**939.622**	**70%**	**3.960.000**	**3.189.043**	**81%**
*Disbursement till December 2019 (Source: PMIS APO-POA 2020)									

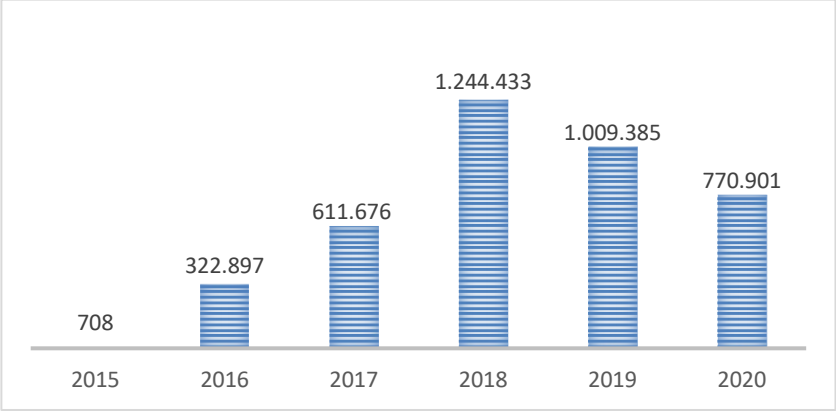

Figure 1 – Disbursement in US$ per year

Table 3 – Co-financing planned and reported

Co-financing (type/source)	UNDP Ecuador own financing (US$)		UNDP Peru own financing (US$)		UNDP Cap-Net own financing (US$)		Government of Ecuador (US$)		Government of Peru (US$)		**Total (US$)**	
	Planned	Reported	Planned	Reported	Planned	Reported	Planned	Reported	Planned	Reported	**Planned**	**Reported**
Loans/Concessions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
In-kind support	104.100	48.023	114.500	Not reported	265.000	Not reported	10.000.000	7.797.297	10.000.000	Not reported	**20.483.600**	**7.845.320**
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	**104.100**	**48.023**	**114.500**	**Not reported**	**265.000**	**Not reported**	**10.000.000**	**7.797.297**	**10.000.000**	**Not reported**	**20.483.600**	**7.845.320**

Monitoring and evaluation: design at entry and implementation (*)

80. The ProDoc contained a brief Monitoring and Evaluation (M&E) Plan and a Project Results Framework with performance and impact indicators for the project implementation along with their baseline, project targets and corresponding sources of verification. The ProDoc contained 30 indicators to monitor process, nevertheless some indicators, especially the ones related to Outcome 3, were not SMART enough to guarantee tracking the progress and performance during the project implementation. At project implementation, one indicator was included ("# of Local Drinking Water Boards / Local Governments that meet national minimum standards of drinking water quality and provide at least 3 hours of water per day to users at the pilot sites), one was eliminated (Proposal for establishment of Binational Commission(s) for Puyango-Tumbes and Catamayo-Chira basins) and 14 were reformulated, including the totality of indicators related to the pilot projects. The reformulation of the indicators of the pilot projects was partially due to the need to select new pilot sites (see table 4) and to adequate the indicators to this new logic framework adopted by the project and used afterward. The project **adopted 30 indicators** that were, to some extent, sufficiently articulated to monitor results and track progress toward achieving the objectives.

81. Although these adjustments represented an improvement from ones presented at ProDoc, some indicators still showing some limitations regarding its specificness and measurability (i.e. during the review of the indicators no metadata was produced). The ProDoc neither presented **Indicator Profile Sheets** with detailed information to assist data collection, calculation of its components, aggregation of scales, selection of sources and means of verification, identification of main assumptions, description of the method adopted to define the baseline and targets, and references to scientific literature.

82. The **usual GEF IW instruments for M&E** were indicated at the ProDoc: an inception report, annual Project Implementation Reviews (PIRs), Annual Workplan (AWP), Annual Project Report (APR), Quarterly Progress Reports (QPRs), audits, Midterm Evaluation (ME), Terminal Evaluation (TE), project publications, and a Final Evaluation. The project, according to GEF-5 IW procedures, was expected to report also on the achievement of the targets on the GEF International Waters Tracking Tool (IWTT).

83. According to the ProDoc, the binational Project Coordinator (PC) was responsible to day-to-day monitoring of implementation progress based on M&E Plan and its indicators. The PC, in conjunction with the UNDP-GEF extended team, was responsible for the preparation and submission of the PIRs, AWPs, APRs, and QPRs. The UNDP CO Ecuador was responsible for periodic monitoring of implementation progress through frequent meetings (mostly, monthly or bimonthly) with the project implementation team. The Steering Committee hosted the responsibility for annual monitoring and review of the project progress.

84. At project design US$ 153,500 from GEF grants for the M&E were assigned, including funds for MTE, TE, audits, SC meetings, TC meetings, and NIC meetings. Nevertheless, there was no **budget** assigned to hire a Monitoring and Reporting (M&R) assistant. The M&R activities for the project implementation, especially the ones from UNDP and GEF, would have required a half-time assistant to support the project team on the monitoring, reporting, and evaluation cycles. This staff has been included in other GEF projects. The lack of this assistant generated additional workload and responsibilities for the project coordinators (binational and nationals).

85. Two audits, one per country, were produced for the project (see para 78). The MTE took place between August and October 2018. The project delivered Annual Project Implementation Reviews (PIRs), Annual Workplan (AWP), and Annual Project Report (APR) in time and with satisfactory quality. These documents were discussed with the project stakeholders at the SC meetings. They were considered valuable and relevant instruments to guide project

implementation. A Project implementation Plan was not produced (see detailed information at Recommendation 7 "Implementation Plan" section 4). Project partners informed that Quarterly Progress Reports (QPRs) were delivered in time, but no evidence was provided to the evaluation consultant.

86. The project adopted a Management Response Plan to implement and track the major recommendations and key issues raised by the MTE. This Management Response Plan included the nature of the response, key actions, responsible, timeframe and status. It was actively discussed with the project stakeholders and proved to be an effective tool for project management.

87. Currently, the project team is preparing the project terminal report, consolidating the project publications and it is expected that the monitoring instruments for the closure of the project, including last APR and CDR, will be delivered on time. This TE report, one of the M&E instruments, was delivered in the expected timeframe (prior to the last SC meeting).

88. As indicated in the MTE, a robust and easy-to-use managerial tool for M&E implemented since the project inception would have benefited the project implementation. This M&E tool could have allowed the project team '*to carry out a detailed planning process, monitoring and follow-up system, detailed quotation of consultancies/services, unified information systems and identifying resources mobilized from co-financing'*. In 2018, a **programmatic progress matrix** to monitor compliance and execution of the different project outputs was developed and adopted by the project team. The project team also created an excel-based **monitoring tool to track the progress of the 30 indicators**. This tool incorporated a sheet for each indicator, where data and evidence were collected and tabulated for each country (when necessary the data was disaggregated by gender), integrated into a formula for the calculation of the indicator and completed the programmatic progress matrix. The Project Team also created another instrument that helped the M&E, a **scheme to determinate the programmatic advance**. This scheme indicated the management progress in different phases of an activity/product (15% Start, 25% Planning, 50% Execution and 10% Closing). This scheme was considered by UNDP Ecuador and Peru as a good practice and adopted, with some adjustments when necessary, in other UNDP projects. These three tools (programmatic progress matrix, monitoring tool to track the progress of the indicators and scheme to determinate the programmatic advance) proved to be of great relevance for the M&E of the project.

89. The M&E design at entry was rated as **Moderately Unsatisfactory**. The M&E Plan Implementation was rated as **Satisfactory**. The Overall quality of M&E was **Moderately Satisfactory**.

Implementing Partner execution, coordination, and operational issues (*)

90. The project was implemented under the National Implementation Modality (NIM)[4] according to the standards and regulations of UNDP. At project inspection UNDP CO Ecuador was assigned to perform, with the support of UNDP Regional Center for LAC and UNDP CO Peru, the roles and responsibilities as a GEF IA. There were two Executing Agencies, the National Water Authority (ANA), responsible for the national components in Peru, and National Water Secretariat (SENAGUA), responsible for the national components in Ecuador and the regional component. At the request of the Governments of Ecuador and Peru, UNDP provided Direct Project Services (DPS) for the execution of the project.

91. UNDP conducted the implementation coordination and operational issues on a **Moderately Satisfactory** manner. The agency had a relevant role in activities related to project's identification, concept preparation, appraisal, preparation of detailed proposal, and approval. The MTE and this TE noticed a limited proactiveness of the IA during the start-up phase to

manage some critical situations, such as the delays of the first two years of the project. However, the evaluation also noticed that in the last two years UNDP had increased its focus on monitoring projects results, and, to some extent, its engagement with the activities related to oversight, supervision, completion, evaluation, articulation and political incidence. The annual reports expressed with realism the progress and barriers faced by the project.

92. During the first years of the project, UNDP Ecuador delegated the supervision of the entire portfolio of International Waters to the Local Development unit. Previously, GEF IW projects were managed by the Energy and Environment unit. The UNDP Local Development unit did not have enough experience working with GEF. As mentioned at MTE, 'this lack of experience with the procedures, structure and operation of a GEF Project led to an important lag that was reflected in a particularly slow start, which generated important consequences that accumulate throughout the Project'. In 2018, it was reassigned to the Environment and Energy unit and since then the project increased its implementation pace.

93. ANA and SENAGUA had recognized capacity to manage water resources on their respective countries, nevertheless they did not have previous experience nor technical, operational, and administrative expertise in place to execute a binational GEF IW Full Size Project. ANA and SENAGUA hosted the PCU, who was responsible for the management and administration of the project's day-to-day activities under the overall oversight and supervision of the project directors (high level authorities at SENAGUA and ANA) and the UNDP CO Ecuador and Peru. This evaluation notices some problems on the separation of roles among IA, EA and PCU, such that the IA provided direct financial and administrative support for project execution, and, at the same time, conducted independent project oversight, monitoring and evaluation functions. Although these implantation arrangements worked fine. With the active support of the PCU and UNDP, the EAs conducted an appropriate use of funds, procurement and contracting of goods and services.

94. Based on this arrangement, PCU-EAs-UNDP, the EAs showed, especially on the last half of the project, a deeper focus on results and timeliness of implementation, delivering valuable management inputs and conducting in an efficient manner the processes, including budgeting and procurement. The active engagement of the PCU was crucial toward the efficient execution. The National Implementation Modality brought the benefit of increased country and government ownership of the project execution. ANA and SENAGUA were on the driver seat of this GEF project. The EAs performance regarding execution coordination and operational issues, despite the severe delays on the first half of the project, was rated as **Moderately Satisfactory**.

95. Throughout the project, the often-long response times of the IA and EA continued to be an issue that affected the pace of implementation. These delays were especially evident when there was a request of information and analyze / approval of products and processes. The turnover/vacancy of authorities and decision-makers at both EA and IA (i.e. the position of RTA for IW was vacant for one year from Abril 2019 to April 2020, during a critical phase of the project), and the lack of clear definitions of operation mechanisms for delegation of authority (see para. 111) also brought some additional pressure to the satisfactory implementation of the project. The overall rating for Implementing Partner execution, coordination, and operational issues was **Moderately Satisfactory**.

3.3. PROJECT RESULTS

Overall results*

96. At TE, the project successfully achieved 18 indicators (G1, G2, G3, G4, G5, #2, #3, #5, #7, #9, #10, #11, #14, #17, #18, #19, #22 and #23) - see Table 4. Five indicators (#1, #6, #15, #24 and #25) are expected to be reached completion by end of the project. Seven indicators (#4, #8, #12, #13, #16, #20 and #21) showed limited achievement as compared with the end-of-project target and they are unlikely to be completed by project closure. The majority of the indicators, 19 of 30, were achieved with no shortcomings (G2, G4, #5, #10, #17, #18 and #22), minor shortcomings (G1, G3, G5, #2, #3, #7, #9, #11, #14, #19 and #23) or moderate shortcomings (#6, #24 and #25) shortcomings. Eight indicators had significant shortcomings (#1, #4, #8, #12, #13, #15,), two had major shortcomings (#16 and #20) and one presented severe shortcomings (#21). The overall results of the project were rated as **Satisfactory**.

Relevance*

97. The project proved to be **Relevant** to and consistent with countries needs to strengthen cooperation for the transboundary management of water resources and local beneficiaries' necessities related to water and sanitation on these three riven basins. The project was, to some extent, consistent with global priorities, such as SGD 6 (see para 102), and UNDP / GEF main programmatic strategies. The project adopted the IWRM approach considering some environmental and socio-economic aspects, mainly related to agricultural and urban use. Nevertheless, the project could have benefited from a more integrated approach considering the value of the ecosystem services provided by water, adopting a systemic perspective of the interrelation among water-environment-economy-livelihoods.

98. The project addressed a very relevant issue on the binational agenda of Ecuador and Peru – the collaboration for the transboundary management of water resources of the three shared river basins. Since the Peace Agreement signed between Ecuador and Peru in 1998, the integration and development of the border area have been a top priority for both countries. It should be noted that these countries had been in conflict related to border limits definitions for a couple of centuries, and water had become an element of integration and collaboration. The "Agreement between the Republic of Peru and the Republic of Ecuador for the establishment of the Binational Commission for IWRM of the Zarumilla transboundary watershed" and the "Agreement establishing the Binational Commission for IWRM of the transboundary river basins between the Republic of Peru and the Republic of Ecuador" are examples of this relevant collaboration.

99. It was the first time that ANA and SENAGUA had led a GEF project, being responsible for its design and execution. Due to the mandate of these agencies, the priorities of the water sector were reflected in the outcomes achieved by the project. Nevertheless, the environmental and development priorities, both at national and local level, go beyond the priorities of the water sector. Several official strategies and planning processes/documents, such as Ecuador and Peru National Biodiversity Strategies, recognize the relevance and fragility of the ecosystems (i.e. *paramos, and "bosque seco"*) of this border region, and its close relation to the provision of water. They recognize the ecosystem approach as one of the keys elements to achieving sustainable development. In the case of the Puyango-Tumbes basin, 36% of the total area is covered by deciduous lowland Ecuadorian forest ecosystem (*bosque ecuatoriano deciduo de tierras bajas*), or the seasonally dry forest of the north (*bosque estacionalmente seco del norte*), whose ecosystems are key to water regulation, as well as other provision services for the region. Project partners recognize that, since its design, this first phase of the project could not deal with these issues and they indicate that those issues should be better addressed on the second phase. It is recommended that similar projects on IWRM take these issues into consideration as well.

Table 4 – Matrix of the assessment of outcomes against project indicators

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rating
Objective: Strengthening institutional, policy, legal and scientific-technical capacities to implement Integrated Transboundary Water Resources Management in Puyango-Tumbes, Catamayo- Chira and Zarumilla River Basins and Aquifers, integrating climate variability concerns					
G1 - Level of knowledge of SENAGUA, ANA, Water Resources Basin Councils, Irrigation Boards and Potable Water Boards on IWRM and management of transboundary basins	Baseline institutional capacity will be measured using institutional capacity survey within 3 months of project start-up	80% of stakeholders who have received training indicate application of IWRM by end of project	Over 97% of the key stakeholders identified by the project had received training or participated in project events leading to an application of IWRM concepts.	More than 600 stakeholders had increased their knowledge on IWRM through over 24 capacity building activities (workshops, training courses, etc.). It is recommended to carry out a study at the end of the project to measure the application of this knowledge on IWRM.	S
G2 - Area (ha) which IWRM practices are being implemented in Catamayo-Chira, Puyango Tumbes and Zarumilla River Basins in Ecuador and Peru	0 ha. There are only specific actions of efficient water or water quality management, without an IWRM	10,300 ha of project influence benefit from IWRM actions in the watersheds of interest.	403,577 ha had been covered by IWRM actions	The project reached almost 40 times the expected area of influence with IWRM actions on the implantation of the pilot demonstration projects (105,056 ha), management models for water management drafted at local level (113,929 ha), protection of water sources (1,271 ha) and communication and capacity building of key local stakeholders.	HS
G3 - Number of beneficiaries from implementation of IWRM in pilot projects	0 beneficiaries, because the pilot projects have not been established	234,549 local inhabitants (125,335 men and 109,214 women)	9,475 local inhabitants (4,878 men and 4,597 women) benefited from on-the-ground pilot projects. 220,643 inhabitants (125,335 men and 109,214 women) were reached by the radio programs.	230,188 local inhabitants were benefited from / reached by the implementation of the pilot projects, representing 98% of end-of-project target. End-of-project target indicated at ProDoc did not present the aggregation method to consider the beneficiary population of the 8 on-the-ground pilot projects.	S
G4 - Institutional framework for binational dialogue and cooperation on IWRM	Only a Binational Commission for Zarumilla has been formally established and there is no Strategic Action Program (SAP) developed or approved.	Proposal for statute and regulations for the operation of the Binational Commission for the IWRM of the transboundary river basins between Ecuador and Peru	Statute and operational regulations of the Binational Commission for the IWRM of the transboundary river basins between Ecuador and Peru was produced	The Binational commission had a broader geographic scope embracing not only the 3 basins of this project, but also the 6 amazon basins shared by Ecuador and Peru. Presidential meeting of 2019, considered IWRM as a relevant component of the bi-national agenda.	HS
G5 - # of Local Drinking Water Boards / Local Governments that meet national minimum standards of drinking water quality and provide at least 3 hours of water per day to users at the pilot sites	It is estimated that less than 50% of Drinking Water Boards / local governments meet standards. A self-assessment tool will be applied to define the level of compliance with national regulations	4 improvement plans / improved management models under the IWRM approach in the areas of pilot projects	5 management models for water and sanitation had been delivered under the IWRM approach in the areas of pilot projects: Las Lajas (EC), Limones (EC), Guineo Chico (EC), Sanguillín (EC) and Paimas(PE).	Five management models were developed with the collaboration of and appropriated by the local Drinking Water Boards and local Governments. The models had not been fully implemented. It was not measured if the they meet national minimum standards of drinking water quality and provide at least 3 hours of water per day to users at the pilot sites. It is recommended to SENAGUA and ANA to track the implementation of the models and to measure the compliance with water quality standards. The end-of-project target was not articulated enough with the description of the indicator.	S

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rat-ing
Outcome 1: Transboundary Diagnostic Analysis developed for the ITWRM in the Puyango-Tumbes, Catamayo-Chira and Zarumilla binational aquifers and basins					
#1 - Hydrogeological studies in important aquifers of the basins	The availability of hydrogeological information is greatest for the Zarumilla basin, while the information for the other basins is scattered, with a medium to low level of hydrogeological information and lack of integration and interpretation of this information.	Basic hydrogeological studies in: a) Alto Piura; b) Catamayo-Loja; and c) Zarumilla aquifers, including monitoring, inventory of wells, identification of hydrogeological units, definition of recharge areas, hydrodynamics, hydrochemistry and water quality, estimation of reserve amounts, among others.	At 20 April 2020, a basic hydrogeological study for the Zarumilla aquifer was under development. Project partners expected that before project closure the study will be concluded and approved. The first contract for the hydrogeological studies for the three aquifers had to be finalized by mutual agreement on May 2018. A new call for proposals was issued on May 2019, only for the Zarumilla aquifer.	The lack of these hydrogeological studies had impacted project implementation, especially regarding the consideration of proper approaches for integrated surface and ground water management on the plans / tools produced by the project (i.e. TDA/SAP). It was reported that the resources available were insufficient to conduct a full-scale study, as described in the ProDoc, of the target hydrogeological units (Alto Piura, Catamayo-Loja and Zarumilla). It is recommended to develop basic hydrogeological studies in Alto Piura and Catamayo-Loja as soon as possible, but before the revision of the TDA/SAP (recommended to be reviewed and updated every 10 years). It is recommended to make all data, information, maps and tools related to these studies available to general public, specially to Universities and research institutions.	MU
#2 - Transboundary Diagnostic Analysis (TDA): Agreement on transboundary priorities and immediate root causes in binational watersheds and the Puyango-Tumbes, Catamayo-Chira and Zarumilla binational aquifers and basins.	The cross-border priority themes have been identified and agreed, but this was done on the basis of limited information on effects; and an inadequate root cause analysis (score 2 in the IW Program Tracking Tool)	Establishment/strengthening of a GIS database for basins and aquifers (with public access). Agreement on cross-border priorities derived from reliable baseline data and immediate causes and root causes properly identified (score 4 IW TT)	GIS database for the 3 basins and aquifers available with public access on internet. TDA was approved by both countries including cross-border priorities where immediate causes and root causes properly identified.	On November 2018 TDA was approved with limited data availability about groundwater, due to the delay on the hydrogeological studies (indicator#1). TDA was developed with limited information about ecosystem services and biodiversity, due partially to the sectorial approach adopted by the project. To a large extent, the TDA did not adopted solid interdisciplinary technical and scientific foundations. GIS database is available for public access on a webpage, but the link was not yet broadly divulgated (i.e. through the project webpage).	S
Outcome 2: Strategic planning and capacity building to strengthen governance of transboundary water resources in the Puyango-Tumbes, Catamayo-Chira & Zarumilla watersheds and aquifers					
#3 - Strategic Action Plan for the Puyango-Tumbes, Catamayo-Chira and Zarumilla basins respectively	Neither Ecuador nor Peru have developed a SAP for any of the three basins. In Peru, there are water resource basin management plans for the Tumbes and Chira-Piura basins, which present agreed-upon solutions for the national-level management of the basins. In Ecuador there are general guidelines and a management plan for the Catamayo- Chira basin	One (01) SAP developed related to cross-border issues complemented by the National Strategic Action Plans NAPs (score of 4 in IW Program Tracking tool). These are programs focused on water resources that will solve problems common to both countries and will be based on the information gathered in the TDA under Outcome 1.	Three SAPs, one for each basin, were developed and approved by both countries. At TE, the National Strategic Action Plans were under development. It is expected that by project closure the NAPs will be completed. The SAPs were produced through a participatory process with active consultation and workshops with local stakeholders, especially with the ones from water and sanitation sector. A study had been carried out to estimate the investments necessary for SAP implementation (indicator #25).	The SAPs included main strategic objectives, capacity building needs, indicators for M&E, priority projects, possible financing sources, and a proposal of governance structure. The SAP did not include clear commitments, time frames, and concrete spatial definition of key TB concerns, especially the ones related to ecosystems management, waste management, mining activities, and climate change and variability. It is recommended that these issues should be addressed at the NAPs, currently under development. The SAP showed limited consideration regarding Water-Food-Energy-Ecosystems nexus. GEF recommends the SAP to be endorsed by the highest possible level as an official governmental strategy. Project partners were encouraged to endorse it before the beginning of next phase of the project. It is recommended that the NAPs should be discussed and incorporate inputs and perspectives from other governmental sectors, see comment below regarding indicator #4.	S

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rating
#4 - National Inter-ministerial Committees	Neither Ecuador nor Peru have established National Interministerial Committees to address IWRM issues	National Interministerial Committees established and functioning in both Ecuador and Peru (score of 3 on IW tracking tool)	There were three political and technical binational coordinating entities for discussing and developing arrangements for the management of transboundary watersheds, namely: the BC9RB, the Binational Technical Group Water Quality Monitoring Protocol, and the Inter-ministerial Coordination process to establish the TDA-SAP geoportal (GIS).	None of these coordination entities had fulfilled the role of National Inter-ministerial Committees as per indicated on GEF IW guidelines and ProDoc. The project was expected to promote the existence of these coordination spaces with a view to enhancing the sustainability of project impact. Within the project there was participation of the governmental actors responsible for external affairs and environment (they were members of SC). Nevertheless, for effective management of water it is necessary to include other relevant governments actors, such as line ministries of Finance, Health, Mining, Agriculture, Infrastructure, Urban Development, and Science.	MU
#5 - Proposed regulations to strengthen the Binational Commissions	There are no general operating rules or procedures to guide the establishment and operation of Binational Commissions[1].	Proposed operational procedures / regulations developed to guide the establishment of Binational Commissions and to strengthen the current Zarumilla Commission	Operational procedures and regulations of Binational Commission of the nine river basins were developed. The Binational Commission was established.	This indicator was closely linked to general indicator G4 above. The ITWRM project was formally recognized as a relevant actor that helped to establish the Binational Commission.	HS
#6 - M&E indicators to measure environmental and socioeconomic status of basins and aquifers and to monitor implementation of SAPs and NAPs	Such indicators have not been agreed upon.	Agreement on indicators to measure river basin and aquifer processes, stress reduction and environmental and socioeconomic status and level of implementation of SAPs/NAPs. Binational work plan agreed upon for joint monitoring in the 3 basins	Indicators were incorporated in the SAP of each basin. The indicators profile sheets are currently under development, and it is expected to be ready before project closure.	Seventeen indicators were agreed by both countries on the SAPs (6 indicators for Puyango-Tumbes, 6 for Catamayo-Chira and 7 for Zarumilla) aiming to monitor the implementation of the SAPs. Nevertheless, indicators had not addressed in detail aquifer-surface water processes, stress reduction, and socio-economic and environmental status. A Binational work plan for joint monitoring in the 3 basins was not agreed yet by the countries. A roadmap in order to develop a binational protocol on water quality for transboundary basins was put in motion by project partners.	MS
#7 - % of officials from ANA, SENAGUA, water user boards, water resource basin councils and local governments trained on IWRM (specific topics of training described in description of Output 2.4[2])	0 % have been trained on these issues. Isolated training has been provided on various topics (such as 'water culture').	In Ecuador: **e1** - At least 60% of members of water user boards trained in each pilot area. **e2** - At least 60% of SENAGUA officials in the Puyango Catamayo Demarcation trained **e3** - At least 60% of SENAGUA officials in the Jubones Demarcation trained	Ecuador: **e1** – 39 members of the water boards of Guineo Chico, Limones and Sanguillín trained **e2** – 90% (26 people) of SENAGUA officials in the Puyango Catamayo Demarcation trained **e3** - 86% (12 people) of SENAGUA officials in the Jubones Demarcation trained	This indicator had 9 end-of-project targets (6 for Ecuador and 3 for Peru). The Output 2.4 was on 65% execution rate at December 2019. Ecuador concluded the capacitation courses on November 2019 with the total participation of 622 people (this number included participants of projects workshops and meetings, i.e. TDA/SAP). At 28 February 2020, it was reported the participation of 310 people on projects' workshops and meeting in Peru. Nevertheless, the actual capacity building trainings in Peru (as described on Output 2.4) began on February-March 2020. The COVID-19 pandemic was affecting the delivery of these courses. The evaluator identified participation of the staff of local community people, officials of	S

[1] For the Zarumilla Binational Commission there are statutes, internal regulations and a draft operational regulation for the Zarumilla aquifer. There are some instruments but the concerted institutionality has not been developed.

[2] Output 2.4. Targeted capacity building programs for national and local stakeholders strengthen implementation of ITWRM and related decision-making

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rating
		e4 -At least two (2) parish-level GADs in each pilot area involved in training activities **e5** - At least one (1) canton-level GADs involved in each pilot area in education and training activities. **e6** - At least one (1) provincial-level GAD involved in education and training activities In Peru: **p1** - At least 60% of officials of the ALAs trained in each pilot area **p2** - At least one (1) basin council involved in training activities in each pilot area. **p3** - At least one (1) regional government involved in training activities in each pilot area.	**e4** – representatives of 3 parish-level GADs were involved in training activities **e5** – 4 canton-level GADs were involved in training activities **e6** – representatives 2 provincial-level GADs involved in training activities In Peru: **p1** – 74% (20 of 27) of officials of ALAs Tumbes, Chira and San Lorenzo were trained **p2** – 2 basin council (Tumbes and Chira-Piura) were involved in training activities **p3** – 2 regional government (Tumbes and Piura) were involved in training activities	the water and sanitation sector in the workshops and capacity building activities delivered by the project. It is recommended to carry out a study at the end of the project to measure the application of this knowledge on IWRM.	
Outcome 3 - Pre-SAP demonstrations in IWRM implemented and investment needs in Puyango- Tumbes, Catamayo-Chira and Zarumilla aquifers and watersheds identified					
#8 - Pilot 1 (Ecuador) Number of protection zones in mini watersheds for the catchment of water for human consumption.	Although there are areas dedicated to the conservation of forests and paramos, there are no water protection zones within the canton, nor is there a technical-administrative mechanism for the declaration of water conservation zones in the country. Possible areas must have an action plan.	2 zones declared as water protection zones in the canton, according to the legal framework applicable in Ecuador, in the project´s intervention cantons.	0 zones declared as water protection zones in the canton, according to the legal framework applicable in Ecuador, in the project´s intervention cantons. The project developed two studies to support the achievement of this indicator[5]. Quebrada Flores hydrographic unit; Quebrada Chica hydrographic unit; and Masanamaca hydrographic unit were indicted as relevant water protection zones.	The methodology to declare water protection zones was applied in the three pilot areas (parochies of Sabanilla, Limones and Quinara). In December 2019, SENAGUA held a workshop on the socialization of the methodological guide for the delimitation of water protection zones. SENAGUA indicated that it will continue the internal process necessary to establish and apply the technical and regulatory-administrative instruments to declare these Water Protection Zones. The creation of the Water Protection Zones in Ecuador requires the approval of different instances within and outside SENAGUA. It is recommended that before project closure the authorities responsible to declare water protection zones reach a formal commitment and design a workplan to declare these water protection zones, according to the legal framework applicable in Ecuador, in the project´s intervention cantons.	MU
#9 - Pilot 1 (Ecuador) One pilot experience of reduction of pollution by domestic sewage in surface water, in cantón Loja	There are some wastewater decontamination facilities in the canton, but they are not widely extended. The municipality of Loja has plans to install WWTP in rural areas.	1 WWTP installed and operated in the rural area of the canton that complies with design parameters of sanitary civil works and meets the national standard on decontamination of wastewater	One system of 26 Basic Sanitary Units (BSUs) was constructed in the neighborhood El Atillo and there were made improvements of the Drinking Water System of the Sanguillín parish, both at the canton of Calvas	The pilot site changed to the Calvas canton (El Atillo), in part due to the lack of interest from the Municipality of Loja. Adaptative management is expected to take place in situations like this one. The pilot project was delivered in October 2019 and to date it has not presented any problems.	S

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rating
#10 - Pilot 2 (Ecuador) A project of Integral Management of Water Resources that considers Drinkable Water, Sanitation and interception of polluting effluents.	The sector does not have drinkable water and the discharge of domestic wastewater goes directly to receiving bodies, especially in rural areas.	1 drinking water system and 40 BSU installed and operating in Guineo Chico sector in the Sabanilla parish, which intercepts coliforms, fats and oils and prevents their discharge.	1 drinking water system and 40 basic sanitation units installed and operating in Guineo Chico sector in the Sabanilla parish, which intercepts coliforms, fats and oils and prevents their discharge into the environment.	The system finished on 2018 and has been operating satisfactory since them. It attended 176 people. A Management Model was designed for the Potable Water Board of Guineo Chico.	HS
#11 - Pilot 2 (Ecuador) Measures for agricultural pollution mitigation in water bodies.	There are local initiatives to reduce agricultural pollution, but they are dispersed and require social participation	Municipality and water boards involved have instruments and agreements to mitigate the water pollution produced by agricultural activities.	39 Potable Water Boards in the provinces of Loja (Pilot 2) and El Oro (Pilot 4) received materials to mitigate water pollution produced by agricultural activities, such as: plastic posts; barbed wire; geotextile mesh; drinking troughs for animals; hoses, among others.	Materials provided by the project had been used by the beneficiary and to some extent they are contributing to reduce agricultural pollution mitigation in water bodies. The Potable Water Boards came to an agreement with the project to use the material to protect water sources from the access of cattle and the risk of contamination from coliforms faecalis, aiming to mitigate the water pollution. Note: this indicator was mirrored with indicator #14.	S
#12 - Pilot 3 (Ecuador) Number of protection zones in mini watersheds for the catchment of water for human consumption.	There are no water protection zones within the canton, nor is there a technical-administrative mechanism for the declaration of water conservation zones in the country. Possible areas must have an action plan.	2 zones declared as water protection zones in the canton, according to the legal framework applicable in Ecuador	0 zones declared as water protection zones in the canton, according to the legal framework applicable in Ecuador.	Ditto Indicator #8 above.	MU
#13 - Pilot 4 (Ecuador) Reduction of water pollution by discharges of domestic wastewater	There is a wastewater treatment plan (WWTP) whose operation is not optimal	3 rehabilitated WWTPs that comply with the national regulations applicable to effluent discharges to freshwater bodies. The rehabilitation contemplates the protection of the WWTP in La Victoria by building a wall of breakwaters and the functional evaluation of all plants.	1 rehabilitated WWTP in San Vicente de El Jobo, cantoon Arenillas, povince de El Oro that comply with the national regulations applicable to effluent discharges to freshwater bodies, and the protection of the WWTP in La Victoria (las Lajas) by building a wall of breakwaters. A funcional evaluation of this plant was not delivered.	The project was expected to rehabilitate two more WWTPs. Project partners considered it was too of an ambitious indicator considering the resources available and the institutional-technical contexts. It was reported the lack of technical information about the existing WWTPs. The changes of local governments were also reported as factors affecting the achievement of this indicator. The rehabilitated WWTP was at El Oro province. The change from Las Lajas province (as indicated at ProDoc) to the El Oro province was due to the lack of interest from Las Lajas local government. The WWTP in San Vicente de El Jobo was delivered in November 2019.	MU
#14 - Pilot 4 (Ecuador) Measures for the mitigation of the agricultural pollution to the bodies of water.	There are local initiatives to reduce agricultural pollution, but they are dispersed and require participation and social control	Municipality and water boards involved have instruments and agreements to mitigate the water pollution produced by agricultural activities.	39 Potable Water Boards in the provinces of Loja (Pilot 2) and El Oro (Pilot 4) received materials to mitigate water pollution produced by agricultural activities, such as: plastic posts; barbed wire; geotextile mesh; drinking troughs for animals; hoses, among others.	Materials provided by the project had been used by the beneficiary and they are contributing to reduce agricultural pollution mitigation in water bodies. The Potable Water Boards came into an agreement with the project to use the material to protect water sources from the access of cattle and the risk of contamination from coliforms faecalis, aiming to mitigate the water pollution. Note: this indicator was mirrored with indicator #11.	S

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rating
#15 - Pilot 5 Chira River (Peru) Wastewater treated in WWTP complies with current MPL in: thermotolerant coliforms (NMP / 100ml), BOD (mg / l) and total suspended solids (ml / l).	Level of thermotolerant wastewater coliforms, BOD and total solids, exceeds MPL (DS No. 003-2010-MINAM)	Wastewater treated in WWTP complies with MPL (thermotolerant coliforms 10000 NMP / 100ml, BOD 100 mg / l and Total solids in suspension 150 ml / l).	Indicator not yet reached. The contract of the construction company to build the WWTP in Paimas was expected to take place between March-April 2020. At TE, the project expected to conclude the construction works on September 2020. The current pandemic of COVID-19 may jeopardize this expectation.	The severe delay of the activities related to this indicator was attributed to the lack of applications for the two call of offers to the construction of the system. The GEF funds were used to buy materials and equipment, and the municipality of Paimas agreed to construct the WWTP. There was a commitment to co-finance in-kind of USD 100,000 from the Municipality of Paimas (30% of WWTP cost). The WWTP was expected to benefit 1800 rural people in poverty conditions. The improvement of the treatment of 6.15 liters per second of wastewater, was expected to enhance quality of the Quiroz River, at Catamayo Binational Basin.	MU
#16 - Pilot 5 Chira River (Peru) Management model of WWTP and reuse of wastewater implemented allows good and correct operation and maintenance of the plant.	There is no appropriate management model for WWTP and wastewater reuse.	WWTP and wastewater reuse, managed locally, presents adequate operating and maintenance conditions.	A study for the Management Model for Water and Sanitation Services in Paimas district was produced by the project in December 2019. Capacity building training for the implementation of the Management Model was delivered by the project. Wastewater reuse was not properly addressed in the Management Model.	The management model study presented a proposal for tariffs systems, a draft municipal resolution to implement the tariff system and guidelines for the implementation of the Municipal Management Unit. In February 2020, the Municipality of Paimas, through Municipal Ordinance No. 001-2020-MDP, has created the Municipal Management Unit to provide W&S services. This could be considered an important milestone – the commitment of the municipality to assume the management of the services and contribute with resources to their improvement. Despite these achievements, due to the late delivery of the output (the study) and the delay in the construction of the WWTP (see indicator #15) there were not yet changes in operational and maintenance conditions of the WWTP.	U
#17 - Pilot 5 Chira River (Peru) Number of cross-border basin institutions and organizations involved in the implementation of pilot projects.	There are no project pilots	At least 20 cross-border watershed institutions and organizations participate and support the implementation of pilot projects.	23 cross-border watershed institutions and organizations participate and support the implementation of pilot projects.	Several of these institutions participated on project activities (i.e. capacity building).	HS
#18 - Pilot 6 Chira River (Peru) Population that accesses campaigns, through communication media, in IWRM and water culture.	None at the start of project	30% of the population of priority districts (30% of 29,834)	15,815 people, 54% of the population, had been reached through radio and print communication campaign in Suyo, Paimas, Jililí y Montero.	The project produced and disseminated communication campaigns, through social media, booklets, brochures and posters, radio programs on water culture, press releases, on themes related to IWRM and water culture. Nevertheless, this indicator did not consider the impact of these campaigns.	HS
#19 - Pilot 6 Chira River (Peru) Number of agricultural and population water users participating in training events in efficient use and water conservation.	None at the start of project	At least 100 leaders of agrarian and population water user organizations have received trainings in efficient use and conservation of water	131 leaders of agrarian and population water user organizations (106 men and 25 women) have received trainings in efficient use and conservation of water.	The end of project target was exceeded by 30%. Nevertheless, there was noticed a high gender unbalance (only 19% of the participants were women). The training included capacity building courses and workshops on themes such as operation and maintenance of WWTP in rural areas, W&S management models, IWRM, sustainable use of water, etc.	S
#20 - Pilot 7 Tumbes River (Peru) Wastewater treated	Level of thermotolerant wastewater coliforms,	Wastewater treated in WWTP complies with MPL	Indicator not reached. Technical and feasibility studies were	The WWTP was not constructed, due in part to several technical and managerial problems, such as low quality of the technical	U

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rating
in WWTP complies with current MPL in: thermotolerant coliforms (NMP / 100ml), BOD (mg / l) and total suspended solids (ml / l).	BOD and total solids, exceeds MPL (DS No. 003-2010-MINAM)	(thermotolerant coliforms 10000 NMP / 100ml, BOD 100 mg / l and Total solids in suspension 150 ml / l).	developed for a Pilot Project on Wastewater Reuse Irrigation System (crops and forest plantations) in Pampas de Hospital.	studies available, and long periods of time required to receive authorization for water reuse. The project carried out improvements on the existing WWTP in Pampas del Hospital, such as the correction of deficiencies in the inlet gutter and filtering system. No formal evidence was provided regarding how these improvements contributed to reach a correct operation.	
#21 - Pilot 7 Tumbes River (Peru) Management model of WWTP and reuse of wastewater implemented allows good and correct operation and maintenance.	There is no appropriate management model for WWTP and wastewater reuse.	WWTP and wastewater reuse, managed locally, presents adequate operating and maintenance conditions.	Indicator not reached.	Project reports that a Management Model of WWTP was prepared to strengthen organizations that would operate and maintain the WWTPs in Paimas (Piura) indicator #16, and that this Management Model could be adapted latter to the WWTP of Pampas del Hospital (Tumbes).	HU
#22 - Pilot 8 Tumbes River (Peru) Population that accesses campaigns, through communication media, in IWRM and water culture.	None at the start of project	30% of the population of priority districts (30% of 49,706)	47,891 people (95% of the population) had been reached through radio and print communication campaign on themes related to IWRM and water culture	The project produced and disseminated communication campaigns, through social media, booklets, brochures and posters, radio programs on water culture, press releases, in Pampas de Hospital, San Jacinto, San Juan de la Virgen, Corrales, Tumbes y La Cruz. Nevertheless, this indicator did not consider the impact of these campaigns.	HS
#23 - Pilot 8 Tumbes River (Peru) Number of agricultural and population water users participating in training events in efficient use and water conservation.	None at the start of project	At least 100 leaders of agrarian and population water user organizations have received trainings in efficient use and conservation of water	84 leaders of agrarian and population water user organizations (57 men and 27 women) have received trainings in efficient use and conservation of water.	The project came close to achieve this end of project target and, in comparison with other activities of the project (see indicator #19), it achieved a better gender balance but yet not enough to promote equity (32% of the participants were women). The training included capacity building courses and workshops on themes such as operation and maintenance of WWTP in rural areas, W&S management models, IWRM, sustainable use of water, etc.	S
#24 - Information (documents / products) of the project, good practices and systematized experiences, shared through website	Since the project has not yet been launched, there has been no exchange of project documents / products or dissemination of project best practices. Lessons learned from the Zarumilla Binational Commission's work have been identified.	Project website running according to IW:LEARN guidelines, updated regularly, and information shared through participation in the International Water Conferences 8 (in 2015) and 9 (in 2017) and other media.	Project website running according to IW:LEARN guidelines, and information shared through participation in the 9th GEF Biennial International Waters Conference and other media, such as radio message and programs, brochures, calendar-posters, etc. The project also used Twitter and Facebook to reinforce the information and communication with general public.	The project website at IW:LEARN was created on the last year of the implementation (August 2019), due in part to the relatively low level of priority of the project communication strategy in the first half of the project. Before August 2019, project information was dispersed on several websites: UNDP, GEF, SENAGUA. The project website so far contained background information about the project, and basic information such as news from last year, brochures, videos and some pictures. So far, it did not contain the major documents and products of the project, such as TDA/SAPs. The PCU informed that once formally approved by EA and IA the main documents produced by the project (i.e. TDA/SAPs, Gender Strategy, Hydrogeological Studies, etc) will be available for download at the project website.	MS
#25 - Investment needed for IWRM in the three identified basins and aquifers.	At present, a comprehensive financial analysis of the investment needs in IWRM has not	Prefeasibility studies of the investments required for IWRM in the three shared	Prefeasibility studies of the investments required for IWRM in the three shared watersheds	On 21 October 2019, the contract for the "Preparation of the National Strategic Action Plans (PNAEs) in Ecuador and Peru, and the cost of the necessary investments for the implementation of the Strategic Action Programs" was signed. This work was in	MS

Indicator (code / description)	Baseline	End of project target	End of project status as per TE	Terminal Evaluation Comments	Rat-ing
	been carried out for the three watersheds.	watersheds and aquifers completed	and aquifers were not yet completed.	execution simultaneously with the TE and it is expected that the product will be delivered before project closure.	

Legend - Color Codes

Achievement of the Target by End-of-Project
Green: completed, indicator shows successful achievement
Yellow: indicator shows expected completion by the end of the project
Red: indicator shows poor achievement – unlikely to be completed by project closure

TE Rating
Highly Satisfactory (HS): The project had no shortcomings
Satisfactory (S): there were only minor shortcomings
Moderately Satisfactory (MS): there were moderate shortcomings
Moderately Unsatisfactory (MU): the project had significant shortcomings
Unsatisfactory (U): there were major shortcomings
Highly Unsatisfactory (HU): The project had severe shortcomings

100. The relevance of the project to UNDP priorities at Ecuador and Peru could be noticed by its alignment with key UNDAF outcomes. The project involved over 30 public institutions and local organizations promoting their strengthening of skills and developing tools to manage better transboundary water resources. However, the project, since its design, did not take full advantage of the opportunity to safeguard a healthy and safe environment, including building capacitates for integrated natural resource management (i.e. protection of critical ecosystem for the provision of water). To safeguard a healthy and safe environment was one of the key aspects of UNDAF 2015-2018 Outcome 5 in Ecuador. Furthermore, the project, with an active involvement of the national governments, designed and strengthened water policies, programs and plans (i.e. TDA/SAP), contributing to the achievement of UNDAF 2012-2016 Outcome 4 in Peru. It should be noted that this UNDAF outcome was expected to be achieved with 'the private sector, scientific and academic institutions', but the limited participation of these stakeholders was one of the shortcomings of the project.

101. The project was relevant to several results of GEF5 IW focal area objectives, especially IW-3 outcomes 3.1 and 3.2. The project increased, in both countries, political commitment, shared vision, and institutional capacity for management of waterbodies. Nonetheless, the project only partially considered the ecosystem approach and did not adopted a solid integration with local coastal management principles (both ecosystem and source-to-sea approaches were core elements of GEF5 IW outcome 3.1). The project implemented on-the-ground demonstration actions that contributed to improve water quantity and quality in three transboundary water basins (GEF5 IW outcome 3.2).

102. In 2015, coinciding with the project start-up, the Sustainable Development Goals were adopted by the UN General Assembly through its 193 member states, including Ecuador and Peru. The project had been contributing to achieve SDG 6, specially, but not limited, to target 6.5. Although, the project, through its planning and reporting documents/strategies, has not adequately taken yet into consideration its positive contributions towards water related SDGs, their targets and indicator (i.e. SDGs were not mentioned in the SAPs). Nevertheless, the countries had been considering these positive contributions. For example, Peruvian reports of SGD 6 recognize the outcomes of the project.

Effectiveness & Efficiency*

103. The project is achieving its **overall objective** "Strengthening institutional, policy, legal and scientific-technical capacities to implement ITWRM". All five general indicators were achieved or were expected to be achieved by project closure and their achievement were rated as high satisfactory or satisfactory. The project delivered training for more than 600 stakeholders of the water and sanitation sector (indicator G1). It is recommended to carry out a study at the end of the project to measure the application of the beneficiaries' knowledge on IWRM. The project covered an area of influence (indicator G2) and number of beneficiaries (indicator G3) above the target. The creation of the Binational Commission of the nine river basins was a relevant landmark (indicator G4). Five management models for water and sanitation had been delivered under the IWRM approach in the areas of pilot projects (indicator G5), however by project closure they would not be fully implemented. It is recommended to SENAGUA and ANA to track the implementation of the models and to measure the compliance with water quality standards.

104. **Outcome 1** is expected to be reached by project closure, with the conclusion of the hydrogeological study for the Zarumilla aquifer (indicator #1 referring to output 1.1). TDA was approved by both countries (indicator #2 referring to output 1.2), what was indeed an important foundational block for transboundary cooperation. Nevertheless, it was produced with limited information on groundwater due to the delay on the hydrogeological studies. The

scope of the hydrogeological studies was also limited to the smallest aquifer (Zarumilla) and the studies of the Alto Piura and Catamayo-Loja aquifers were parked aside.

105. Regarding **outcome 2 '**Strategic planning and capacity building carried out to strengthen governance' 80% of the indicators are expected to be reached before project closure. The SPAs for the three basins were developed and NAPs are currently under development (indicator #3 referring to output 2.1)[6]. Nonetheless, there were some relevant observations regarding the scope of the SAPs/NAPs (see Table 4 indicator #3). One relevant element for this output is the establishment of the National Inter-ministerial Committees (indicator #4 referring to output 2.1) but has not been yet established (see detailed information at para. 115). Therefore, the SAP process and the project impact did not benefit by any effective mean to promote inter-ministerial communication, discussion, and cooperation with key development sectors of the government beyond water-environment sector. The Binational Commission of the nine river basins (indicator #5 referring to output 2.3) established in 2018, formally recognized the project as a relevant actor that helped to establish this Binational Commission. Seventeen indicators to monitor the implementation of the SAPs were agreed by both countries and their profile sheets are currently under development (indicator #6 referring to output 2.2). Indicator #7, referring to output 2.4 'Targeted capacity building for national and local stakeholders strengthens implementation of ITWRM´, was achieved based on the 9 end-of-project sub-targets.

106. Outcome 3 was expected to be achieved by four outputs. On one hand, nine of the indicators of **outputs 3.1 and 3.2 (pilot projects)** showed good performance: a drinking water system and 40 basic sanitation units were installed and operating in Guineo Chico (indicator #10); 39 Potable Water Boards in the provinces of Loja and El Oro had instruments to mitigate the water pollution produced by agricultural activities (indicators #11 and #14); 23 cross-border watershed institutions and organizations participate and support the implementation of pilot projects (indicator #17); more than 63,000 people in the priority districts of the pilot projects in Peru had been reached through radio and print communication campaign on themes related to IWRM and water culture (indicators #18 and #22); and 215 leaders of agrarian and population water user organizations (163 men and 52 women) have received trainings in efficient use and conservation of water (indicators #19 and #23). On the other hand, seven indicators were not fully achieved: despite some progress no water protection zone was declared (indicators #8 and #12); from the five WWTPs that were expected to be rehabilitated to comply with water quality standards (indicators #13, #15 and #20) only one was operational; and WWTPs and wastewater reuse had been managed in similar operational and maintenance condition as to the baseline (indicators #16 and #21). Recommendations regarding scaling-up and monitoring these initiatives could contribute to increase the impact of the project.

107. Indicator #24, which referred to output 3.3 'Knowledge management and dissemination increase uptake of best practices', was expected to be completed by end of the project. It should be noted that indicator #24 was poorly formulated and knowledge management and dissemination was one of the bottlenecks of the project since its design. The prefeasibility studies of the investments required for the implementation of the Strategic Action Programs (indicator #25 referring to output 3.4) are currently under development and it is expected to be one of the last products to be delivered by the project.

108. The effectiveness of the project was rated as **Satisfactory**. Despite the implementation problems on the first two years of the project, the intervention's objective is expected to be achieved by project closure. Since 2018, the intervention has attained its outcomes with a fair amount of efficiency and a positive institutional development impact. The most relevant outputs to achieve the outcomes were delivered (i.e. outputs 1.2, 2.1, 3.4). Furthermore,

project partners are engaged in continue working together to increase the impact of the project after the end of GEF assistance.

109. The efficiency of the intervention assesses how resources / inputs (funds, expertise, time, etc.) were converted to results. The project was implemented in accordance with GEF, IA and EAs norms and standards. As described on paragraphs 73 to 77, the financial and accounting systems have been adequate for project management and for producing accurate and timely financial information. The project applied proper adaptive management to ensure efficient use of resources. The budget adjustments, when necessary, followed the processes and instructions provided by UNDP and were in accordance with the rules of the donor.

110. The results-based management approach has grown through the implementation of the project. At the beginning, there was not a solid understanding by the governmental institutions about the relevance and implications of RBM on a GEF project. There was also noticed some lack of capacity of the national project partners to work under RBM framework. The PCU, and to some extent the UNDP, had to constantly bring the focus to RBM approach to the project management process. During the project closing stage, it has been noticed that this effort has brought results and most of the project partners have understood and supported the RBM approach.

111. Given paragraphs 109 and 110, the project, to some extent, has efficiently used the available resources (funds, personnel and time). However, there was a significant delay on the implementation during the first two years, the project did not adopt an Implementation Plan and response times were higher than ideal. Approval system and decision-making process were perceived by project partners as centralized and with too many layers of approval. Neither at project design nor at project inception, operation mechanisms were defined for the day-to-day management of the project, in order to give autonomy and agility for execution of the project. For example, even minor expenses, such as the purchasing of regular office materials and cleaning supplies, depended of the approval from the project director. This situation was particularly relevant in Peru, where PCU was located in Tumbes and project director was located in Lima, and where there were also longer times of response. Lack of institutional culture and/or dispositions towards delegation of responsibilities from the authorities to the technicians were perceived by project partners as one of the reasons to centralize decisions on the hands of the project directors, who were not ways in a position to provide prompt response, generating bottlenecks and delays. There was the search, especially on the last years, for a more efficient delegation of power on the day-to-day decision making and the approval of intermediary products. Among the factors that affected the efficiency of the project, it was the frequent turnover of project staff, authorities, and decision makers at EAs and IAs (see para. 63 and 95). The efficiency of the project was rated as **Moderately Satisfactory**.

Country ownership

112. ANA and SENAGUA were at the driver's seat and had a **high ownership** of the project outcomes. Both institutions were engaged during the project´s identification, planning and implementation. On one hand, their active role fostered the involvement of government officials contributing to the project sustainability. On the other hand, there was the perception that the project brought an additional workload to the government officials engaged with the project execution. The high level of engagement of ANA and SENAGUA was also relevant to build trust, enhance the channels of communications, and foster cooperation between the agencies and their staff.

113. The outcomes from the project, especially the SAPs/NAPs, had not been yet **mainstreamed into the national sectoral and development plans**. Project partners

indicated that one of the reasons to not mainstream yet the SAP and NAPs, was that the former had just been developed and the latter was being developed at the time. Nevertheless, the construction process of these planning instruments was, to some extent, carried out without an effective involvement of major development and sectorial institutions beyond the water sector, leaving the possibility of incidence on national sectorial and development plans/institutions such as *Planifica Ecuador* and *Programa de Reconstrucción con Cambios* to a future phase. However, project partners showed commitment to promoting the endorsement of the SAP as an official governmental strategy of the highest possible level. The Binational Commission of the nine river basins and the Annual Binational Presidential Meetings were presented as potential mechanisms to bring the SAP a possible bi-national endorsement at the presidential level.

114. To improve sustainability of SAPs/NAPs activities and priority projects, it will be necessary to **mainstream** them into national strategies/programmes and relevant regional initiatives within and, especially, beyond the water sector[7]. Mainstreaming will pave the way for institutions inside and outside the sphere of the project to eventually capture SAPs/NAPs activities in their annual budgets, especially for purposes of leveraging resources.

115. As mentioned on paras 59 and 105, **National Inter-Ministerial Committees** (NICs) could had been relevant mechanisms for national crosscutting coordination during the project and for building commitments for the implementation of SAP after the project closure. Nevertheless, putting in place an effective Inter-Ministerial Committee is not an easy task. As mentioned on paras. 133 and 138, there were in place relevant mechanisms for binational coordinating for the management of transboundary watersheds, namely: the BC9RB, the Zarumilla Commission, the Binational Technical Group Water Quality Monitoring Protocol, and the Binational High-Level Ministerial meetings (*Gabinetes Binacionales*). These mechanisms had formally recognized the contribution of the 3 Basins Project towards binational coordinating. Nevertheless, none of these coordination entities had fulfilled the role of National Inter-ministerial Committees as per indicated on GEF IW guidelines and ProDoc. It should be noted that both the GEF IW guidelines on NICs and the description of the NICs for this project at ProDoc were, to some extent, not precise and left room for the project partners to define, during the implementation phase, the most effective ways to promote national coordination at ministerial level, using if possible existing mechanisms and instruments. It is recommended that before the GEF assistance is ceased, project partners discuss effective means to promote inter-ministerial coordination with key development sectors of the government beyond water sector, such as line ministries of Finance, Health, Mining, Agriculture, Fisheries, Infrastructure, Urban Development, Science, and Planning.

116. The **project SC** was a mean to promote inter-ministerial coordination between water, environment, and foreign affairs. Although the number of SC members seems to be relatively high (3 representatives from each country), it was a good strategy to increase country ownership and to guarantee the involvement at the decision level of these key governmental decision-makers: water, environment, and foreign affairs. Two elements came into consideration regarding the SC: i) the project could have benefited from increasing the level of engagement of the Ministries of Environment and Foreign affairs on the construction of TDA/SAPs/NAPs (these processes engaged mostly ANA/SENAGUA and local/regional water and sanitation actors); ii) SC should have a more strategic engagement and do not aim to micro-manage the project.

117. To **mainstream** a GEF project internally into large governmental institutions is not a trivial task. Ministries of Environment and Foreign Affairs, and Water Agencies are huge institutions with many departments and sectors. Sometimes it is necessary to identify, since the project design, means to promote an active institutional involvement that goes beyond the

participation of the institution's representative in the SC meetings and includes some "voluntary-base collaboration". Good practices to promote the in-house mainstream of a GEF project include high-level commitment, combined with agreed-upon internal Communication and Engagement plans with monitoring and feedback mechanisms, and assignation of resources both from the project and the institutions.

118. The project involved several local institutions from the water sector, such as the AAA (Autonomous Water Authority), ALAs (Local Water Authority), SENAGUA DHs (Hydrographic Demarcations), Water Boards, River Committees, GADs (Decentralized Autonomous Governments) and regional/local governments, on the development of main project outputs (capacity building, pilot projects, TDA/SAP/NAPs). This engagement fostered the country ownership of the project outcomes. It is also relevant to promote mainstreaming at local/regional level with other governmental actors beyond water and sanitation sector. This could be done for example, by engaging formally with the four regional governments of the border (Tumbes, Piura, Loja and Machala) and major municipalities, and by making incidence of the projects outputs (i.e. SAPs/NAPs) on the local and regional planning process and sectorial initiatives related to agriculture, mining, urban development, planning-finance, environment (i.e. Regional Environmental Commissions of Tumbes and Piura), poverty reduction, and disaster responsa/prevention. It is recommended that the exit strategy incorporates means to promote this engagement, and that the design and implementation of the next phase of the project is carried out with the consultation and involvement of these actors. These could contribute to increase the sustainability of the results of the current project and to improve its likelihood of impact.

119. The project had a limited engagement of NGOs, Universities and private sector (see paras 68 and 69). Both countries have solid universities on the border region that have experience on water resources and environment, very active NGOs (such as NCI, IRAGER, FORAGUA, Fondo del Agua Quizos-Chira) working in similar themes on the region, and unmapped set of private sector actors relevant for river basin management. The second phase of the project could increase country ownership by including these actors from the initial discussions of the project design. They should also be considered as target audience to make incidence and search for collaboration/synergies regarding the SAPs/NAPs processes that are happening during the closure of the project and should continue as the next phase of the project begins. It is recommended to consider these issues on the exit strategy of the project.

Mainstreaming

120. According to UNDP guidance, this session should address how the project mainstreamed with a) UNDAF/CPD; b) sustainable livelihoods and poverty/environment nexus; c) crisis prevention and recovery; d) gender. The project document acknowledged UNDP priorities as set out in the UNDAF and CPD that frame the UNDP assistance in each country. Paragraphs 29 and 100 describes the alignment and relevance of the project for the UNDAF and CPD.

121. The project recognized the UNDP focus on **sustainable livelihoods** related to water and sanitation needs in the region. The implementation of the pilot projects had positive effects on local populations (i.e. construction of potable water and sanitation). Capacity building and communication campaigns on ITWRM also contributed to indirectly address the poverty-environment nexus. In a broader sense, the project, since its design, had a limited reach regarding other relevant elements of UNDP poverty-environment nexus and sustainable livelihood approach such as: improved natural resource management arrangements with local groups and regeneration of natural resources for long term sustainability. It is recommended that the next phase of the project integrates better in its design elements to

strengthen sustainable livelihood and to address core issues of the poverty-environment nexus that were identified in the TDA as root causes of the environmental problems.

122. The project considered, to some extent, the connection between water management and disaster management. This connection was built mostly upon the inclusion of adaptation to **climate change and variability** into the TDA/SAP. While the TDA considered the impacts of CC and variability as one of the main transboundary problems, the SPAs focused on the development of mechanisms to mitigate and adapt to CC and variability as one of the general objectives. Each SAP also indicated as one of the priority-projects the development of binational strategies for risk management and/or strategies about adaptation and mitigation of CC. One of the 12 project's profile currently under development is about "Risk Management and Early Warning Systems for the 3 basins". The pilot projects promoted the increase of water supply and safe sanitation, which are relevant to increase resilience to climate change. Since the ProDoc stage, it was expected that the project would give special attention to CC and variability concerns. This was in line with requirements of GEF-5 to "adequate mainstreaming climate change and variability priorities within all IW projects".

123. Nevertheless, there were some **limitations regarding the CC approach** of the project. The pilot projects did not adopt a proper climate risk screening in its design and implementation. There was no record that major experts or decision makers on themes related to risk assessment, prevention, mitigation and response to disaster had been involved in the formulation of the formulation of the TDA, SAPs, and NAPs. However, it was indicated in the ProDoc that the project would "maintain contact with the relevant climate change authorities in each country during project implementation in order to obtain guidance on how to mainstream climate change issues in the project". The TDA did not include an analysis of climate trends/sceneries with its three categories as described in the 3rd National Communication to UNFCC (Peru 2016 and Ecuador 2017), nor an estimation of future water balance, nor a convincing description of the chains of effects and consequences that climate change impacts may be causing in water availability and quality.

124. To a large extent, the way the SAPs addressed climate change and variability was broad, imprecise (especially regarding geospatial location, time, magnitude, and frequency of the impact), not properly rooted on scientific evidence, and with limited consideration of environmental, social and economic elements related to risk and exposure of the population. There was no evidence that the SAPs processes considered possible scenarios that could result from climate change and their impacts on the water resources and ecosystems (one of the guidelines from GEF-5 IW). It is recommended to include an indication of these limitations on the TDA/SAP and, if it is the case, inform the readers that these issues will be considered in the next revision of the TDA/SAPs (2028). It is also recommended to explore mechanisms to incorporate a proper climate change and variability approach on the upcoming activities on the three basins, i.e. through the exit strategy, and production of the PIF/ProDoc for the second phase of the project.

125. To some extent, the studies, institutional framework, pilots, and plans produced by the project (i.e. SAPs) will contribute in the mid and long term to reduce the vulnerability to climate change in the 3 basins. Nevertheless, no data to measure that contribution have been gathered by the project, so there is no evidence to assess the extent that the project outcomes are likely to contribute to better cope with natural disasters. However, it is recognized by project partners the potential that a GEF ITWRM project has to foster transboundary cooperation for crisis prevention and recovery in relation to environment and water. This potential could be explored better on the second phase of the project.

126. The ProDoc indicated that **gender** issues would be mainstreamed as "integral part of the development, implementation, monitoring and evaluation of the project". At project start-up (2016), gender was already a priority issue of UNDP and GEF, nevertheless the project was, to some extent, not gender sensitive during most of its life cycle. On 2018, MTE acknowledge this problem and recommended to define strategies to internalize gender perspective on the project process and its outputs. In the last year of the project (2019), a solid strategy to mainstream gender approach in the project was developed and some activities were implemented. This strategy had positive impacts on the project. Words like "memorable", "transformative" and "eye opener" were used to describe some activities that emerge from this strategy, which included capacity building workshops for gender mainstreaming into water resources.

127. It was clear that the project team tried to catch the pace, but it might had come too late to promote effective incidence on the project outputs. TDA did not present a clear assessment of how the impact of threats to the basins affects differently men and women. There is not solid evidence to assure that SAPs and NAPs were built with a suitable gender perspective, which would have ensured that proposed priority actions met the needs and expectations of both men and women. It is recommended that the project closure, exit strategy and the production of the PIF take into consideration all proposal and recommendations presented on the Gender Strategy developed on 2019. Furthermore, as a matter of urgency, the PCU should explore if and how would be feasible to include properly the gender perspective in the products that are currently being developed (i.e. NAPs and economic estimation for SAP implementation). Gender mainstream should also be considered as a relevance element during the intersectional phase and in the design of the project for the second phase.

Sustainability*

128. According to GEF-UNDP guidelines, this terminal evaluation assessed the extent to which benefits from the project were likely to continue after GEF assistance has come to an end. Sustainability was assessed by four perspectives: i) financial resources; ii) socio-political; iii) institutional framework and governance; and iv) environmental.

129. Project outcomes have a moderate dependency on **future funding / financial flows** to persist. Some project products do not require direct further financial inputs to be maintained, e.g. output 1.1 "Hydrogeological studies". However, in order to derive benefits from these outputs, further management action and/or resources may still be needed e.g. to disseminate the hydrogeological studies aiming to make them known and used as tools for decision making.

130. Other direct outcomes are dependent on a continuous flow of action and resources, e.g. maintenance and expansion of the WWTPs (project pilots). The project came to an agreement with the local governments to transfer them the responsibility for maintenance of systems funded by GEF funds. Nevertheless, several water and sanitations systems of the region have not been properly maintained (i.e. the GEF project funded the improvement of two systems that had maintenance and expiation problems: El Atillo, Ecuador – pilot project #1, and Paimas, Peru – pilot project #5). Aiming to reduce the risk of lack of maintenance, the project developed management models for the water and sanitation systems implemented by the project (see para. 103). These models aimed at the self-management of these systems by the water boards and calculated a tariff for water users to maintain the system. Despite the relevance of the water and sanitation systems for local communities, the experience had demonstrated that a single water board, usually, can handle the ordinary maintenance and operation costs, but often cannot handle expensive replacements and investments (i.e. the substitution of a filtration equipment or the ampliation of the system).

The operational maintenance of several systems is highly dependent on the political will / priority of the local, regional, and national government. It is relevant to explore ways to bring financial sustainability for the maintenance and ampliation of the water and sanitation systems in the rural and peri urban areas of the basins.

131. Another element related to financial sustainability, is the scale of the financial resources needed to implement the SAPs. The project is currently developing a study of the necessary investments for the implementation of the SAPs. The SAPs include actions that are beyond the ANA and SENAGUA mandate, therefore these studies should have been done in close coordination with other financial actors of the basins, including line ministries, regional and local governments and private sector. It is very important to identify more than one potential source for each investment and start as soon as possible the articulation and engagement of these actors that could result in commitments for the implementation of the SAPs. The scale of the economic resources needed, and the financial limitations of the governments and private stakeholders of the basin probably will force the stakeholders to seek for external resources. It should be noted that the border region of Peru and Ecuador had been receiving substantial external aid since the peace agreement of 1998. The scale of the necessary resources for the IWRM of these basins are far beyond the GEF capacity / mandate to support. Therefore, the project partners are incentivized to explore additional sources to bring funds at scale, such as GCF (Green Climate Fund), and development banks active in the region, CAF (Latin American Development Bank), IDB (Interamerican Development Bank), and WB (World Bank).

132. Even considering the effort to present a project proposal for GEF aiming to receive funds for a second phase of the project, this effort could not be considered as an indication of financial sustainability. No evidence was found that the countries governments, major water users and regional/local authorities are bringing and/or will bring the necessary financial resources to sustain the benefits that were brought by the project. Nevertheless, it is rare and unlikely to achieve financial sustainability on a first phase of an GEF IW foundational project under the TDA/SAP approach. Therefore, the financial sustainability was rated Moderately Likely.

133. The continuation and further development of project benefits are highly dependent on **political will and social ownership**. It was noted different levels of ownership, interest, and commitment among the key actors. On one hand, there is a high level of **political** will to continue the collaborative work between Ecuador and Peru governments on the border region, reflected on the political platform that was created between the countries: Binational Commission of the nine river basins, Binational Protocol for the Monitoring Water Quality, Presidential Declarations, and Binational High Level Ministerial meetings (*Gabinetes Binacionales*). This brings a unique institutional arrangement for the ITWRM of the three basins (see para. 138). It is expected that this political platform will be crucial for the endorsement of the TDA/SAPs and to foster most of the recommendations and future work derived from this GEF project.

134. On the other hand, governmental actors outside the sphere of the water and sanitation sector, and key stakeholders of the basin, such as major water users, civil society, NGOs and Universities have little to no ownership and knowledge of the projects outcomes. In contrast, there is high ownership, interest and commitment among people and institutions that participated in the project, but it does not reach the sufficient level to be able to sustain the project outcomes beyond the project closure.

135. Weak mechanisms are in place to promote changes in social and political contexts. The project communication strategy was developed too late and still has to prove its effectiveness.

Despite the relevance of the studies, plans, models, and tools developed by the project, there was no effective knowledge management strategy to properly promote the use of this knowledge by the stakeholders outside the sphere of the project.

136. Furthermore, priorities like security, employment, health, economy, and education, and the crisis generated by the COVID-19 pandemic, unfortunately overshadow the relevance of sustainable development (water and environment) in the political and social agenda. The socio-political sustainability was rated Moderately Unlikely. However, it should be noted the high-level political will as described in paragraph 133.

137. Project benefits have a high dependency on, and sensitivity to, **institutional framework and governance** support. The project direct outcomes were achieved with a high degree of institutional support from the water agencies of the two countries, in collaboration with the ministries of foreign affairs, and the environment. For example, the most relevant output of this project, the SAPs, were delivered with the active engagement of several officials, experts and authorities of ANA and SENAGUA. To sustain the benefits to be brought by the SAPs, governance and institutional support toward the implementation of the SAP will need to be improved in a coordinated way and beyond the sphere of influence of the project.

138. The institutional framework of the binational cooperation among Peru and Ecuador on the border region is emblematic and probably the most promising collaborative effort among two countries in Latin America to jointly manage transboundary water resources. The Zarumilla Binational commission exists from over one decade and the cooperation process has been growing and maturing since the peace agreement of 1998. Currently, water resources are considered of high-level importance at the presidential agenda (Annual Presential Meetings) and both countries are cooperating to manage the nine river basins shared by them. The three basins of this project are at the center of the attention and both countries recognized the contribution of the GEF project to this process. At the moment, the Technical Secretariat of the BC9RB is under creation. Experts from both countries are working together to draft its rules and procedures. The success of the BC9RB could depend, to a large extent, on the success of its Technical Secretariat. It could be relevant to consider whether the secretariat would be a binational body that could mobilize and manage resources, receive resources from the governments, have a dedicated technical body, have presence on the field. In addition, it is important to consider its dependence degree on the capitals. All these elements could be relevant to guarantee capacity of execution, articulation and belonging to the territory. It should be also noted that despite some efforts to promote decentralization, both countries have a tradition and institutional culture of centralized decisions at their capitals. This can bring additional challenges to promote ITWRM in border regions, which are far from the decision's centers.

139. The project has held significant efforts to promote institutional capacity development on transboundary IWRM. On one hand, the capacity of relevant individuals who participated actively in project activities and workshops appear to be sustained. Several of these individuals, who were interviewed during data collection phase, were seen to exercise an increasing influence supporting the project's benefits. On the other hand, several of the targeted individuals engaged in the project have been moved to other assignments. The turnover of staff was high during project implementation and it is not expected to lower after project closure. The current process of reducing the size of the states is also affecting the maintenance of permanent personal in the governmental institutions. These situations increase the risk of turn overs especially affecting processes that take long time and effort, such as the transboundary management of river basins. These issues bring considerable uncertainty on how institutional capacity will be maintained and further expanded.

140. Regarding the institutional framework, two elements that were taking place during this evaluation should be considered: the fusion of SENAGUA and Ministry of Environment in Ecuador; and the COVID-19 crises. On March 2020, a presidential decree established the fusion of environment and water bodies into one single organization: Ministry of Environment and Water. On one hand, fusions of this nature bring insecurity to staff, could affect on-going processes, and usually takes time and resources to be consolidated. On the other hand, in the case of the GEF project, this fusion could help to increase the environmental relevance of the project outcomes and bring more environmental considerations to the next phase of the project, aiming for the global environmental benefits of the GEF mandate. Regarding the impacts of the coronavirus crisis, they are currently very uncertain, but there is the perception that countries economy will be severely impacted. This crisis could bring more challenges to guarantee funds and resources for the environment and water sectors. It is very relevant to persistently increase awareness of decision-makers on the economic value of ecosystems and water services for society (in monetary form if necessary) by clearly demonstrating its contribution to promote equitable and sustainable development.

141. There was not enough evidence to suggest that the current institutional framework and governance is robust enough to continue delivering the benefits of the project after its closure. There is hope that the positive Binational cooperation on the border can bring sustainability, but the actions to properly institutionalize most of the project plans, strategies, models and studies has not, to a large extent, yet been taken. The institutional sustainability was rated Moderately Unlikely.

142. Regarding **environmental sustainability**, for GEF IW foundational projects like this one, which produces plans, strategies, studies and models, merged with demonstrative on-the-ground projects, there should be applied a twofold approach. First, several of the projects benefits lies on technical products (TDA, SAPs, NAPs, Hydrogeological Studies, Management Models, etc.). They are not threatened by environmental risks, as a matter of fact, as environmental risk increases the perception of their value and relevance could increase. In order for this to be true, the project products should be well-known and appropriated by many stakeholders and decision makers. On a second fold, the pilot projects that delivered water and sanitation infrastructure could be affected by environmental risks. There was no evidence that risks related to drought and floods, changes in key ecosystem, variations on water availability and quality, and climate risk screening were explicitly addressed on these projects and that actions to mitigate them were in place by project closure. Despite this, the environmental sustainability was rated Moderately Likely.

143. The **overall rate for sustainability** is Moderately Unlikely. However, this evaluation recognizes the effort of the project partners to enhance the sustainability of the benefits derived by the project. It is rare to find a GEF IW or any ITWRM project that on its first phase achieves financial, social, political, and institutional sustainability. Transboundary Water projects are complex in nature and scope. It usually needs more time and resources to reach sustainability. It requires building trust, engagement, reaching agreements and coordinating activities between two or more countries. It has been demonstrated through the GEF IW portfolio that solid Communication, Stakeholders Engagement and Knowledge Management Strategies are relevant to promote higher levels of social, political and institutional sustainability that could lead to appropriate financial sustainability. It is recommended that the PIF and the ProDoc for the second phase of this project and other GEF IW projects or ITWRM initiatives to be planned or implemented by the project partners to position these elements at a higher level of priority with the assignation of appropriate resources.

Impact

144. The original ProDoc did not include a Theory of Change, as it was not a GEF requirement at the time. According to GEF-UNDP guidelines, this Terminal Evaluation constructed the Theory of Change (ToC) of the intervention aiming to assess the impact and catalytic effect of the project. The ToC was produced based on the project's results framework and ProDoc, using as reference the guidelines for GEF-5 IW strategies. Figure 2 presents the ToC diagram with a sequence from outputs / outcomes to intermediate states through to the desired impact. It indicates the process of change by outlining major causal pathways along the intervention.

145. As indicated by GEF guidelines, in foundation initiatives (i.e. international waters projects developing TDA/SAP), it may often be the case that stress reduction and/ or status change impacts cannot be discerned at project closure. Therefore, it should be considered whether the project has put in place the conditions (building blocks or process) that could eventually lead to impact (lasting improvements on socioeconomic and environmental status).

146. The project contributed significatively to bring momentum to the change process that was already being undertaken by Ecuador and Peru to coordinate the management of the transboundary water resources, especially on the Zarumilla river basin. To some extent this project helped to put in place relevant building blocks (i.e. TDA, SAPs, demonstration pilots, NAPs, models, and studies) and to foster processes (i.e. capacity building, institutional framework for binational cooperation, shared visions, increased cooperation and trust) that could lead eventually to the desired impact: the joint management of the three transboundary water systems with lasting improvements on socioeconomic and environmental status.

147. The impact of the intervention was rated as **Satisfactory**. However, it is recommended that this "first phase" of the 3 Basins project is followed by a second phase aiming to increase the sustainability of its achievements and the likelihood of its impact occurrence. To expand the catalytic effect of the intervention it is relevant to promote the scaling up/replication to regional and national levels of the demonstration projects and their lessons learned.

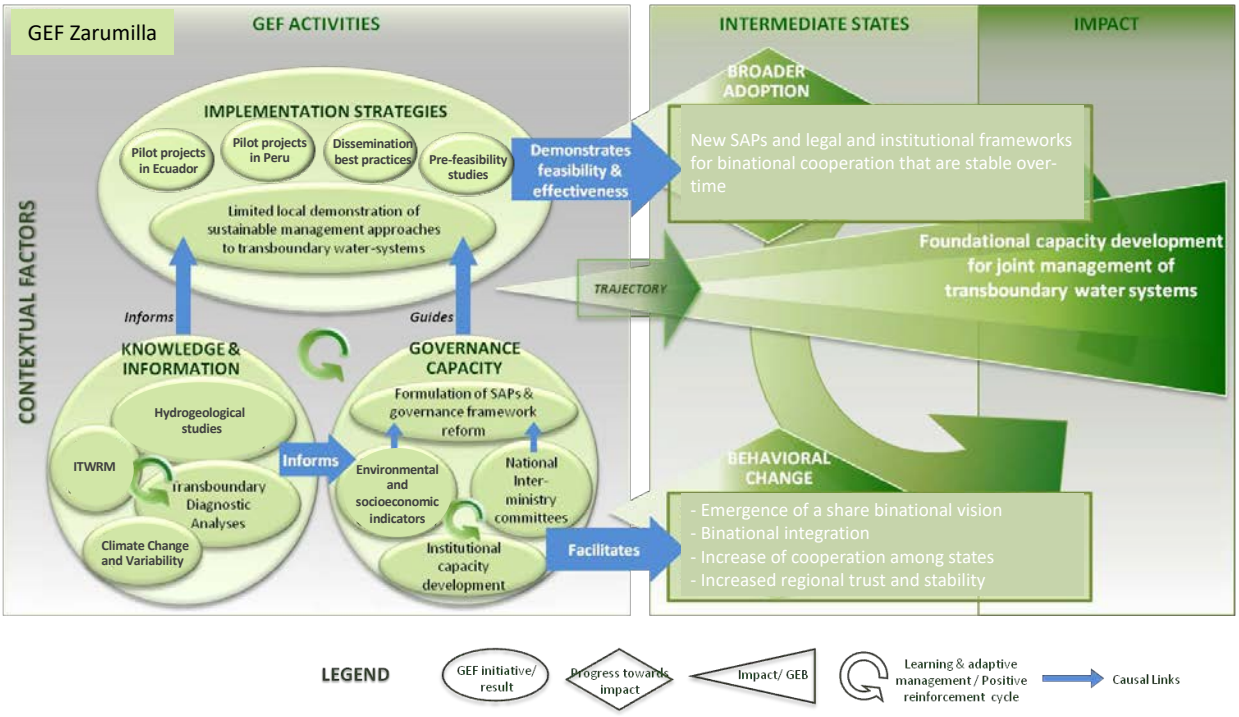

Figure 2 – Theory of Change GEF 3 Basins project

4. CONCLUSIONS, RECOMMENDATIONS & LESSONS

148. According to the UNDP guidance, this last section of the TE report is structured in four sub-sections: 1) Recommendations for the design, implementation, monitoring and evaluation of GEF IW projects; 2) Actions to follow up or reinforce initial benefits from the project; 3) Proposals for future directions underlining main objectives; and 4) Best and worst practices in addressing issues about relevance, performance and success.

149. The conclusions, recommendations and lessons presented here are substantiated by the evidence and findings of the TE. The conclusions aim to be comprehensive and provide insights for the identification of solutions to important issues that are pertinent to the project partners, beneficiaries, UNDP and GEF. The recommendations for the intended users aim to provide practical and feasible proposals to contribute to the main objective of the GEF 3 Basins Project.

150. The evaluation recognizes the effort and dedication of the project partners to design and implement this project. The GEF 3 Basins Project should be seen as the **first phase** of a long and complex work toward the integrated and sustainable management of the transboundary water resources of the Puyango-Tumbes, Catamayo-Chira and Zarumilla river basins and aquifers. The project, after a slow start, increased its implementation pace and achieved most of its expected results, fostered cooperation, developed capacities, promoted trust and effective binational collaboration.

151. Currently, the Governments of Ecuador and Peru, with the support of UNDP and the PCU, are constructing the PIF for a second phase of the project, aiming to present it for GEF approval as soon as possible. Nevertheless, in a few months the GEF assistance for this first phase will end, and the PCU will be demobilized. It is important that project partners understand that the 3 Basin project does not end with the demobilization of the PCU: it will enter an **intersectional period** (the time between the closure of the first PCU and the mobilization of the PCU for the second phase). During the intersectional period, the project partners host a great responsibility to sustain the outcomes from the first phase and allow a smooth and fast transition towards the second phase. It should be noted that the intersectional period of an IW multiphase project usually takes a couple of years or more. The conclusions, recommendations and lessons presented here might be of great value for the project partners to 'navigate' in the space between the first and second phase of the project. These recommendations aim to be also useful to other EAs, UNDP, and GEF IW projects, especially the ones that Peru and Ecuador are involved in, such as GEF Colombia Ecuador Binational Basins, GEF IW Amazon Phase 2, and GEF TDPS Peru-Bolivia[8].

Recommendations for the design, implementation, monitoring and evaluation of GEF IW projects

Recommendation 1	**Knowledge Management Strategy**
Findings	Despite having a component on knowledge management and dissemination (output 3.3), the project was designed and implemented without a proper Knowledge Management Strategy. Despite the relevance of the studies, plans, models and tools developed by the project, the lack of a KM strategy impacted in how this information was generated and how it was and will be used by the stakeholders inside and outside the sphere of the project. (paras. 40, 107 and 135)
Conclusion	The significant volume and relevance of information generated and exchanged, as well as the need to validate it with a broad range of

	stakeholders argues in favor of adopting a powerful knowledge management system. A knowledge management system has been, to some extent, considered as a requirement for other GEF and non-GEF projects that generate and have to manage a significative volume of information.
Recommendation	To include in the second phase of the 3 Basins Project and in similar projects, since its design, a knowledge management strategy fostering a multi-actor construction of knowledge processes, managing its co-creation, accessibility, flows and sharing. A knowledge management system would certainly contribute to develop innovative practices towards ITWRM, opening a continuous process of SAP validation, consultation, update and implementation.
Target Audience	UNDP, project partners, GEF agencies, and broader IWRM community.
Recommendation 2	**Communication Strategy**
Findings	ProDoc did not present a Communication Strategy for the project (however outputs 2.3 and 3.3 presented some communication activities). During the first half of the project, it was noticed that a relatively low level of priority was given to the communication strategy by the project partners. In the last year of the project, it was noticed an increase of the relevance of the communication strategy. (paras. 71,106, 135 and 143; indicators #18 and #22)
Conclusion	The project communication strategy was developed late and up to this point it still has to prove its effectiveness. On water and environmental projects, strategic communication is an important tool to help achieve the project objectives. It contributes to information exchange and facilitates the participation of stakeholders in the project. As a matter of a fact, GEF IW has guidelines and recommendations for Communication Strategies for projects.
Recommendation	To include in the second phase of the 3 Basins Project and in similar projects, since its design, a solid communication strategy for the project describing the communication activities and tools that will be used to reach the project objectives. It should be design and implemented as an integral part of the project, not a set-aside element.
Target Audience	UNDP, GEF agencies, project partners and broader IWRM community.
Recommendation 3	**Stakeholder Engagement**
Findings	ProDoc contained a Stakeholder Involvement Plan that identified and briefly described a diverse range of stakeholders with active roles in the project (more than 50 institutions at binational, national, regional, and local levels). Nevertheless, for most of them, their roles, responsibilities, and capacities for the engagement with the project were not assessed nor at project design nor at its implementation stage. The partnership arrangements were not described in detail and established prior project approval. There was no evidence that ProDoc was developed with a broad stakeholder engagement. These constraints were not addressed properly at project implementation. The Stakeholder Involvement Plan had limitations that impacted the results of the project. (see para. 32, 63 to 71, 100, 113 and 143).
Conclusion	Participation is key for IWRM. An interactive process of participation is needed not only at pilot projects' level but at the basin wide scale. Stakeholders outside national governmental institutions from the water sector, such as major water users' representatives, academic sector, local

	governments, local communities, and civil society organizations contribute to a more comprehensive top-down and bottom-up approach, allowing a systematic understanding and increasing awareness of the complex interactions taking place in river basin management. Such a process is relevant for all projects that aim to promote changes and impact the living conditions and natural environment, such as the projects related to IWRM and Climate Change Adaptation and Mitigation. Active participation is motivating and builds trust by considering concerns and goals of the involved stakeholders, enhancing (or reducing) the possibilities to influence policy decision-making, and favoring long term sustainability while reducing conflicts and/or tensions. Furthermore, UNDP/GEF guidance for the 7th replenishment period requires the inclusion of a Stakeholders Engagement Plan, which must be connected not only with the results framework in the Prodoc formulation (during PPG), but also with the respective budget, social and environmental screening procedure (SESP) and Gender Action Plan. A solid Stakeholders Engagement Plan, combined with a Communication and a Knowledge Management Strategies, are key elements of ITWRM projects to promote higher level of social, political, and institutional sustainability that could lead to appropriate financial sustainability.
Recommendation	To develop a solid Stakeholders Engagement Plan. To do so, it is important to understand and recognize its relevance, and allocate resources for the design and on-site implementation. To properly do it, key stakeholders beyond IA, EA and governmental institutions, should be included in the consultations for the PIF, and be engaged on the design of the ProDoc. Cooperation agreements/mechanisms should be established since the startup of the project.
Target Audience	UNDP, GEF agencies, project partners and broader IWRM community.
Recommendation 4	**Replication and scaling up**
Findings	At project design no replication strategy was developed. The ProDoc did not assign resources, indicated activities, and proposed instruments to foster replication of the lessons learned and best practices derived from the project. (see paras. 50 and 171)
Conclusion	In order to expand the catalytic effect of the intervention, it is relevant to promote the scaling up/replication to regional and national levels of the demonstrative projects and the lessons learned. The replication of the project brings valuable opportunities to at least five processes/projects that Peru and Ecuador are involved in[8]: the other 6 binational basins shared by Peru and Ecuador draining for the Amazon (under BC9RB process), the GEF IW Colombia Ecuador Binational Basins project, the GEF IW Amazon Phase 2 project, GEF IW TDPS Project (Peru-Bolivia), and the Peru-Colombia IW concept project for Putumayo River (currently under development).
Recommendation	To include, since project design, a solid scaling up/replication strategy to encourage the adoption of new solutions, lessons learned and best practices, both within the project region and more widely to the international IWRM community.
Target Audience	UNDP, GEF agencies, project partners and broader IWRM community.
Recommendation 5	**Links with other interventions**
Findings	ProDoc briefly describes links of the project with other five interventions in Peru, three in Ecuador and three at multi-country/binational scale. The

	project at design failed to identify and establish linkages with at least three GEF projects that were of high relevance. Furthermore, during project implementation there was limited/unstructured interaction and exchange with other GEF projects, including UNDP GEF CFI-LA project[9]. (para. 53, 57 and 58)
Conclusion	Interactions among the GEF projects foster synergetic contributions to the achievement of global environmental benefits and sustainability of the impact's interventions.
Recommendation	For future projects, to properly identify and indicate concrete mechanisms to promote collaboration, exchange of best practices during project design, implementation and closure, and, if is the case, synergies on deliverables / activities, between sisters GEF projects, even if they are not implemented by the same IA. IW:LEARN is an unique platform for sharing best practices, lessons learned, and innovative solutions to common problems across the GEF IW portfolio
Target Audience	UNDP and GEF Agencies
Recommendation 6	**Risk Management**
Findings	At ProDoc, the risk assessment was superficial and did not reflect the complex and interrelated mechanisms associated with the proposed intervention. The ProDoc lacked strategies to properly allocate resources to give a robust response to the most relevant risks. Several risks affected the implementation of the project, such as high turn-over rates, long response time, centralized decision processes, disease outbreak, and capacity of the executing partners (paras. 43, 44, 45, 46, 47, 49, 63, 95, 111, and 139)
Conclusion	Managing risks should have been an integral part of the project design. A proper risk assessment should have considered a risk management strategy, including both the likelihood of the event and the potential impact on the project.
Recommendation	To consider risk management as a core element for the success of the intervention since the design of the project until its closure (reinforcing the relevance of the social and environmental screening procedure SESP). It should include, at least, the identification of major hazards, the assessment of vulnerability and exposure, and a solid mitigation planning integrated.
Target Audience	UNDP, GEF Agencies, project partners
Recommendation 7	**Implementation Plan**
Findings	The project did not adopt an Implementation Plan (IP). This contributed to the slow start of the project and affected its effectiveness and efficiency. The project also did not hire the entire team of the PCU at the startup phase. (see paras. 48, 85 and 111)
Conclusion	GEF IW program argue in favor of the adoption of a detailed Project Implementation Plan to be presented for approval on the first SC meeting. The startup of the project is a key moment, when the project begins '*with the right foot'* it is more likely to reach its outcomes and generate impact. The IP should be developed by or with the PCU team who will be responsible for its implementation, so it is highly recommendable to hire the entire team as soon as possible. The Implementation Plan is particularly relevant where the ProDoc does not bring a detailed and updated M&E Plan, Risk Management Plan, Communication Strategy, KM Strategy and Stakeholders Engagement Plan (as was the case of the GEF 3 Basins project).

Recommendation	To indicate, since ProDoc, the strategies that will be used on the project start-up phase, indicating the development of the Project Implementation Plan as one of the first activities to be done by the PCU. The guidelines presented at the GEF IW:LEARN '*Project Management Manual'* could be used as a valuable reference.
Target Audience	UNDP and GEF Agencies
Recommendation 8	**Guidelines on reporting co-finance**
Findings	Only 38% of the committed co-finance was reported (table 3 and annex 8). Co-financing resources were administered directly by their contributors (para. 79)
Conclusion	Co-finance is an integral part of a GEF project. It is relevant to adopt instruments and procedures to define, estimate, report, and verify co-financing, including in-kind resources.
Recommendation	To formulate guidelines on reporting of co-finance for GEF projects
Target Audience	UNDP and GEF Agencies

Recommendations as actions to follow up or reinforce initial benefits from the project

152. This TE presents below 14 follow up actions aiming to reinforce initial benefits from the project and to keep the change process in motion. These actions should be considered as recommendations and project partners are invited to identify which ones will be adopted. Therefore, the recommendations, responsible actors and proposed timelines must be considered as indications from the evaluation consultant and are not mandatory, nor have to be agreed by the project partners before the approval of the TE report. Some follow up recommendations presented here could also be relevant and be considered for the design of the second phase of the project.

Follow up action 1	**To build a proposal for the second phase of the project**
Findings	The project brought momentum to the change process to coordinate ITWRM. It put in place relevant building blocks that could eventually lead to desired impact. However, the evaluation considered that is moderately unlikely to sustain the benefits of the project without additional support from GEF. Currently, the project is producing the PIF for its second phase. (paras 143 and 145)
Conclusion	ITWRM projects are complex in nature and scope. It usually needs more time and resources to reach sustainability. (para 143)
Recommendation	It is recommended that this first phase of the 3 Basins project is followed by a second phase aiming to increase the sustainability of its achievements and the likelihood of its impact. To consider in its design all lessons learned from the first phase of the project, including addressing the eight Recommendations described above; the recommendations for the second phase listed below under Follow up actions numbers 2, 5, 6, 7, 8, 10, 11, 12, 14, and, specially, 13; the set of recommendations emerging from Proposal 1 "To increase the integrated approach of ecosystem-climate-land-water-livelihoods", and Proposal 2 "To take to the next level relevant processes that already are in place at the basin"; and the best and worst

	practices described in paras. 156 to 160. To build for this second phase a solid M&E plan, with SMART indicators accompanied with data collection tools, indicators profile sheets (with detailed information to assist data collection, calculation of its components, aggregation of scales, selection of sources and means of verification, identification of main assumptions, description of the method adopted to define the baseline and targets, and references to scientific literature), and adequate allocation of resources/budget including for hiring a M&E staff, for designing M&E protocols and instruments, for contracting data collection and surveys services, as well as for the development capacity building activities for M&E, a acquisition/development of a robust and easy-to-use managerial tool for M&E, etc. (see paras. 81, 84 and 88)
Responsible Actors	Project partners: UNDP, EAs, GEF Focal Points, with engagement of major stakeholders
Proposed Timeline	This process is already in motion with the construction of the PIF.
Follow up action 2	**To measure the impact of capacity building activities**
Findings	The project had contributed to increase the knowledge of more than 600 stakeholders on IWRM through over 24 capacity building activities (workshops, training courses, etc.). (see table 1 indicators G1 and #7)
Conclusion	To properly measure the impact of the capacity building, it is relevant to assess how stakeholders who participated on the capacity building activities are using the knowledge and skills gained.
Recommendation	It is recommended to carry out an online survey with the participants of the capacity building activities to measure the application of their knowledge on IWRM. It is recommended for the design of the second phase of the project to adopt instruments to measure the effectiveness of the knowledge management and capacity building actions/activities.
Responsible Actors	PCU: regarding the first phase Project partners: regarding the second phase
Proposed Timeline	Before project closure: for the first phase During PIF/PPG design: for the second phase
Follow up action 3	**To implement the management models for W&S**
Findings	Five management models for water and sanitation had been delivered under the IWRM approach in the areas of pilot projects: Las Lajas (EC), Limones (EC), Guineo Chico (EC), Sanguillín (EC) and Paimas (PE). The models had not been fully implemented. (see table 1 indicators G5, #16 and #21)
Conclusion	In order to promote changes on the ground, these technical studies should be implemented by the local stakeholders responsible for the operation of the W&S systems.
Recommendation	To provide support and monitor the implementation of these five management models for water and sanitation.
Responsible Actors	EAs: ANA and SENAGUA
Proposed Timeline	To start by the publication of the TE

Follow up action 4	**To follow up the construction of Paimas' WWTP**
Findings	The construction of the WWTP of Paimas was not concluded during the lifespan of the project. GEF funds were used to buy materials and equipment, and the municipality of Paimas agreed to construct the WWTP. (see table 1 indicator #15)
Conclusion	Aiming to provide accountability towards impact, it is important that the WWTP is constructed and operative.
Recommendation	To provide support and monitor the implementation and operation of the Paimas' WWTP.
Responsible Actors	EA: ANA
Proposed Timeline	To start on the publication of the TE
Follow up action 5	**To commit to declaring four water protection zones**
Findings	The project was expected to declare four water protection zones in Ecuador. By project closure, no water protection zone was declared (see table 1 indicators #8 and #12)
Conclusion	The protection of these areas is relevant for the safe/sustainable water supply for the communities served by the pilot projects. FORAGUA has a vast experience on this matter and could be invited to collaborate.
Recommendation	1. To reach a formal commitment between the authorities responsible to declare water protection zones and design a workplan to create the four water protection zones. 2. To support, in the second phase of the project, the scaling-up and replication of this initiative, i.e. the simplification and/or integration of public policy and regulations needed to declare water protections zones.
Responsible Actors	EA: SENAGUA (for recommendation 1) Project partners (for recommendation 2)
Proposed Timeline	Before project closure (for recommendation 1) During PIF/PPG design (for recommendation 2)
Follow up action 6	**To foster the gender approach on the follow-up actions**
Findings	The mainstreaming of a gender approach has been growing during the project lifespan. The project ends with a solid Gender Strategy produced on 2019 and that had already impacted the stakeholders positively. (para. 126 and 127)
Conclusion	It is important to continue to work under this strategic gender mainstreaming approach guaranteeing that follow-up actions met the needs and expectations of both men and women.
Recommendation	To take into consideration for the exit strategy, the work during the intersectional period and for the design of the second phase (PIF/ProDoc), the proposals and recommendations presented on the Gender Strategy developed on 2019. If possible, the project partners should consider and/or explore how to include gender perspective in the last products of the project (i.e. NAPs and economic estimation for SAP implementation).
Responsible Actors	PCU - for the exit strategy and last products of the project. Project partners - on the work during the intersectional period. UNDP and GEF Focal Points - for design of the second phase.
Proposed Timeline	To start immediately and to handover to PCU and SC of the second phase.

Follow up action 7	**To inform readers about some limitations of TDA and SAPs**
Findings	TDA was developed based on the sovereign standards of each country, using secondary data available until 2016, with limited information about groundwater, did not adopted solid interdisciplinary technical and scientific foundations, did not considered water related biodiversity and ecosystem services properly, and did not include an analysis of climate trends/scenarios. The SAPs did not include clear commitments, time frames, and concrete spatial definition of key TB concerns, especially on ecosystems management and addressing climate change and variability. The SAPs also showed limited consideration regarding Water-Food-Energy-Ecosystems nexus. The SAPs did not include an estimation of future water balance, nor a convincing description of the chains of effects and consequences that climate change impacts may be causing in water availability and quality (see table 1 indicators #2 and #4, and para. 123)
Conclusion	The production of the TDA/SAPs is not an easy task and the project team made a serious effort to foster this process aiming to produce these documents. To acknowledge these limitations is relevant to the TDA/SAP process and will contribute to its usefulness and improvement.
Recommendation	To mention on the TDA/SAP publications these limitations, and, if it is the case, inform the readers that these issues will be considered in the next revision of the TDA/SAPs (planned for 2028).
Responsible Actors	PCU with support of EAs
Proposed Timeline	Before project closure
Follow up action 8	**To work toward the endorsement of the SAPs**
Findings	SAPs were approved by the project SC. SAPs /NAPs were not yet endorsed as an official governmental strategy. Project partners showed commitment to promote the endorsement of the SAPs and NAPs. The Binational Commission of the nine river basins and the Annual Binational Presidential Meetings were presented as possible mechanisms for a jointly bi-national endorsement at presidential level. (see table 1 indicator #3 and paras.113 and 133)
Conclusion	To have the SAP approved by the highest possible level as an official governmental strategy is one the GEF's requirements for the approval of a second phase of an IW project under the TDA/SAP approach.
Recommendation	To keep the high commitment and seek the endorsement of the SAPs and NAPs by the highest possible level as an official governmental strategy
Responsible Actors	Project partners (note: project partners refer to the institution represented at the project SC – UNDP, SENAGUA, ANA, Ministries of Environment, and Ministries of Foreign Affairs)
Proposed Timeline	Before the submission of the ProDoc to GEF secretariat
Follow up action 9	**To put in place a targeted knowledge sharing strategy**
Findings	Despite the relevance of the studies (i.e. Hydrogeological), maps (i.e. GIS), plans (i.e. SAPs/PAEs), models (i.e. Management Models), and tools (i.e. capacity building materials) delivered by the project, they are not yet available for the general public (see table 1 indicators #1 and #2, and para. 129)
Conclusion	The project promoted generation of knowledge, but no knowledge management and sharing strategy was developed.

Recommendation	To make accessible to the public and actively disseminate the knowledge generated by the project to the target audience. This would contribute to expand knowledge sharing, promote further activities based on this knowledge and improve the use of the products delivered by the project. The project webpage at IW:LEARN site and social media could be used as repository and/or channels for dissemination. But this recommendation goes beyond just publishing the documents there, it encompasses a construction of a targeted knowledge sharing strategy to be implemented by the project partners in the next months, even after the closure of the PCU. It is especially relevant to consider the roles (both as target audience and as possible collaborators) of key stakeholders outside the sphere of influence of the project, such as other ministries, local/regional governments, Universities, NGOs, and private sector. It is recommended to construct this knowledge sharing strategy before the last SC, aiming for its formal approval before project closure. This strategy should indicate the roles, responsibilities, resources, timeframes and means of verifications. It is recommended to UNDP to track and support the implementation of the agreed strategy.
Responsible Actors	PCU to produce the strategy with active engagement of UNDP, SENAGUA and ANA, and, if possible, to start its implementation. ANA and SENAGUA to implement most of strategy, under the support and monitoring of UNDP.
Proposed Timeline	Before project closure
Follow up action 10	**To increase inter-ministerial engagement with project outcomes, especially SAPs and NAPs**
Findings	The National Inter-Ministerial Committees, one of the pillars to mainstream the outcomes of the project in a cross-cutting manner with other sectors, and to contribute to enhance the sustainability of the project's impact, was not implemented. (see table indicator #4, and paras. 59, 64, 105 and 115)
Conclusion	For effective water management, it is necessary to include other relevant government actors.
Recommendation	Before the project closure, to agree on a strategy or set of actions to promote incidence and to mainstream the project outcomes, specially SAPs and NAPs, with key ministries and governmental bodies beyond water-environment sector, such as line ministries of Finance, Health, Mining, Agriculture, Fisheries, Infrastructure, Urban Development, Science, Planning, Social Development, Tourism, Energy, and Response to Emergencies. The TE recommends to formally agree on a strategy or set of actions, on the last SC meeting. If possible, the project partners should consider and/or explore if some ministerial actors could be engaged on the NAPs process currently under execution. It is recommended for the second phase of the project to promote a management arrangement that will lead to national coordination at ministerial level, using if possible, existing mechanisms and instruments. This coordination could be built around concrete topics such as the implementation of the SAP/NAPs.
Responsible Actors	PCU to produce the strategy or set of actions with active engagement of Project Partners. Project partners to implement it with the support and monitoring of UNDP.
Proposed Timeline	Before project closure
Follow up action 11	**To promote the implementation of SAPs and NAPs, and to leverage sources at scale**
Findings	The SAPs and NAPs are flagship outcomes of the project. It is relevant to start their implementation as soon as possible, aiming to promote change

	on the ground and at scale. The project is currently developing a study of the necessary investments for the implementation of the SAPs. (paras. 131 and 137)
Conclusion	SAPs and NAPs include actions that are beyond the ANA and SENAGUA mandate. Therefore, their implementation should be done in close coordination with the other financial actors of the basins, including line ministries, regional and local governments, and private sector. It is highly likely that the scale of the necessary resources and the economic limitation of the governments and private stakeholders of the basin will force to aim for external resources. The scale of the resources necessary for the IWRM of these basins are far beyond the GEF capacity / mandate to support .
Recommendation	1. To have the SAP approved by the highest possible level as an official governmental strategy (see follow up action 8 above) 2. To identify the possible national sources for each investment necessary for SAPs/NAPs implementation and start as soon as possible the articulation and engagement of these actors bringing commitments for their implementation. 3. To explore external sources to bring funds at scale, such as GCF and development banks active in the region, CAF, IDB, and WB.
Responsible Actors	Project partners
Proposed Timeline	To start on the publication of the TE
Follow up action 12	**To continue working on the intersectional period**
Findings	The project had fostered the collaborative process between the two countries to coordinate the management of the transboundary water resources, but the GEF assistance for this first phase will end soon. Project partners are currently developing a PIF for a second phase, aiming for additional GEF funds. Nevertheless, the intersectional period between phases could extend for a couple of years or more. Project partners are engaged to continue working together to increase the impact of the project after the end of GEF assistance. (see para 108 and 145)
Conclusion	Lessons learned from GEF IW portfolio indicates that the impact of the project could be reduced if there is no commitment of the project partners to keep working on the intersectional period.
Recommendation	1. To construct a solid exit strategy and approve it at the last SC with clear commitments to conduct activities during the intersectional period to sustain and expand the project outcomes. This exit strategy should consider the new scenery that will emerge from the COVID-19 crises. 2. To identify what actions on the intersectional period, the project partners can do with their own resources (especially staff time and if it is the case funds) aiming to start the implementation of the SAPs/NAPs or at least to keep the SAPs/NAPs processes “alive” (i.e. working with communication, incidence, mainstream, and endorsement). 3. To guaranty a proper flow / hand-over of documents, knowledge and background information between the phases of the intersectional period (i.e. from the closure of the PCU to the begin of the PPG process; from PPG process to the startup of the second phase). It is recommended to ensure a hard-copy disc with all information, including the exit strategy, this TE report and the management response to be prepared by UNDP with the collaboration of major stakeholders. It is recommended to clearly define the “guardians” of this material/knowledge: considering the nature of the project RTA, UNDP COs and the GEF OFP may share these responsibilities. Beyond the formal documents listed above, hand-over notes could also be

	adopted as a complementary mean to transfer knowledge efficiently between phases aiming to keep as much as possible all relevant information about background and other issues relevant for the intersectional period.
Responsible Actors	Project Partners
Proposed Timeline	Before project closure
Follow up action 13	**To engage key stakeholders in the construction of the exit strategy, and design for second phase (PIF/ProDoc)**
Findings	The project had a limited engagement of key stakeholders such as line ministries, local/regional governments, Universities, NGOs, and major water users. (see paras. 68 and 134)
Conclusion	The second phase of the project could benefit with greater country ownership by including these actors that were identified at the project design and implementation. They should also be considered as target audience to make incidence and search for collaboration/synergies regarding the NAPs processes that are currently taking place.
Recommendation	To foster the interaction with these institutions, consulting them for the construction of the project's exit strategy of the project, and the development of PIF/ProDoc for the second phase.
Responsible Actors	For the Exit Strategy: PCU, with collaboration of SC members For PIF/ProDoc: UNDP in coordination with SC institutions
Proposed Timeline	Before project closure
Follow up action 14	**To continue supporting the work of the BC9RB**
Findings	Water resources are considered at high level at the agenda of the Binational Presidential Meetings therefore creating the Binational Commission of the nine river basins. The three basins of this project are at the center of attention in both countries and they recognized the contribution of the GEF project to this process. At the moment, the Technical Secretariat of the BC9RB is under creation and experts from both countries are working together to draft its rules and procedures. (paras. 133 and 138)
Conclusion	This brings a unique institutional framework for the ITWRM of the three basins. The success of the BC9RB could depend, to a large extent, of the success of its Technical Secretariat.
Recommendation	To continue supporting the creation of these ITWRM framework. To pay especial attention to the roles, nature, structure, and resources to be assigned for the Technical Secretariat of the BC9RB. To consider whether the secretariat would be a binational body that could mobilize and manage resources, receive resources from the governments, have a dedicated technical body, and have presence in the field. To consider its dependence degree on the capitals. To take advantage of the PPG phase to support binational meetings for ProDoc preparation / endorsement. To consider in the design of the second phase of the project how it could contribute to the strengthening/consolidation of the BC9RB technical secretariat.
Responsible Actors	Project partners
Proposed Timeline	Continuous work until the consolidation of the ITWRM framework

Recommendations as proposals for future directions underlining main objectives

153. Two proposals for future direction that underline the main objectives of the project are presented in this TE. The immediate objective of the project was to strength institutional, policy, legal and scientific-technical capacities to implement ITWRM in Puyango-Tumbes, Catamayo-Chira and Zarumilla River Basins and Aquifers, integrating climate change and variability concerns (para 28). This GEF intervention sought to ensure the conservation, restoration and integrated management of surface and groundwater resources including maintenance of ecological flows, associated with the water cycle in the Puyango-Tumbes, Catamayo-Chira and Zarumilla river basins (para 27).

154. The first proposal is to increase the integrated approach of ecosystem-climate-land-water-livelihoods. It is composed of 6 recommendations related to integrated natural resource management, source-to-sea approach, poverty-environment nexus, sustainable mining and agriculture, climate change and variability, and the economic value of ecosystems services. The second proposal aims to continue and/or expand relevant processes already taking place at the basin. These proposals are described below and are expected **to be considered for the construction of the second phase of the 3 Basins project** and on other activities / plans / strategies related to the ITWRM of the Puyango-Tumbes, Catamayo-Chira and Zarumilla River Basins and Aquifers. To some extent, these proposals could be also useful for other IWRM projects emerging from a similar TDA/SAP process, such as the GEF Colombia Ecuador Binational Basins, GEF IW Amazon Phase 2, and GEF TDPS Peru-Bolivia[8].

Proposal 1*
To increase the integrated approach of ecosystem-climate-land-water-livelihoods

Findings

i. The project was consistent with countries needs to strengthen cooperation for the transboundary management of water resources and local beneficiaries' necessities related to water and sanitation on these three riven basins.
ii. The project, since its design, had a limited reach (i.e. beyond the water sector) regarding poverty-environment nexus and sustainable livelihood approach.
iii. Both countries recognize the relevance and fragility of the ecosystems of this border region (from source to sea), including forests, and its close relation to the provision of water. It is recommended that future projects take these issues into consideration.
iv. Unsustainable mining practices, lack/ineffectiveness of solid waste management, and inappropriate use of agrochemicals, such POPs (Persistent Organic Pollutants) had been identified since ProDoc as major environmental problems of the basin. It was decided, at project design, not to address these issues on this first phase of the project, due to its complexity, sensitivity and insipient process of trust building and cooperation between the project partners on both countries.
v. The impacts of CC and variability were identified as one of the main transboundary problems. The development of SAPs indicated the need to create binational strategies for risk management and/or strategies about adaptation and mitigation of CC.
vi. In the project area, the economic value of the ecosystems and the services they provide is still not properly measured and recognized by the society. Usually, ecosystem services are often given little weight in the decision-making process, e.g. in the course of the development of a grey infrastructure project. Thus, decisions makers in the region may have been favoring outcomes with commercial value at the expense of degrading the ecosystems and their services, generating economic returns in the short-term at the expense of economic long-term costs.

Note: see detailed information at paragraphs 97, 99, 100, 101, 121, 122, 123, 124 and 125

Conclusions

i. The environmental and development priorities (i.e. biodiversity conservation, poverty alleviation, etc), both at national and local level, go beyond the priorities of the water sector.
ii. The project could have benefited from a more integrated approach considering the value of the ecosystem services provided by water, adopting a systemic perspective on the interrelation among water-environment-economy-livelihoods.
iii. Unsustainable mining practices, especially at Portovelo-Zaruma (red circle) within the Puyango-Tumbes River basin, and inappropriate use of agrochemicals, are priority issues for the sustainable management of water and natural resources on the basins and should be addressed on the next phase of the project.
iv. ITWRM projects have a recognized value to foster transboundary cooperation for crisis prevention and recovery in relation to environment and water, especially regarding the challenges imposed by climate change and variability. The environmental health of forests is also a relevant issue to consider, especially considering its relation to water provision and resilience to the impacts of climate change and variability.
v. It is relevant to persistently increase awareness of decision-makers on the economic value of ecosystems and water services for society (in monetary form if necessary) by clearly demonstrating its contribution to promote equitable and sustainable development

Proposal description

To increase the integrated approach of ecosystem-climate-land-water-livelihoods, which are at the core foundations of the GEF principals and ITWRM concept. This proposal includes six recommendations:

i. To use the ITWRM approach to safeguard a healthy and safe environment, including interventions and building capacitates for **integrated natural resource management** (i.e. protection of critical ecosystem for the provision of water, strengthen monitoring of critical species such as the ones acting as indicators of water quality, the improved natural resource management arrangements with local groups, and regeneration of natural resources for long term sustainability).
ii. To adopt the **Source to Sea** approach, identifying and promoting a solid integration between river basin management and local coastal / marine management principles, projects, and actions. (see detailed information at Granid et al, 2019)
iii. To integrate elements that contribute to strengthening sustainable livelihoods and addressing core drivers under the **poverty-environment nexus** identified, in the TDA, as root causes of the environmental problems.
iv. To address mechanisms to minimize the impact of **mining, solid waste disposal, and agriculture**, especially regarding the use of agrochemicals, on the next phase of the project. The project partners were already exploring mechanisms to present a multi-focal PIF for GEF, including both the strategic area of IW and Chemicals. Consider the approach of “the commons” to address over appropriation of water resources for agricultural use.
v. To address **climate change and variability** in the TDA/SAPs/NAPs processes in a more precise manner (especially regarding geospatial location, time, magnitude, and frequency of the impact), rooted on scientific evidence, and with proper consideration of environmental, social and economic factors that contribute to risk and exposure of the population. The SAPs and NAPs should be constructed considering possible scenarios that could result from climate change and their impacts on the water resources, ecosystems, people, economy, and institutions. (see detailed information at GEF IW:LEARN, 2014)
vi. To estimate the **economic value of ecosystems and biodiversity** for the territory of the 3 basins, considering provisioning, regulating, habit and cultural services linked with the water cycle. To use this knowledge to effectively inform in-country decision-making in ways that support the transformation on how development is planned and acted upon towards more sustainable solutions (see detailed information at GEF IW:LEARN, 2019)

Proposal 2*
To take to the next level relevant processes that are already in place at the basin

Findings

The GEF 3 Basins Project contributed to implementing relevant processes. ITWRM requires the continuity of several processes overtime to reach lasting improvements on socioeconomic and environmental status. Future initiatives in the region could contribute to taking to the next level these relevant processes that are already in place at the basin.

i. The project was expected, according to ProDoc, to develop necessary hydrogeological studies in three relevant aquifers: a) Alto Piura; b) Catamayo-Loja; and c) Zarumilla. By project closure, only the Zarumilla study will be available. The development of a "Binational management model of the Zarumilla transboundary aquifer" was identified by the project as one of the 12 priority projects that emerged from the SAPs.
ii. The project developed a relevant strategy for mainstreaming the gender approach in the project and for institutional strengthening on gender issues. Studies developed for the construction of the Gender Strategy of the project indicated low participation and representation of women in the IWRM on the three basins.
iii. The overall objective of the project was to strengthening capacities to implement ITWRM. The project implemented target capacity building programs for more than 600 national and local stakeholders aiming to enhance the implementation of ITWRM.
iv. A Binational work plan for joint monitoring in the 3 basins was not agreed yet by the countries.
v. The institutional framework for the binational cooperation between Peru and Ecuador in the border region is emblematic, and, probably, the most promising collaborative effort among two countries in Latin America who jointly manage transboundary water resources.
vi. National and regional/local governmental actors outside the sphere of the water and sanitation sector, and key stakeholders of the basin, such as major water users, civil society, NGOs and Universities were not properly engaged during the first phase of the project and have little to no ownership and knowledge of the projects outcomes.
vii. The outcomes from the project, especially the SAPs/NAPs, have not been yet mainstreamed with the national/regional sectoral and development plans.

Note: see detailed information at paragraphs 38, 51, 68, 1133, 114, 126, 127, 133, and 138, and table 1 indicators G1, #1, #6 and #7.

Conclusions

i. The resources available on the first phase of the project were insufficient to conduct a full-scale hydrogeological study of the three aquifers. In order to have an effective management of water resources it is necessary to consolidate the studies of the major aquifers of the basins.
ii. It takes time and continuous effort to promote the social and cultural changes necessary to mainstream the gender approach into natural resources management. Despite the relevance of the gender strategy developed by the project, it was created the last year of the intervention and future interventions should be built upon these foundations.
iii. Despite the emphasis on capacity building, the process of capacity development requires a continuity as people, knowledge and circumstances change other time. As a matter of a fact, the SAPs indicated that it is essential to strengthen the capacities of the different actors of the basins.
iv. A roadmap in order to develop a binational protocol on water quality for transboundary basins was put in motion by project partners. It is relevant to conclude its development and allocate resources for its implementation.
v. The consolidation of a binational framework for the coordination and shared management of natural resources is, usually, a long and delicate process that requires continued work between the countries, institutions and people engaged in the process. As a matter of a fact, the follow up action #14, proposed above, and one of the 12 priority projects that emerged from the SAPs are about strengthening of the binational institutional framework for IWRMT in the basins.
vi. The management of water is transversal, as it depends and affects various sectors and actors. Therefore, it should be done in close coordination with stakeholders beyond the usual water and sanitation sector, including natural resources, health, agriculture, fisheries, ecosystems, infrastructure, urban development, science, energy, planning, finance, social development, tourism, response to emergencies, among others. Stakeholders' nature, roles and functions

should also be diverse, including governmental institutions from local, regional, and national level, private sector, academia, civil society organizations, and third sector.

vii. For SAPs/NAPs, to be effective, they have to be mainstreamed with the major national/regional sectors and development plans. Mainstreaming will pave the way for institutions inside and outside the sphere of the project to eventually capture SAPs/NAPs activities in their annual budgets, especially for purposes of leveraging resources.

Proposal description

It is relevant to expand further, improve, and continue relevant processes already taking place at the basin. This proposal includes six recommendations:

i. To develop basic **hydrogeological studies** in Alto Piura and Catamayo-Loja as soon as possible, and before the revision of the TDA/SAP (every 10 years).
ii. To implement and further develop the strategy for mainstreaming the **gender approach** in the 3 Basins project, strengthening the binational normative framework for gender equality, executing, and expanding the action plan and lines of intervention proposed on this strategy.
iii. To put in place a permanent process of **capacity development**, such as the "Binational Water School", one of the 12 priority projects that emerged from the SAPs. The collaboration with knowledge management institutions, like Universities, could promote positive synergies for capacity development by training, knowledge sharing, capacities' strengthening, and technical formation on ITWRM. It is also recommended to explore synergies with relevant networks and programmes that are already linked to the project, such as GEF IW:LEARN and UNDP Cap-Net.
iv. To conclude the development, to approve and to implement the **binational protocol for joint monitoring of water quality** between Ecuador and Peru
v. To continue supporting the development of the **ITWRM framework** for the management of the 9 River Basins shared by Ecuador and Peru and especially the 3 basins of this project. This includes the creation of the binational river basin committees, institutional strengthening, development of studies, establishment of financial mechanisms, among other related issues.
vi. To increase the **engagement of key stakeholders** toward ITWRM, including national and regional/local governmental actors beyond the water and sanitation sector, and major stakeholders of the basin, such as major water users, civil society, NGOs and Universities.
vii. To **mainstream NAPs and SAPs** with national/regional **sectoral and development plans,** such as *Planes de Desarrollo y Ordenamiento Territorial, Plan Nacional de Riego, Plan de Adaptación al Cambio Climático, Estrategia Nacional de Biodiversidad, UNDAF, Plan Nacional de Combate a la Desertificación, Planes de Desarrollo Agrícola y Seguridad Alimentaria, Planes de Agua Potable y Saneamiento, and Planes de respuesta a Emergencias y Desastres*.

* These proposals (set of recommendations) are expected to be considered for the second phase of the 3 Basins project and on other activities / plans / strategies related to the ITWRM of the Puyango-Tumbes, Catamayo-Chira and Zarumilla River Basins and Aquifers. To some extent, they could be also useful for other IWRM projects emerging from a similar TDA/SAP process

Best and worst practices addressing relevance, performance and success

155. This section presents lessons taken from the evaluation including best practices and opportunities for improvements (worst practices). These lessons highlight strengths or weaknesses in preparation, design, and implementation that affect performance, outcomes, and impacts. They were extracted from the project and are applicable to other GEF and UNDP interventions, including the second phase of the 3 Basins project.

Opportunities for improvements (worst practices)

156. The project at design did not analyze the **capacity of the executing partners** and major stakeholders with active role in the project. Optimistic assumptions set out on the ProDoc, such as the preexistence of capacities of ANA and SENAGUA and articulation between them to implement a multi-country GEF project, were identified as one of the factors that contributed to the slow start of the project. ANA and SENAGUA have recognized capacity to manage water resources on their respective countries, nevertheless they did not have previous experience and technical, operational, and administrative expertise in place to

execute a binational GEF IW Full Size Project (para 93)[10]. The creation at the inception phase of a 'favorable environment for cooperation and teamwork between two institutions' should be considered as a key element at project design. The weak capacity and absence of responses to overcome this limitation at project entry contributed to the delays and shortcomings that happened during the implementation (para 60). This was one painful lesson learned and it is recommended for future projects, especially the ones under National Implementation Modality, to properly address these risks.

157. There should not be assumed that actors engaged in the project already have all capacities, knowledge and ability to conduct a GEF PNUD IW project. Therefore, **capacity building and training for the management of a GEF PNUD IW project** should be **provided to the PCU staff and key EA personal**. Capacity development was considered relevant on planning, financial, contracting, procurement, monitoring, reporting, and RBM procedures of GEF UNDP. This training/capacity development is especially relevant at the start-up phase, but it should be done every time there is a turnover of staff (which happened to be frequent on this project). This strategy is usually more important when the project adopts the National Implementation Modality, where the national entities responsible for the execution of the project have often a limited expertise on the procedures and mechanisms for the implementation of a GEF project. In these cases, it expected that the IA to be in a position to address this challenge. It should be noted that the turnover of officials and decisions makers at the IA, COs and RTA could also bring pressures to the implementation of the project. These situations should also be treated by with proper internal hand-over processes. It is necessary to consider the needs of capacity development for the effective engagement of the national actors on the development of the PIF and ProDoc. It should not assume that they fully understand these processes, their mechanisms, results and flows.

Best practices

158. The project adopted **management arrangements that promoted strong country ownership**. Countries were in the 'drivers' seat' and took a leadership role on strategic guidance of project delivery, endorsing project results, providing important amounts of in-kind resources and, to some extent, advocating for change to achieve higher level results. At the same time, the project suffered several changes of country representatives. There is a need to establish ways to ensure project delivery, keeping some degree of autonomy/ flexibility and the countries' commitments but without losing the focus on the main impacts meant to be achieved by the project. The next phase of the 3 Basins Project and future GEF projects could benefit from this lesson, by allowing/motivating the countries to be in the driver seat but anchored with mechanisms that would facilitate the project implementation.

159. **Transboundary water projects are complex in nature and scope**. The evaluation recognizes that the people and institutions involved in the project have put a significative amount of resources, time, dedication, passion and hope on this project. Despite the positive results achieved by the project, there was a perception among some project partners that the project had several shortcomings (i.e. some expected outcomes were yet not fully achieved). A change of the magnitude proposed by the GEF 3 Basins Project might require more time and additional effort to be perceived. This project was designed as the first phase of a larger Binational ITWRM Program. It is rare to find a GEF IW or any ITWRM project that on its first phase achieves sustainability. The evaluation reinforces the will of the project partners to continue working together for joint management of the three transboundary water systems, aiming to achieve lasting improvements on socioeconomic and environmental status.

160. The most relevant lesson extracted from this project was that **water can be an element of cooperation and helps to build peace**. Ecuador and Peru had been in conflict about

border limits definitions for a couple of centuries, and only in 1998 these countries signed the Peace Agreement. Since then, the integration and development of the border area have been a top priority for both countries, and water had become an element of that prompted joint and collaborative work for the management of the shared resources. The institutional framework of the binational cooperation for ITWRM among Peru and Ecuador on the border region is emblematic and probably the most promising collaborative effort among two countries in Latin America to jointly manage transboundary water resources. The GEF 3 Basin Project is an inspiring initiative embedded at the center of this process. It has been contributing to promote trust, build empathy, collaboration, integration, and harmony between these two neighbor nations of the Latin American region.

ANNEX 1 – TOR FOR THE EVALUATION

TERMINAL EVALUATION TERMS OF REFERENCE

Project No.: 00091894

Project Title: "Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Transboundary Aquifers and River Basins."

Functional Title: Consultant for Independent Terminal Evaluation

Contract Type: Individual Consultant

Location: Quito - Ecuador

Duration: 45 days over a time period 90 days

INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the *"Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Transboundary Aquifers and River Basins."* (PIMS #4402)

The essentials of the project to be evaluated are as follows:

PROJECT SUMMARY TABLE

Project Title:	Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Trans			
GEF Project ID:	83398		*at endorsement (Million US$)*	*at completion (Million US$)*
UNDP Project ID:	UNDP Ecuador: 91894 UNDP Perú: 92113	GEF financing:	**3,960,000**	
Country:	Ecuador - Perú	IA/EA own:	BIN / EC 2´625.000 PERÚ 1´335.000	2´073,939,90 916.599,03
Region:	Latin America and the Caribbean	Government:	Bin / EC 10´000.000 Perú: 10´000.000	5.000.000 5.000.000
Focal Area:	Energy and Environment Management for Sustainable Development	Other:	ECUADOR 104.100 track y ART 132.500 capnet PERÚ 114.500 132.500 capnet	 48.022,92 0,00 0,00 0,00

FA Objectives, (OP/SP):	OP5	Total co-financing:	20´483.600	10,048.022,92
Executing Agency:	Secretariat of Environmental Policy, Climate Change and Sustainable Development (SPACCyDS, for its Spanish acronym), Ministry of Environment and Sustainable Development (MAyDS) National Authority of Water (ANA in Peru)	Total Project Cost:	24´443.600	13´038.561,85
Other Partners involved:	National Institute of Agricultural Technology (INTA); Government of the provinces of Chaco, Formosa, Entre Ríos and Misiones Ministry of Environment (MINAM)	ProDoc Signature (date project began):		24/08/2015
		(Operational) Closing Date:	Proposed: 31/08/2019	Actual: 30/06/2020

OBJECTIVE AND SCOPE

The project was designed to: *strengthen the institutional, policy, legal and scientific-technical capacities to implement Integrated Transboundary Water Resources Management in Puyango-Tumbes, Catamayo- Chira and Zarumilla River Basins and Aquifers, integrating climate variability concerns. The project aims to enhance binational efforts of Peru and Ecuador for Integrated Transboundary Water Resources Management (ITWRM) in the three main aquifers and basins shared by the two countries in the Pacific Ocean drainage basin -– Puyango-Tumbes, Catamayo-Chira and Zarumilla. It will give special attention to integrating groundwater concerns and opportunities and extreme manifestations of climate variability and change in the area. The aquifers and linked river basins "Zarumilla", "Puyango-Tumbes" and "Catamayo-Chira" contain an important, but often highly variable, water supply that is essential to the region´s socio-economic development and to the integrity of its ecosystems. These resources are threatened by overexploitation, pollution and inefficient management, as well as by climate variability and change.*

The project follows a three-pronged approach consisting of improving the common understanding of these shared water resources and their environmental and socioeconomic status; strengthening institutional capacities and cooperation mechanisms between the two countries sharing these aquifers and basins; and applying and disseminating IWRM demonstrations in targeted site interventions. The project has a strong emphasis on capacity development and, through the TDA/SAP process, will support countries in the identification of the required legal, policy and institutional reforms that can deliver global, regional and national environmental benefits. The project will apply the most recently validated GEF International Waters Transboundary Diagnostic Analysis (TDA) and Strategic Action Programme (SAP) methodology to achieve project objectives and outcomes.

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

EVALUATION APPROACH AND METHOD

An overall approach and method[1] for conducting project terminal evaluations of UNDP supported GEF financed projects has developed over time. The evaluator is expected to frame the evaluation effort using the criteria of **relevance, effectiveness, efficiency, sustainability, and impact,** as defined and explained in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects. A set of questions covering each of these criteria have been drafted and are included with this TOR (*Annex C*) The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. The evaluator is expected to conduct a field mission to (*Quito – Ecuador, Loja - Ecuador, Machala – Ecuador, Calvas – Ecuador, Celica - Ecuador, Lima – Perú, Tumbes – Perú, Piura - Perú),* including the following project sites *(list).* Interviews will be held with the following organizations and individuals at a minimum:

City*	Site / distance from the project office / means of mobilization	Interviews will be held with the following stakeholders at a minimum
Quito	Av. Toledo N22-286 y calle Lérida (SENAGUA) Centro Corporativo EkoPark, Torre 4, piso 2 / Vía Nayón s/n y Av. Simón Bolívar (UNDP)	Deputy Secretary of Social Affairs at National Water Authority (SENAGUA – Ecuador) Project team / Binational Coordination unit UNDP Steering Committee members Individual consultants or enterprises that provide consulting services to the project
Loja	Quito – Loja: 689 Km / 1h10m by plane Loja – Guineo Chico (Celica): 220 Km / 2h30 by car Project's car and driver will be provided Quito – Loja: 689 Km / 1h10m by plane Loja – Limones (Zapotillo): 258 Km / 4h by car	Hydrographic Administrative Units of Puyango Catamayo (Loja) Subnational governments involved in the project (Celica, Calvas and Zapotillo Ecuador) Project team / National Coordination Unit Individual consultants or enterprises that provide consulting services to the project

[1] For additional information on methods, see the Handbook on Planning, Monitoring and Evaluating for Development Results, Chapter 7, pg. 163

City*	Site / distance from the project office / means of mobilization	Interviews will be held with the following stakeholders at a minimum
	Loja – Atillo (Calvas):90 km / 2:30 by car Project's car and driver will be provided	
El Oro	Quito – Santa Rosa: 565 Km / 1h15 by plane Santa Rosa – Las Lajas: 55 km / 40m by car Santa Rosa – Arenillas: 20 km / 20 m by car Project's car and driver will be provided	Hydrographic Administrative Units of Jubones (Machala) Subnational governments involved in the project (Las Lajas, Arenillas) Individual consultants or enterprises that provide consulting services to the project
Lima	Calle Diecisiete Nº 355, Urb El Palomar, San Isidro (ANA) Jorge Chávez 275, Miraflores 15074, Perú (UNDP)	National Water Authority (Head of Water Resources Planning) UNDP Steering Committee members Individual consultants or enterprises that provide consulting services to the project
Piura	Lima – Piura: 993 Km / 1h45m by plane Panamericana Norte Km. 3.5, Carretera Piura – Sullana (AAA Piura) Piura – Paimas: 150 Km / 2h00m by car Project's car and driver will be provided	Local Water Authority Administrative authority of the Water Jequetepeque - Zarumilla Subnational governments involved in the project (Piura) Project team / National Coordination Unit Individual consultants or enterprises that provide consulting services to the project
Tumbes	Lima – Tumbes: 1271 Km / 1h50m by plane Calle Francisco Navarrete N° 111- Tumbes (ALA Tumbes) Tumbes – Pampas de Hospital: 20 Km / 30m by car. Project's car and driver will be provided	Local Water Authority Tumbes Subnational governments involved in the project (Tumbes) Project team / National Coordination Unit Individual consultants or enterprises that provide consulting services to the project

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in Annex B of this Terms of Reference.

EVALUATION CRITERIA & RATINGS

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework (see Annex A), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, sustainability and impact.** Ratings must be provided on the following performance criteria. The completed table must be included in the evaluation executive summary. The obligatory rating scales are included in Annex D.

Evaluation Ratings:			
1. Monitoring and Evaluation	***rating***	**2. IA& EA Execution**	***rating***
M&E design at entry		Quality of UNDP Implementation	
M&E Plan Implementation		Quality of Execution - Executing Agency	
Overall quality of M&E		Overall quality of Implementation / Execution	
3. Assessment of Outcomes	**rating**	**4. Sustainability**	**rating**
Relevance		Financial resources:	
Effectiveness		Socio-political:	
Efficiency		Institutional framework and governance:	
Overall Project Outcome Rating		Environmental:	
		Overall likelihood of sustainability:	

PROJECT FINANCE / COFINANCE

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal evaluation report.

Co-financing (type/source)	UNDP own financing (mill. US$)		Government (mill. US$)		Partner Agency (mill. US$)		Total (mill. US$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Actual	Actual
Grants								
Loans/Concessions								
• In-kind support								
• Other								
Totals								

MAINSTREAMING

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project was successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

IMPACT

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.[2]

CONCLUSIONS, RECOMMENDATIONS & LESSONS

The evaluation report must include a chapter providing a set of **conclusions**, **recommendations** and **lessons learnt**.

IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation resides with the UNDP CO in *(Ecuador)*. The UNDP CO will contract the evaluator and ensure the timely provision of per diems and travel arrangements within the country for the evaluation consultant. Please note, that all travel and related expenses to field visits need to be included in the financial proposal. The Project Team will be responsible for liaising with the evaluator to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

EVALUATION TIMEFRAME

The total duration of the TR will be approximately 45 days over a time period of 90 days and shall not exceed five months from when the consultant is hired:

Activity	Timing	Completion Date*
Contract signing		January 2, 2020
Preparation	05 business days	January 9, 2020
Evaluation Mission	15 business days	January 30, 2020
Draft Evaluation Report	15 business days	February 20, 2020
Final Report	10 business days	March 13, 2020

*These are tentative dates. SENAGUA and UNDP will send comments on deliverables within 8 business days after their reception.

EVALUATION DELIVERABLES

[2] A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: ROTI Handbook 2009

The consultant is expected to deliver the following:

Deliverable	Content	Timing	Responsibilities
Inception Report	Evaluator provides clarifications on timing and method	No later than 2 weeks before the evaluation mission.	Evaluator submits to UNDP CO
Presentation	Initial Findings	End of evaluation mission	To project management, UNDP CO
Draft Final Report	Full report, (per annexed template) with annexes	Within 3 weeks of the evaluation mission	Sent to CO, reviewed by RTA, PCU, GEF OFPs
Final Report*	Revised report	Within 1 week of receiving UNDP comments on draft	Sent to CO for uploading to UNDP ERC.

*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

CONSULTANT PROFILE

The consultant shall have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. The evaluators selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

The Evaluator must present the following qualifications:

- University degree in environmental sciences, water management, civil or agricultural engineering or other related fields.
- Minimum ten (10) years of relevant professional experience evaluating or managing development and/or environmental or water projects.
- Experience in evaluation of at least three (3) water or environmental projects.
- Knowledge of UNDP and GEF Principles and Projects.
- Previous experience with results-based monitoring and evaluation methodologies;
- Project evaluation experiences within United Nations system and GEF projects will be considered an asset.
- Fluency in reading, speaking and writing Spanish will be necessary.
- Excellent English and Spanish communication skills.
- Knowledge in the basic computer programs, such as Microsoft Office.

EVALUATOR ETHICS

Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct (Annex E) upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the

principles outlined in the UNEG 'Ethical Guidelines for Evaluations'

PAYMENT MODALITIES AND SPECIFICATIONS

(*this payment schedule is indicative, to be filled in by the CO and UNDP GEF Technical Adviser based on their standard procurement procedures)*

%	Milestone
20%	Upon approval of Inception Report as an advance to cover costs of travel.
30%	Following submission and approval of the 1ST draft terminal evaluation report
50%	Following submission and approval (UNDP-CO and UNDP RTA) of the final terminal evaluation report

EVALUATION CRITERIA

Technical proposals (CV and technical offer) will weight a maximum of 70% and only the consultants that meet the technical phase with a minimum score of 49/70 or more, will continue to the review of economic proposal, which will weight a maximum of 30%.

The evaluation criteria are the following:

Rating parameter	***Criteria***	***Score***	***Percentage***
CV	***Knowledge:***		***30%***
	University degree in environmental sciences, water management or other related fields.	***10***	
	Knowledge of UNDP and GEF Principles and Projects	***5***	
	Fluency in reading, speaking and writing Spanish will be necessary. Excellent English and Spanish communication skills	***10***	
	General experience:		
	Minimum ten (10) years of relevant professional experience evaluating or managing development and/or environmental or water projects.	***15***	
	Previous experience with results-based monitoring and evaluation methodologies	***10***	
	Specific experience:		
	Experience in evaluation of at least three (3) water or environmental projects.	***40***	
	Project evaluation experiences within United Nations system and GEF projects will be considered an asset.	***10***	
	TOTAL:	***100***	
Technical Proposal	***Methodology, agenda and implementation schedule:***		
	How much the offeror understands the nature of the work and conforms to the Terms of Reference?	***25***	***40%***
	Does the offeror's portfolio demonstrate experience in the development and elaboration of products similar to those described in the ToRs?	***25***	
	Is the methodology, established to achieve the products defined for the consultancy, described in depth?	***20***	
	Is the methodology adequate to achieve the products defined for the consultancy?	***15***	

Rating parameter	*Criteria*	*Score*	*Percentage*
	Has a clear presentation been made? Is the sequence of activities and their planning logical and realistic? Does it lead to an efficient implementation of the consulting objective?	***15***	
	TOTAL:	***100***	

Economic proposal	*Score*	*Percentage*
The highest score (30%) will be awarded to the most economical offer and the inverse proportional to the other offers. Only the technical proposal that meet the technical phase with a minimum score of 49/70 or more, will continue to the review of economic proposal, which will weight a maximum of 30%.	**100**	**30%**

ANNEX A: PROJECT LOGICAL FRAMEWORK

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
Objective: Strengthening institutional, policy, legal and scientific-technical capacities to implement Integrated Transboundary Water Resources Management in Puyango-Tumbes, Catamayo- Chira and Zarumilla River Basins and Aquifers, integrating climate variability concerns	Level of knowledge of SENAGUA, ANA, Water Resources Basin Councils (Peru), Irrigation Boards and Potable Water Boards (Ecuador) on IWRM and management of transboundary basins	Baseline institutional capacity will be measured using institutional capacity survey within 3 months of project start-up	80% of stakeholders who have received training indicate application of IWRM by end of project	Implementation study carried out at the end of the project to measure the level of knowledge of stakeholders and the application of this knowledge on IWRM	There is a sustained commitment by the Governments of Ecuador and Peru to strengthen the policy framework and governance in sectors related to IWRM in watersheds and transboundary watersheds There is effective communication between public entities Rotation of personnel does not undermine the capacity development of actors
	Area (ha) which IWRM practices are being implemented in Catamayo-Chira, Puyango Tumbes and Zarumilla River Basins in Ecuador and Peru	0 ha. There are only specific actions of efficient water or water quality management, without an integrated management of water resources	10,300 ha of project influence benefit from IWRM actions in the watersheds of interest.	Project GIS Project reports	
	Number of beneficiaries from implementation of IWRM in pilot projects	0 beneficiaries, because the pilot projects have not been established (base line to be defined)	234,549 local inhabitants (125,335 men and 109,214 women)	Reports on the implementation of pilot projects Baseline report and report at the end of the project	
	Institutional framework for binational dialogue and cooperation on IWRM	Only a Binational Commission for Zarumilla has been formally established and there is no Strategic Action Program (SAP) developed or approved.	Proposal for statute and regulations for the operation of the binational commission for the integrated management of water resources of the transboundary hydrographic basins between the Republic of Ecuador and the Republic of Peru	Final document with proposal for statute and framework of action of the single binational commission.	

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
	# of Local Drinking Water Boards / Local Governments that meet national minimum standards of drinking water quality and provide at least 3 hours of water per day to users at the pilot sites	It is estimated that less than 50% of Drinking Water Boards / local governments meet standards.	4 improvement plans / improved management models under the IWRM approach in the areas of pilot projects	Self-evaluation reports at the end of the project, according to ARCA Resolution 003)	
Outcome 1: Transboundary Diagnostic Analysis developed for the Integrated mangement of Transboundary Water Resources Management (ITWRM) in the Puyango-Tumbes, Catamayo-Chira and Zarumilla binational aquifers and basins.	Indicator 1: Hydrogeological studies in important aquifers of the basins	The availability of hydrogeological information is greatest for the Zarumilla basin, while the information for the other basins of Catamayo-Chira- and Puyango-Tumbes is scattered (primarily data on water quality information, volume of flow that is exploited, groundwater levels), with a medium to low level of hydrogeological information and lack of integration and interpretation of this information.	Basic hydrogeological studies in: a) Alto Piura; b) Catamayo-Loja; and c) Zarumilla aquifers, including monitoring, inventory of wells, identification of hydrogeological units, definition of recharge areas, hydrodynamics, hydrochemistry and water quality, estimation of reserve amounts, among others.	Hydro-geological studies completed	Key reference information is collected in a timely manner to avoid delays in the preparation of both ADT and subsequent PAEs The main actors are convened by SENAGUA and ANA and come together to validate and agree on the information
	Indicator 2: Transboundary Diagnostic Analysis (TDA): Agreement on transboundary priorities and immediate root causes in binational watersheds and the Puyango-Tumbes, Catamayo-Chira and Zarumilla binational aquifers and basins.	The cross-border priority themes have been identified and agreed, but this was done on the basis of limited information on effects; and an inadequate root cause analysis (score 2 in the IW Program Tracking Tool)	Establishment / strengthening of a GIS database for basins and aquifers (with public access) Agreement on cross-border priorities between Ecuador and Peru derived from reliable baseline data and immediate causes and root causes properly identified (score 4 on the AI Program monitoring tool)	GIS database ADT completed	

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
Outcome 2: Strategic planning and capacity building to strengthen governance of transboundary water resources in the Puyango-Tumbes, Catamayo-Chira & Zarumilla watersheds and aquifers	Indicator 3: Strategic Action Plan for the Puyango-Tumbes, Catamayo-Chira and Zarumilla basins respectively	Neither Ecuador nor Peru have developed a SAP for any of the three basins. In Peru, there are water resource basin management plans for the Tumbes and Chira-Piura basins, which present agreed-upon solutions for the national-level management of the basins. In Ecuador there are general guidelines and a management plan for the Catamayo- Chira basin	One (01) SAP developed related to cross-border issues complemented by the National Strategic Action Plans (score of 4 in IW Program Tracking tool). These are programs focused on water resources that will solve problems common to both countries, and will be based on the information gathered in the TDA under Outcome 1.	A complete SAP document	There is a sustained commitment by the governments of Ecuador and Peru to strengthen the policy framework and governance in sectors related to IWRM in transboundary watersheds There is effective communication between public entities Interested parties in Ecuador and Peru agree on the structure and operating mechanism of the Binational Commissions for Puyango-Tumbes and Catamayo-Chira Rotation of personnel does not affect the capacity development of the main actors
	Indicator 4: National Inter-ministerial Committees	Neither Ecuador nor Peru have established National Interministerial Committees to address IWRM issues	National Interministerial Committees established and functioning in both Ecuador and Peru (score of 3 on IW tracking tool)	Minutes of the meetings of the National Interministerial Committees	
	Indicator 5: Proposed regulations to strengthen the Binational Commissions	There are no general operating rules or procedures to guide the establishment and operation of Binational Commissions. For the Zarumilla Binational Commission there are statutes, internal regulations and a draft operational regulation for the Zarumilla aquifer. There are some instruments but the concerted institutionality has not been developed.	Proposed operational procedures / regulations developed to guide the establishment of Binational Commissions and to strengthen the current Zarumilla Binational Commission	Draft of Standard / Operational Procedures Document with proposed new / updated IWRM standard (s) and management of transboundary watersheds (e.g. Standard on Binational Commissions and / or on water protection zones)	

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
	Indicator 6: M&E indicators to measure environmental and socioeconomic status of basins and aquifers and to monitor implementation of SAPs and NSAPs	Such indicators have not been agreed upon.	Agreement on indicators to measure river basin and aquifer processes, stress reduction and environmental and socioeconomic status and level of implementation of SAPs/NSAPs. Binational work plan agreed upon for joint monitoring in the Puyango-Tumbes, Catamayo-Chira and Zarumilla basins	Minutes of the meetings of the National Interministerial Committees confirming agreement on the indicators Agreement between SENAGUA and ANA on parameters Monitoring reports	

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
	Indicator 7: % of officials from ANA, SENAGUA, water user boards, water resource basin councils and local governments trained on IWRM (specific topics of training described in description of Output 2.4)	0 % have been trained on these issues. Isolated training has been provided on various topics (such as 'water culture').	In Ecuador: - At least 60% of members of water user boards trained in each pilot area. - At least 60% of SENAGUA officials in the Puyango Catamayo Demarcation trained - At least 60% of SENAGUA officials in the Jubones Demarcation trained -At least two (2) parish-level Decentralized Autonomous Governments (GADs) in each pilot area involved in training activities - At least one (1) canton-level GADs involved in each pilot area in education and training activities. - At least one (1) provincial-level GAD involved in education and training activities In Peru: - At least 60% of officials of the Local Water Authorities (ALAs) trained in each pilot area - At least one (1) basin council involved in training activities in each pilot area. - At least one (1) regional government involved in training activities in each pilot area.	Project reports	

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
Outcome 3: Pre-SAP demonstrations in IWRM implemented and investment needs in Puyango-Tumbes, Catamayo-Chira and Zarumilla aquifers and watersheds identified	Indicator 8: Pilot 1 (Ecuador) Number of protection zones in mini watersheds for the catchment of water for human consumption.	Although there are areas dedicated to the conservation of forests and paramos, there are no water protection zones within the canton, nor is there a technical-administrative mechanism for the declaration of water conservation zones in the country. Possible areas must have an action plan.	2 zones declared as water protection zones in the canton, according to the legal framework applicable in Ecuador, in the project´s intervention cantons.	Official declaration of water protection zones endorsed by SENAGUA and issued by the municipalities. Elaboration of decrees to support the official declaration Plans of action of the zones of water protection Ordinances for the declaration of water protection zones Technical and administrative mechanism for the declaration of water protection zones	Pilot projects are initiated in a timely manner to achieve the environmental and socio-economic goals
	Indicator 9: Pilot 1 (Ecuador) 1 pilot experience of reduction of pollution by domestic sewage in surface water, in cantón Loja	There are some WW decontamination facilities in the canton, but they are not widely extended. The municipality of Loja has plans to install WWTP in rural areas.	1 WWTP installed and operated in the rural area of the canton that complies with design parameters of sanitary civil works and meets the national standard on decontamination of waste water	Reports of the Unit responsible for Drinking Water and Sanitation of the Municipality of Loja. Certified Laboratory Analysis Reports	The cost of construction of the plant is adjusted to the budget of the project. UMAPAL has a management model that allows the operation and maintenance of the WWTP.

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
	Indicator 10: Pilot 1 (Ecuador) A project of Integral Management of Water Resources that considers Drinkable Water, Sanitation and interception of polluting effluents.	The sector does not have drinkable water and the discharge of domestic wastewater goes directly to receiving bodies (gorges and other water bodies), especially in rural areas. The water quality status at the waste water discharge points will be determined at the start of the project.	1 drinking water system and 40 basic sanitation units installed and operating in Guineo Chico sector in the Sabanilla parish, which intercepts coliforms, fats and oils and prevents their discharge into the environment.	Delivery report. As-built plans of the work. Inspection reports	Key stakeholders for the implementation of pilot projects can work together effectively. Key stakeholders for the implementation of pilot projects can work together effectively
	Indicator 11 Measures for agricultural pollution mitigation in water bodies.	There are local initiatives to reduce agricultural pollution, but they are dispersed and require social participation	Municipality and water boards involved have instruments and agreements to mitigate the water pollution produced by agricultural activities.	Training plans and social mechanisms defined for the mitigation of pollution considered in management models.	There are no major new sources of pollution in the area of pilot projects that may undermine the achievement of environmental and socio-economic goals Key stakeholders for the implementation of pilot projects can work together effectively
	Indicator 12: Pilot 3 (Ecuador) Number of protection zones in mini watersheds for the catchment of water for human consumption.	Although there are areas dedicated to the conservation of forests and paramos, there are no water protection zones within the canton, nor is there a technical-administrative mechanism for the declaration of water conservation zones in the country. Possible areas must have an action plan.	2 zones declared as water protection zones in the canton, according to the legal framework applicable in Ecuador	Official declaration of water protection zones endorsed by SENAGUA and issued by the municipalities. Elaboration of decrees to support the official declaration Plans of action of the zones of water protection Ordinances for the declaration of water protection zones Technical and administrative mechanism for the declaration of water protection zones	Pilot projects are initiated in a timely manner to achieve the environmental and socio-economic goals

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
	Indicator 13: Pilot 4 (Ecuador) Reduction of water pollution by discharges of domestic wastewater	There is a waste water treatment plan (WWTP) whose operation is not optimal	3 rehabilitated WWTPs that comply with the national regulations applicable to effluent discharges to freshwater bodies. The rehabilitation contemplates the protection of the WWTP in La Victoria by building a wall of breakwaters and the functional evaluation of all plants)	Delivery report. As-built plans of the work. Inspection reports	Key stakeholders for the implementation of pilot projects can work together effectively. Key stakeholders for the implementation of pilot projects can work together effectively
	Indicator 14: Pilot 4 (Ecuador) Measures for the mitigation of the agricultural pollution to the bodies of water.	There are local initiatives to reduce agricultural pollution, but they are dispersed and require participation and social control	Municipality and water boards involved have instruments and agreements to mitigate the water pollution produced by agricultural activities.	Training plans and social mechanisms defined for the mitigation of pollution considered in management models.	There are no major new sources of pollution in the area of pilot projects that may undermine the achievement of environmental and socio-economic goals Key stakeholders for the implementation of pilot projects can work together effectively
	Indicator 15: Pilot Chira River (Peru) Wastewater treated in WWTP complies with current MPL in: thermotolerant coliforms (NMP / 100ml), BOD (mg / l) and total suspended solids (ml / l).	Level of thermotolerant wastewater coliforms, BOD and total solids, exceeds MPL (DS No. 003-2010-MINAM)	Waste water treated in WWTP complies with MPL (thermotolerant coliforms 10000 NMP / 100ml, BOD 100 mg / l and Total solids in suspension 150 ml / l).	Results of measurement of effluent parameters of the WWTP (final discharge of WWTP), based on the manual of procedures of the competent authority	Technical-economic proposal is viable for its implementation by the project.
	Indicator 16: Management model of WWTP and reuse of wastewater implemented allows good and correct operation and maintenance of the plant.	There is no appropriate management model for WWTP and wastewater reuse.	WWTP and wastewater reuse, managed locally, presents adequate operating and maintenance conditions.	Creation of WWTP / reuse management unit, operations manual and operation and maintenance records	Institutions assume commitments for the implementation and management of the WWTP.

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
	Indicator 17: Number of cross-border basin institutions and organizations involved in the implementation of pilot projects.	There are no project pilots	At least 20 cross-border watershed institutions and organizations participate and support the implementation of pilot projects.	Reports of Workshops and minutes of meetings with commitments assumed in Pilot Projects	There are involved in Pilot Projects at least: 02 ALAs, 01 AAA JZV, 02 CRHC, 01, EPS, 04 Local governments, 02 Regional Housing Directorate, 02 Regional Governments, 04 JASS, 02 User Boards.
	Indicator 18: Population that accesses campaigns, through communication media, in IWRM and water culture.	None at the start of project	30% of the population of priority districts (30% of 49,706)	Monitoring of communication campaigns.	Media and a strategy are available
	Indicator 19: Number of agricultural and population water users participating in training events in efficient use and water conservation.	None at the start of project	At least 100 leaders of agrarian and population water user organizations have received trainings in efficient use and conservation of water	Reports of training workshops, attendance lists, briefing notes.	Budget and training plan aligned with ANA strategies are available
	Indicator 20: Pilot Tumbes River (Peru) Wastewater treated in WWTP complies with current MPL in: thermotolerant coliforms (NMP / 100ml), BOD (mg / l) and total suspended solids (ml / l).	Level of thermotolerant wastewater coliforms, BOD and total solids, exceeds MPL (DS No. 003-2010-MINAM)	Waste water treated in WWTP complies with MPL (thermotolerant coliforms 10000 NMP / 100ml, BOD 100 mg / l and Total solids in suspension 150 ml / l).	Results of measurement of effluent parameters of the WWTP (final discharge of WWTP), based on the manual of procedures of the competent authority	Technical-economic proposal is viable for its implementation by the project.
	Indicator 21: Management model of WWTP and reuse of wastewater implemented allows good and correct operation and maintenance of the plant.	There is no appropriate management model for WWTP and wastewater reuse.	WWTP and wastewater reuse, managed locally, presents adequate operating and maintenance conditions.	Creation of WWTP / reuse management unit, operations manual and operation and maintenance records	Institutions assume commitments for the implementation and management of the WWTP.
	Indicator 22: Population that accesses campaigns, through communication media, in IWRM and water culture.	None at the start of project	30% of the population of priority districts (30% of 49,706)	Monitoring of communication campaigns.	Media and a strategy are available

Project Strategy	Indicator	Baseline Level	End-of-project Target	Verification sources	Assumptions / Risks
	Indicator 23: Number of agricultural and population water users participating in training events in efficient use and water conservation.	None at the start of project	At least 100 leaders of agrarian and population water user organizations have received trainings in efficient use and conservation of water	Reports of training workshops, attendance lists, briefing notes.	Budget and training plan aligned with ANA strategies are available
	Indicator 24: Information (documents / products) of the project, good practices and systematized experiences, shared through website	Since the project has not yet been launched, there has been no exchange of project documents / products or dissemination of project best practices. Lessons learned from the Zarumilla Binational Commission's work have been identified.	Project website running according to IW: Learn guidelines, updated regularly, and information shared through participation in the International Water Conferences 8 (in 2015)	Project website with all key project documents	
	Indicator 25: Investment needed for IWRM in the three identified basins and aquifers.	At present, a comprehensive financial analysis of the investment needs in IWRM has not been carried out for the three watersheds.	Prefeasibility studies of the investments required for IWRM in the three shared watersheds and aquifers completed	Consultancy report completed, with prefeasibility study	

ANNEX B: LIST OF DOCUMENTS TO BE REVIEWED BY THE EVALUATORS

1. PIF
2. UNDP Initiation Plan
3. UNDP Project Document
4. UNDP Environmental and Social Screening results
5. Project Inception Report
6. All Project Implementation Reports (PIR's)
7. Quarterly progress reports and work plans of the various implementation task teams
8. Audit reports
9. Finalized GEF focal area Tracking Tools at CEO endorsement and midterm
10. Oversight mission reports
11. All monitoring reports prepared by the project
12. Financial and Administration guidelines used by Project Team

The following documents will also be available:

13. Project operational guidelines, manuals and systems
14. UNDP country/countries program document(s)
15. Minutes of the Project Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)
16. Project site location maps
17. Final project product reports

ANNEX C: EVALUATION QUESTIONS

This is a generic list, to be further detailed with more specific questions by CO and UNDP GEF Technical Adviser based on the particulars of the project.

Evaluative Criteria Questions	Indicators	Sources	Methodology
Relevance: How does the project relate to the main objectives of the GEF focal area, and to the environment and development priorities at the local, regional and national levels?			
•	•	•	•
•	•	•	•
•	•	•	•
Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?			
•	•	•	•
•	•	•	•
•		•	•
Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?			
•	•	•	•
•	•	•	•
•	•	•	•
Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?			
•	•	•	•
•	•	•	•
•	•	•	•
Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?			
•	•	•	•
•	•	•	•

ANNEX D: RATING SCALES

Ratings for Outcomes, Effectiveness, Efficiency, M&E, I&E Execution	***Sustainability ratings:***	***Relevance ratings***
6: Highly Satisfactory (HS): no shortcomings 5: Satisfactory (S): minor shortcomings 4: Moderately Satisfactory (MS) 3. Moderately Unsatisfactory (MU): significant shortcomings 2. Unsatisfactory (U): major problems 1. Highly Unsatisfactory (HU): severe problems	4. Likely (L): negligible risks to sustainability 3. Moderately Likely (ML): moderate risks 2. Moderately Unlikely (MU): significant risks 1. Unlikely (U): severe risks	2. Relevant (R) 1.. Not relevant (NR) ***Impact Ratings:*** 3. Significant (S) 2. Minimal (M) 1. Negligible (N)
Additional ratings where relevant: Not Applicable (N/A) Unable to Assess (U/A		

ANNEX E: EVALUATION CONSULTANT CODE OF CONDUCT AND AGREEMENT FORM

Evaluators:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

Evaluation Consultant Agreement Form[3]

Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: _____

Name of Consultancy Organization (where relevant)**:** _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *place* on *date*

Signature: _____

[3]www.unevaluation.org/unegcodeofconduct

ANNEX F: EVALUATION REPORT OUTLINE[4]

i. Opening page:

- Title of UNDP supported GEF financed project
- UNDP and GEF project ID#s.
- Evaluation time frame and date of evaluation report
- Region and countries included in the project
- GEF Operational Program/Strategic Program
- Implementing Partner and other project partners
- Evaluation consultant
- Acknowledgements

ii. Executive Summary

- Project Summary Table
- Project Description (brief)
- Evaluation Rating Table
- Summary of conclusions, recommendations and lessons

iii. Acronyms and Abbreviations

(See: UNDP Editorial Manual[5])

1. Introduction

- Purpose of the evaluation
- Scope & Methodology
- Structure of the evaluation report

2. Project description and development context

- Project start and duration
- Problems that the project sought to address
- Immediate and development objectives of the project
- Baseline Indicators established
- Main stakeholders
- Expected Results

3. Findings

(In addition to a descriptive assessment, all criteria marked with (*) must be rated[6])

3.1 Project Design / Formulation

- Analysis of LFA/Results Framework (Project logic /strategy; Indicators)
- Assumptions and Risks
- Lessons from other relevant projects (e.g., same focal area) incorporated into project design
- Planned stakeholder participation
- Replication approach
- UNDP comparative advantage
- Linkages between project and other interventions within the sector
- Management arrangements

3.2 Project Implementation

- Adaptive management (changes to the project design and project outputs during implementation)
- Partnership arrangements (with relevant stakeholders involved in the country/region)
- Feedback from M&E activities used for adaptive management

[4]The Report length should not exceed *40* pages in total (not including annexes).

[5] UNDP Style Manual, Office of Communications, Partnerships Bureau, updated November 2008

[6] Using a six-point rating scale: 6: Highly Satisfactory, 5: Satisfactory, 4: Marginally Satisfactory, 3: Marginally Unsatisfactory, 2: Unsatisfactory and 1: Highly Unsatisfactory, see section 3.5, page 37 for ratings explanations.

- Project Finance:
- Monitoring and evaluation: design at entry and implementation (*)
- UNDP and Implementing Partner implementation / execution (*) coordination, and operational issues

3.3 Project Results

- Overall results (attainment of objectives) (*)
- Relevance(*)
- Effectiveness & Efficiency (*)
- Country ownership
- Mainstreaming
- Sustainability (*)
- Impact

4. Conclusions, Recommendations & Lessons

- Corrective actions for the design, implementation, monitoring and evaluation of the project
- Actions to follow up or reinforce initial benefits from the project
- Proposals for future directions underlining main objectives
- Best and worst practices in addressing issues relating to relevance, performance and success

5. Annexes

- ToR
- Itinerary
- List of persons interviewed
- Summary of field visits
- List of documents reviewed
- Evaluation Question Matrix
- Questionnaire used and summary of results
- Evaluation Consultant Agreement Form

ANNEX G: EVALUATION REPORT CLEARANCE FORM

(to be completed by CO and UNDP GEF Technical Adviser based in the region and included in the final document)

Evaluation Report Reviewed and Cleared by

UNDP Country Office

Name: _____

Signature: _____ Date: _____

UNDP GEF RTA

Name: _____

Signature: _____ Date: _____

ANNEX 2 – INDIVIDUALS CONSULTED

Nombre	Institución	Cargo
Alain Bernard	RIOC / Office International de l'Eau	Secretário Adjunto / Chef du Service 3A (Afrique, Amérique Latine, Asie du Sud-Est)
Alexandra Fisher	UNDP	RTA - Biodiversidad
Ana Cueva	MIN. AMBIENTE	Analista Técnica de Calidad Ambiental (Delegada)
Ana María Núñez	PNUD Centro Regional	Regional Technical Advisor Water and Oceans Latin America and the Caribbean
Araceli Jaramillo	AAA Jequetepeque Zarumilla-ANA	Profesional Responsable en Comunicación y Cultura del Agua
Arturo Cevallos	SENAGUA	Ex-Director de Articulación Territorial
Baltazar Calvas	UTPL	Docente / Investigador Forestal GIS
Carla Chacón	Área de Desarrollo Territorial PNUD Ecuador	Asociada de Programa Administrativa Financiera
Carla Zacapa	PNUD Perú	Representante Residente Adjunto
Carlos Cabrejos	Universidad de Piura	Profesor
Carlos Ludena	Proyecto Gestión de Recursos Hídricos Transfronterizos	Consultor - PIF
Carlos Montenegro	Área de Energía y Medio Ambiente de PNUD Ecuador	Oficial de Programa (encargado)
Carolina Vergara	Proyecto Gestión de Recursos Hídricos Transfronterizos	Especialista Genero
Catalina Ortíz López	SENAGUA - PLANTA CENTRAL	Analista Intersectorial e Internacional
Christian Severin	GEF	Sr. Environmental Specialist, IW
Cyntia Sarango	GAD Cantonal de Celica (Proyecto Guineo Chico)	Ex-directora de Agua Potable del GAD Cantonal de Celica
Damian Indij	CAP-Net	Manager of LA-WETnet (Latin America Water Education & Training Network)
Daniela Cuenca	SENAGUA - PUYANGO/CATAMAYO	Analista de Agua Potable y Saneamiento
Diego Manya	PNUD - Perú	Coordinador IWM-TDPS
Elizabeth Vargas	Consultora	Economista del PNAEs
Emilio Cobo	UICN	Coordinador sector agua UICN /Proyecto BRIDGE

Fernando Adames	PNUD Ecuador	Deputy Resident Representative
Fernanda Gonzales	PNUD Ecuador	Proyecto GEF Ecuador-Colombia
Fernando Reategui	Ministério RREE Perú	Técnico de aguas internacionales
Freddy Chachi	ALA Piura	Secretario Técnico
Gabriel Quijandria Acosta	Ministerio del Ambiente - Perú	Viceministro de Desarrollo Estratégico de lo Recursos Naturales
Gerardo Mendieta	SENAGUA - JUBONES	Subsecretario de la Demarcación Hidrográfica de Jubones
Gonzalo Quezada	SENAGUA - PUYANGO/CATAMAYO	Subsecretario de la Demarcación Hidrográfica de Puyango-Catamayo
Hamilton Santorum	GAD Cantonal de Calvas (Proyecto Calvas)	Director de Agua Potable y Saneamiento del Canton Calvas
Hanny María Quispe Guzman	ANA	Especialista en Gestión de Recursos Hídricos
Isabel Guerrero	Universidad del Pacifico	Profesora y Investigadora
Iván Garcés	MREMH Ecuador (Cancilleria)	Funcionario
Jaime Huamanchumo	AAA Piura	Directro de la autoridad Administrativa Del Agua Jequetepeque-Zarumilla
Jaime Ortiz	SENAGUA - PLANTA CENTRAL	Subsecretaria Social y articulación del recursos Hídrico
Joana Troyano Rodríguez	PNUD Centro Regional	Asociada de Programa
Jorge Álvarez	PNUD Perú	Oficial de Programa de Energía y Medio Ambiente en PNUD Perú
José Oswaldo Ganzhi Tacuri	SENAGUA - PLANTA CENTRAL	Técnico de la Dirección de Articulación Territorial e Intersectorial
Juan Carlos Romero	Proyecto Gestión de Recursos Hídricos Transfronterizos	Ex-Coordinador Binacional Proyecto
Juan Infate	Junta de Agua Potable (Proyecto Guineo Chico)	Presidente de Junta
Karla Tapia	MAE	Especialista de calidad de los Recursos Naturales
Lisett Mirella Trelles Alburqueque	Proyecto Gestión de Recursos Hídricos Transfronterizos	Asistente Administrativa Financiera - Perú
Lorena Vargas	Proyecto Gestión de Recursos Hídricos Transfronterizos	Asistente Administrativa Financiera
Maria Belén Duran	MAE	Coordinadora Gestión Internacional GEF Operational Focal Point

Maria José Carvajal	Proyecto Gestión de Recursos Hídricos Transfronterizos	Especialista Comunicación
Maria Pitacuar	Proyecto Gestión de Recursos Hídricos Transfronterizos	Técnica Especilista de Proyecto
Maria Quevedo	MINAM - Perú	Coordinadora de Gestión de la Calidad Ambiental del Agua y Efluentes
Mariana Yumbay	SENAGUA	Ex-Subsecretaria Social y de Articulación Territorial
Mario Estrella	Ministério RREE Ecuador	Especialista de la Dirección de Relaciones Vecinales (Delegado)
Martha Cuba	Directora, Cooperación y Asuntos Internacionales	Punto focal GEF Perú Ministério del Ambinete
Marvin Ayosa Machado	Municipalidad Distrital de Paimas (Proyecto Paimas)	Gerente Municipal
María Cebrian	PNUD Perú	Especialista Planificacion, Gestion y M&E
Matilde Mordt	PNUD Ecuador	Representante Residente Adjunto
Mish Hamid	IW:Learn	Project Manager
Mónica Andrade	PNUD Ecuador	Responsable del Área de Ambiente y Energía
Natalie Degger	IW:Learn	Project Manager
Néstor Fuertes Escudero	Proyecto Gestión de Recursos Hídricos Transfronterizos	Coordinador Nacional - Perú
Nylle Juare	ANA	Funcionária
Renzo Paladip	Naturaleza y Cultura Internacional	Director
Ricardo Noblecilla Reyes	Secretaría Técnica CRHC Tumbes (Proyecto Pampas de Hospital)	Secretario Técnico
Rolando Sosa	Red de comunicadores hídricos	Integrante
Sebastián Izquierdo	Proyecto Gestión de Recursos Hídricos Transfronterizos	Coordinador Binacional
Segundo Pérez	ALA Tumbes	Administrador local AGUA
Themba Gumbo	CAP-Net	Director Cap-Net
Verónica Guzmán	Proyecto Gestión de Recursos Hídricos Transfronterizos	Coordinadora Nacional - Ecuador

ANNEX 3 – DOCUMENTS CONSULTED

Project Documents:

1. ProDoc - Project document
2. Project Implementation Review
3. Progress Reports
4. Annual Reports
5. AOPs – Annual Operation Planning
6. CDRs – Combined Delivery Reports
7. GEF International Water Tracking Tool
8. Steering Committee meeting minutes
9. Technical Committee meeting minutes
10. Audit Reports
11. Mid-Term Evaluation report
12. Mid-Term Evaluation response plan
13. Programmatic progress matrix
14. Monitoring tool to track the progress of the 30 indicators
15. Initiation Plan for the Project Preparation Grant
16. Communication Strategy 2017
17. Communication Strategy updated 2019
18. Gender Mainstreaming Strategy
19. Co-finance Letters
20. Terms of References for consultancies and services
21. Technical Reports
22. Approval Reports
23. Technical Opinion Reports
24. Mission Reports
25. Transboundary Diagnostic Analysis
26. Strategical Action Plans
27. Technical studies and projects
28. Communication products, including folders, brochures, and posters
29. Project Webpage
30. Project social media: Facebook, Youtube, and Instagram.

Other documents:

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58. GEF, GEF 5 Focal Areas Strategy. 2011
59. GEF, Policy on Stakeholder Engagement. 2017
60. GEF. From Community to Cabinet: Two decades of GEF action to secure transboundary river basins and aquifers. 2012
61. GEF. Guidelines on core indicators and sub-indicators (ME/GN/02). 2019
62. GEF. Guidelines on gender equality (SD/GN/02). 2018
63. GEF. Guidelines on the implementation of the policy on stakeholder engagement (D/GN/01). 2018
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ANNEX 4 – EVALUATION CRITERIA MATRIX

Evaluation Criteria Matrix

Preguntas	Indicadores	Fuentes	Método
Criterio: Relevancia Pregunta: ¿Cómo se relaciona el proyecto con los objetivos principales del área de interés del FMAM y con las prioridades ambientales y de desarrollo a nivel local, regional y nacional?			
1. ¿En que medida el proyecto se relaciona con los objetivos del área focal de Aguas Internacionales y las prioridades estratégicas del FMAM?	Existencia de una clara relación entre los objetivos del proyecto y el área focal de Aguas Internacionales y para las prioridades estratégicas del FMAM	Documentos del proyecto. Estrategias y documentos del área focal del FMAM	Análisis de documentos Entrevistas con personal del PNUD y del proyecto
2. ¿En que medida el proyecto estuvo en línea con las prioridades ambientales y de desarrollo de Ecuador y Perú?	Existencia de una clara relación entre los objetivos del proyecto y las prioridades ambientales y de desarrollo de los países	Documentos del proyecto. Planos y políticas nacionales de RH, Medio Ambiente y Desarrollo.	Análisis de documentos. Entrevistas con personal del PNUD y del proyecto. Entrevistas con actores clave a nivel nacional
3. ¿En que medida el proyecto estuvo en línea con las prioridades ambientales y de desarrollo de las regiones/localidades de Puyango-Tumbes, Catamayo-Chira y Zarumilla?	Existencia de una clara relación entre los objetivos del proyecto y las prioridades ambientales y de desarrollo a nivel local/regional	Documentos del proyecto. Documentos de referencia a nivel local y regional que aborden las prioridades de RH, Medio Ambiente y Desarrollo.	Análisis de documentos. Entrevistas con personal del PNUD y del proyecto. Entrevistas con actores clave a nivel local/regional. Visitas de campo
Criterio: Efectividad Pregunta: ¿En qué medida se han logrado los resultados y objetivos previstos del proyecto?			
4. ¿En que medida el proyecto ha alcanzado el resultado 1: Análisis Diagnóstico Transfronterizo (ADT)?	Indicadores #1 y #2 del marco de resultados estratégicos/marco lógico del proyecto.	Documentos del proyecto. Informes de avance trimestral y anual.	Análisis de documentos. Entrevistas. Visitas de campo
5. ¿En que medida el proyecto ha alcanzado el resultado 2: planificación estratégica y desarrollo de capacidades?	Indicadores #3 al #7 del marco de resultados estratégicos/marco lógico del proyecto.	Documentos del proyecto. Informes de avance trimestral y anual.	Análisis de documentos. Entrevistas. Visitas de campo
6. ¿En que medida el proyecto ha alcanzado el resultado 3: demonstraciones Pre-PAE en GIRH?	Indicadores #8 al #25 del marco de resultados estratégicos/marco lógico del proyecto.	Documentos del proyecto. Informes de avance trimestral y anual.	Análisis de documentos. Entrevistas. Visitas de campo
7. ¿En que medida el proyecto ha logrado el fortalecimiento institucional, político, jurídico y de las capacidades	Indicadores A, B, C y D del marco de resultados estratégicos/marco lógico del proyecto.	Documentos del proyecto. Informes de avance trimestral y anual.	Análisis de documentos. Entrevistas. Visitas de campo

Preguntas	Indicadores	Fuentes	Método
científico-técnicas para la Gestión Integrada de Recursos Hídricos?			
Criterio: Eficiencia Pregunta: ¿El proyecto se implementó de manera eficiente en conformidad con las normas y los estándares internacionales y nacionales?			
8. ¿Se utilizó o se necesitó el manejo adaptativo para asegurar un uso eficiente de los recursos?	Cuán adecuadas han sido las opciones de manejo adaptativo del proyecto en función del contexto externo	Documentos del proyecto. Informes de avance trimestral y anual. Actas del Consejo Directivo del Proyecto.	Análisis de documentos. Entrevistas.
9. ¿En que medida ha sido usado el enfoque de gestión basada en resultados durante la implementación del proyecto?	Calidad de los informes de gestión basados en resultados (informes de progreso, monitoreo y evaluación)	Documentos del proyecto. Informes de avance trimestral y anual.	Análisis de documentos. Entrevistas.
10. ¿En que medida han sido los sistemas financieros y contables adecuados para la gestión del proyecto y para producir información financiera precisa y a tiempo?	Precisión, calidad y adecuación de los sistemas financieros del proyecto	Documentos del proyecto. Informes financieros.	Análisis de documentos. Entrevistas.
11. ¿En que medida el proyecto ha utilizado de manera eficiente los recursos disponibles (fondos, personal y tiempo)?	Recursos asignados al proyecto en comparación con otras alternativas	Documentos del proyecto. Informes de avance trimestral y anual. Actas del Consejo Directivo del Proyecto. Informe de Auditoria (si disponible) y Informe de Evaluación de Medio Termino	Análisis de documentos. Entrevistas. Visitas de campo
Criterio: Sostenibilidad Pregunta: ¿En qué medida hay riesgos financieros, institucionales, socioeconómicos o ambientales para sostener los resultados del proyecto a largo plazo?			
12. ¿En que medida las cuestiones de sostenibilidad se encuentran adecuadamente integradas en el diseño del proyecto?	Evidencia/ calidad de la estrategia de sostenibilidad.	Documentos del proyecto	Análisis de documentos
13. ¿Han sido integradas estrategias de sostenibilidad financiera durante la implantación del proyecto? ¿Son sostenibles los costos recurrentes luego de la finalización del proyecto? ¿Existen riesgos financieros que puedan poner en	Nivel y fuente de respaldo financiero futuro que debe proporcionarse a actividades y sectores relevantes luego de la finalización del proyecto. Compromisos de socios internacionales, gobierno u otros	Documentos del proyecto. Informe final del proyecto. Actas del Consejo Directivo.	Análisis de documentos. Entrevistas.

Preguntas	Indicadores	Fuentes	Método
peligro la sostenibilidad de los resultados del proyecto? ¿Cuál es la probabilidad de que los recursos financieros y económicos no estén disponibles una vez que finalice la asistencia de la donación del FMAM?	interesados en respaldar financieramente		
14. ¿Cuál es el grado de compromiso político-institucional entre los actores y beneficiarios del proyecto para continuar trabajando sobre los resultados del proyecto después de su cierre?	Evidencia de que los socios y beneficiarios del proyecto darán continuidad a las actividades más allá de la finalización del proyecto	Documentos del proyecto. Informes de avance trimestral y anual. Estrategia de cierre.	Análisis de documentos. Entrevistas. Visitas de campo
15. ¿Es adecuada la capacidad técnica-institucional existente a nivel nacional y local para garantizar la sostenibilidad de los resultados alcanzados?	Nivel de capacidad existente al final del proyecto	Documentos del proyecto. Informe final del proyecto. Estrategia de cierre.	Análisis de documentos. Entrevistas. Visitas de campo
16. ¿Los marcos legales, las políticas y las estructuras y procesos de gobernanza dentro de los cuales opera el proyecto presentan riesgos que pueden poner en peligro la sostenibilidad de los beneficios del proyecto?	Adecuación de las estructuras de gobernanza	Documentos del proyecto. Informe final del proyecto. Estrategia de cierre.	Análisis de documentos. Entrevistas. Visitas de campo
17. ¿En que medida riesgos o amenazas ambientales, incluyendo las derivadas del cambio climático, pueden afectar el mantenimiento de los resultados del proyecto a largo plazo?	Identificación de las posibles amenazas y evaluación de los riesgos.	Documentos del proyecto. Informe final del proyecto. Estrategia de cierre.	Análisis de documentos. Entrevistas. Visitas de campo
18. ¿En que medida riesgos o amenazas socioeconómicos pueden afectar el mantenimiento de los resultados del proyecto a largo plazo?	Identificación de las posibles amenazas y evaluación de los riesgos.	Documentos del proyecto. Informe final del proyecto. Estrategia de cierre.	Análisis de documentos. Entrevistas. Visitas de campo
19. ¿Cuál es el riesgo de que el nivel de interés de las partes interesadas (a nivel local, nacional y regional) sea	Nivel de participación y propiedad que los actores y partes interesadas tienen sobre los resultados y sus grados de interés en mantenerlos.	Documentos del proyecto. Informe final del proyecto. Estrategia de cierre.	Análisis de documentos. Entrevistas. Visitas de campo

Preguntas	Indicadores	Fuentes	Método
insuficiente para permitir que se mantengan los resultados / beneficios del proyecto? ¿Los diversos interesados clave ven que les interesa que los beneficios del proyecto continúen fluyendo? ¿Existe suficiente conciencia pública / de los interesados en el mantenimiento de los resultados del proyecto a largo plazo?			
Criterio: Impacto	Pregunta: ¿Hay indicios de que el proyecto haya contribuido a reducir la tensión ambiental o a mejorar el estado ecológico, o que haya permitido avanzar hacia esos resultados?		
20. ¿En que medida el proyecto generó y/o posibilitará la generación mejoras verificables en el estado ecológico y reducciones verificables en el estrés en los ecosistemas?	Nivel de consolidación de la Teoría del Cambio del proyecto	Documentos del proyecto. Informe final del proyecto. Actas del Consejo Directivo. GEF focal-area tracking tolos	Análisis de documentos. Entrevistas. Visitas de campo
21. ¿En que medida el proyecto ha establecido las condiciones básicas que eventualmente se pueda lograr el impacto previsto para el proyecto, incluyendo mejoras duraderas en el estado socioeconómico y ambiental, y los beneficios ambientales globales del FMAM? ¿Cuál es la probabilidad que el impacto sea alcanzado?	Grado de establecido las condiciones básicas y probabilidad de alcanzar impacto	Documentos del proyecto. Informe final del proyecto. Actas del Consejo Directivo. GEF focal-area tracking tools	Análisis de documentos. Entrevistas. Visitas de campo

ANNEX 5 – EVALUATION CONSULTANT AGREEMENT FORM

ANNEX E: EVALUATION CONSULTANT CODE OF CONDUCT AND AGREEMENT FORM

Evaluators:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

Evaluation Consultant Agreement Form[3]

Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: _____

Name of Consultancy Organization (where relevant)**:** _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *place* on *date*

Signature: _____

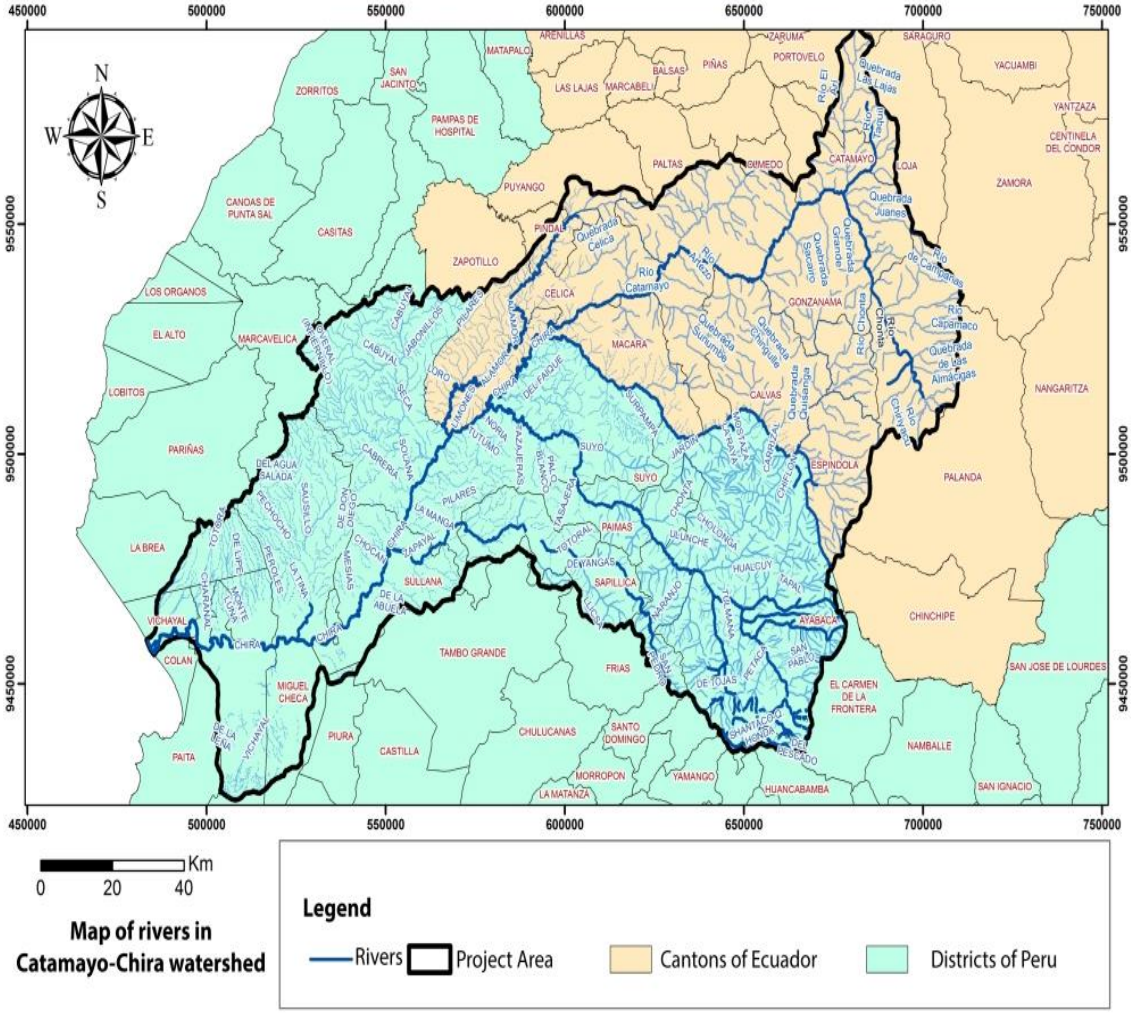
[3]www.unevaluation.org/unegcodeofconduct

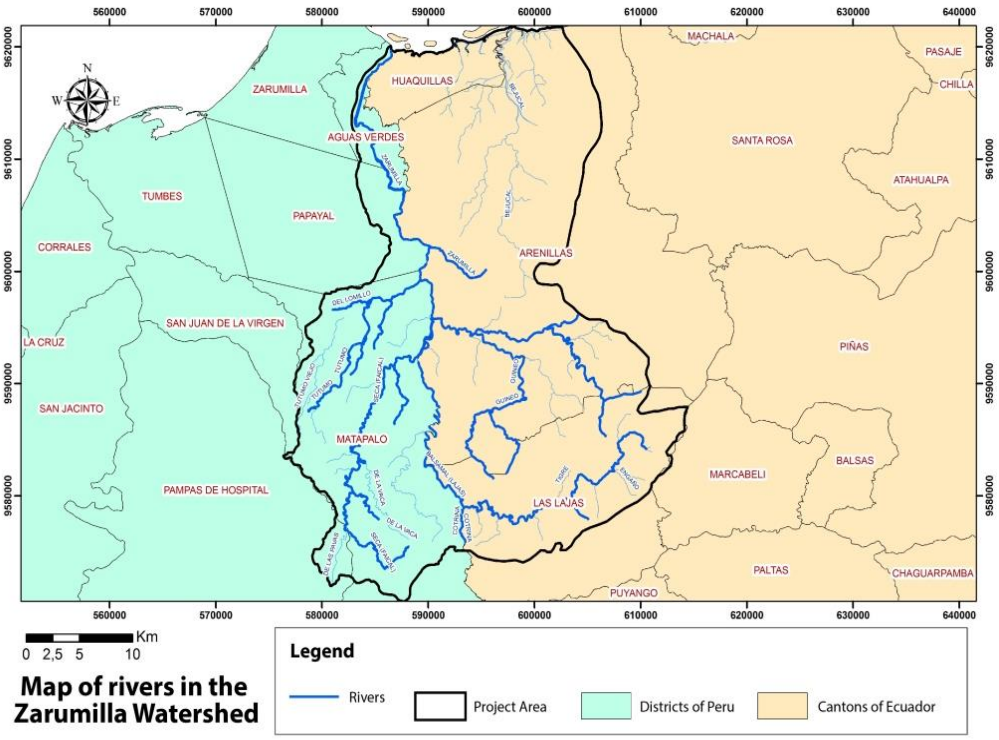
ANNEX 6 – DESCRITION OF THE RATING SCALES

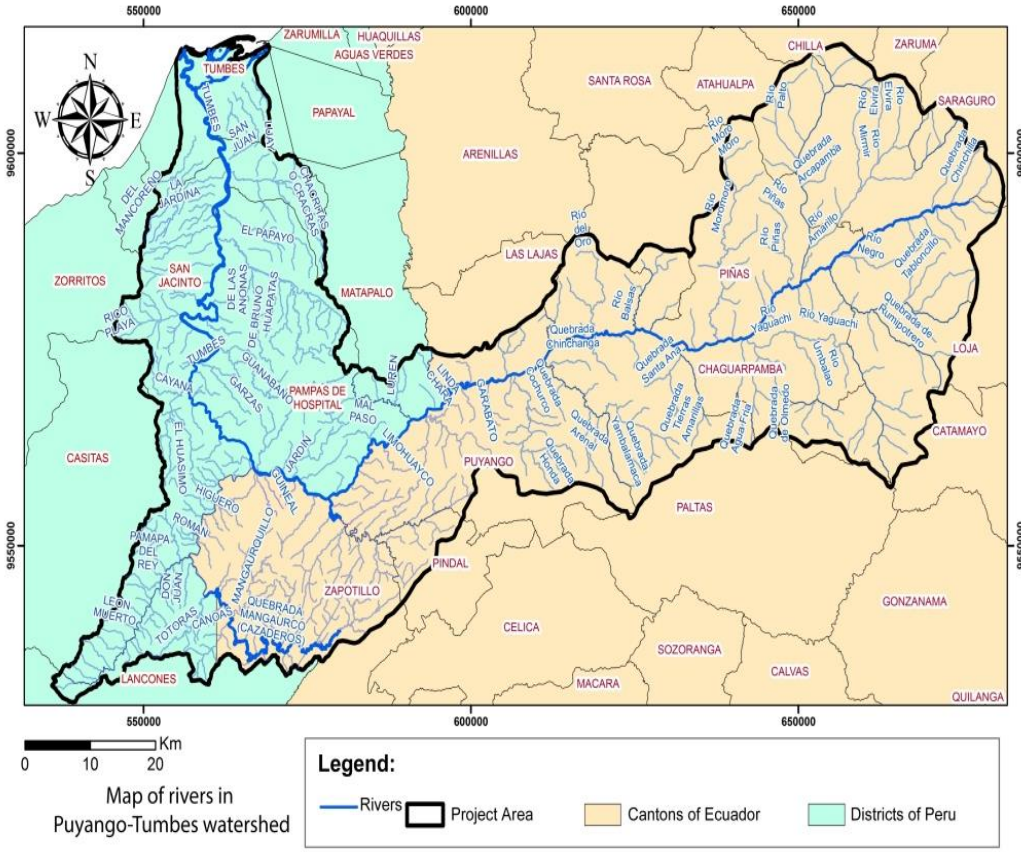
Ratings Scales		
Ratings for Outcomes, Effectiveness, Efficiency, M&E, I&E Execution	**Sustainability ratings:**	**Relevance ratings**
6: Highly Satisfactory (HS): The project had no shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency 5: Satisfactory (S): There were only minor shortcomings 4: Moderately Satisfactory (MS):there were moderate shortcomings 3. Moderately Unsatisfactory (MU): the project had significant shortcomings 2. Unsatisfactory (U): there were major shortcomings in the achievement of project objectives in terms of relevance, effectiveness, or efficiency 1. Highly Unsatisfactory (HU): The project had severe shortcomings	4. Likely (L): negligible risks to sustainability 3. Moderately Likely (ML):moderate risks 2. Moderately Unlikely (MU): significant risks 1. Unlikely (U): severe risks	2. Relevant (R) 1.. Not relevant (NR) Impact Ratings: 3. Significant (S) 2. Minimal (M) 1. Negligible (N)
Additional ratings where relevant: Not Applicable (N/A) Unable to Assess (U/A		

Box 6. Project Sustainability Ratings		
4	**Likely (L)**	negligible risks to sustainability, with key outcomes expected to continue into the foreseeable future.
3	**Moderately Likely (ML)**	moderate risks, but expectations that at least some outcomes will be sustained
2	**Moderately Unlikely (MU)**	substantial risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on.
1	**Unlikely (UL)**	severe risk that project outcomes as well as key outputs will not be sustained.
Not Applicable (N/A) Unable to Assess (U/A)		

ANNEX 7 – MAP ZARUMILLA, PUYANGO-TUMBES AND CATAMAYO-CHIRA BASINS

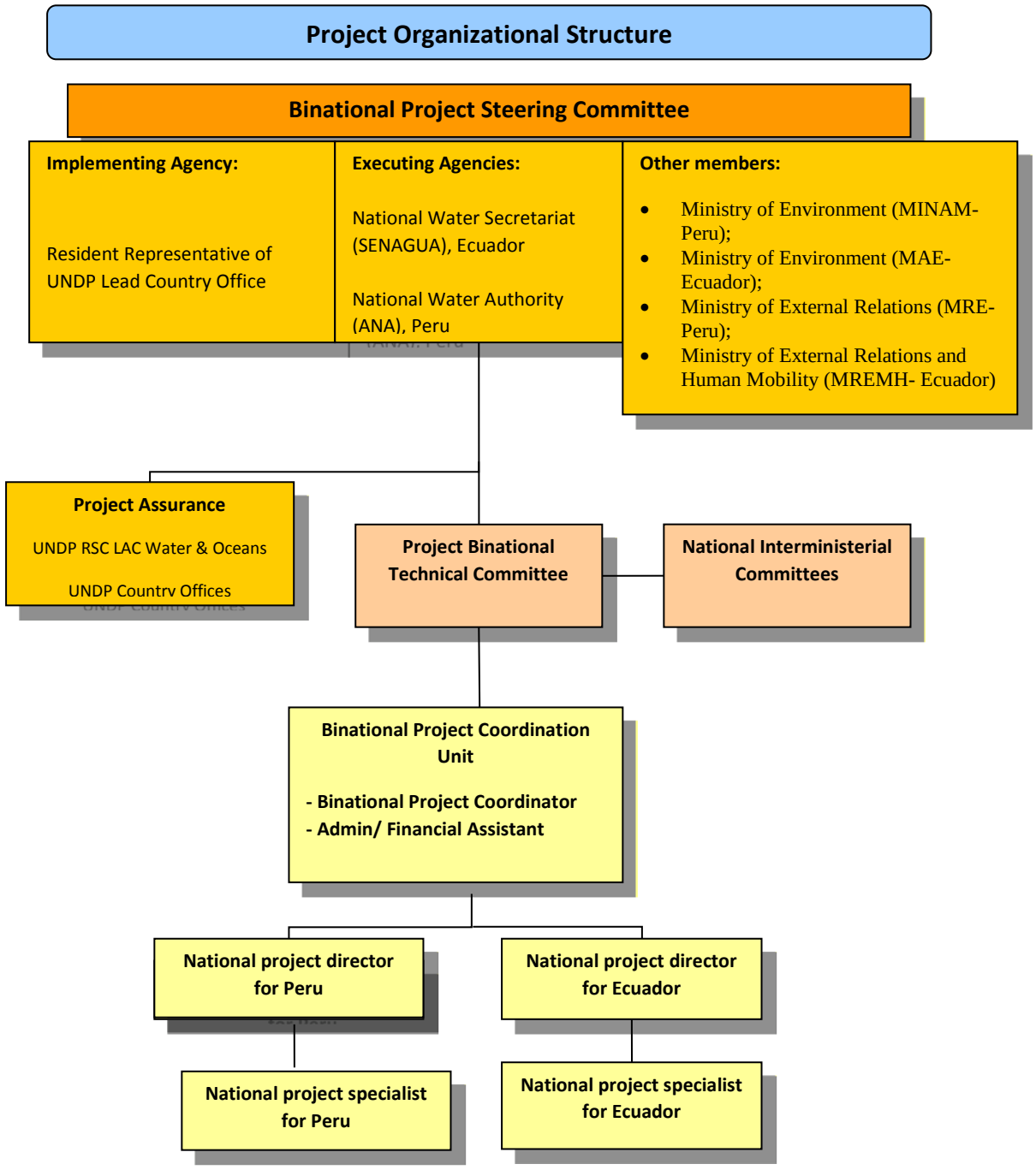






Source: ProDoc

ANNEX 8 – MANAGEMENT ARRANGEMENTS DIAGRAM



Source: ProDoc

ANNEX 9 – CONFIRMED SOURCE OF CO-FINANCING BY NAME AND BY TYPE

CONFIRMED SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

PLEASE COMPLETE FOR ALL PROJECTS AT MTR AND TE STAGES

Please include evidence for co-financing for the project with this form (please add rows as necessary)

Sources of Co-financing	Name of Co-financier	Type of Cofinancing	Investment Mobilized	Amount ($)
Recipient Country Government	SENAGUA	In-kind	Investment mobilized	1.124.665,48
Recipient Country Government	SENAGUA	In-kind	Investment mobilized	6.589.031,89
Recipient Country Government	SENAGUA	In-kind	Recurrent expenditures	83.600,00
GEF Agency	PNUD ECUADOR	In-kind	Recurrent expenditures	48.022,92
(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
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(select)		(select)	(select)	
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(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
(select)		(select)	(select)	
Total Co-financing				7.797.297,37

ANNEX 10 – ENDNOTES

[1] The short name adopted by the project during its implementation was the "Zarumilla project". Nevertheless, the project addressed three basins: Zarumilla (the smallest), Puyango-Tumbes and Catamayo-Chira. It is relevant to adopt a short name for a project, nevertheless, to adopt a short name that only makes reference to one of the three geographic areas of intervention may not be the most appropriate solution. When it deals with territory, names are not just a mater of semantic. It includes a sense of belonging, cultural values, and identification both from individual and from the collective perspectives. Therefore, this evaluation adopted "GEF 3 basins project" as the short name for the GEF UNDP project 'Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Transboundary Aquifers and River Basins'. It was informally recommended by the evaluator to the project stakeholders present at Preliminary Findings Meeting, to discuss about a short name that could reflect the project profile and geographic scope. If it is the case, the project can adopt (or not) the short name "3 basins" for the PIF/ProDoc process, the intersectional period and the second phase of the project.

[2] The difference between disbursement by February 2020 (US$ 3,300,662) and December 2019 (US$ 3,189,043) was US$111,619 correspondent to disbursements from January and February 2020

[3] See document GEF Policy: FI/GN/01 - Guidelines on Co-financing

[4] See document UNDP. National Implementation by the Government of UNDP Supported Projects: Guidelines and Procedures. 2011

[5] "Methodological Technical Document to Identify, Delimit, Declare and Manage Water Protection Zones (June 2018)"; and "A proposal of the Normative-Administrative Instrument for the Declaration of Water Protection Areas (June 2019)"

[6] It is expected that TDA/SAPs will be officially launched on a binational workshop. This workshop was initially planned for March 2020 with the in-person presence of several authorities and key stakeholders. Due to the Covid-19 crises, this event was adapted for an online format and it is expected to happen before project closure. The PCU informed that TDA/SAPs files will be available for download at the project website (https://iwrmzarumilla.iwlearn.org) and hardcopies will be printed and distributed to institutions related to water resources and local governments of Ecuador and Peru, as well as universities and cooperation agencies.

[7] At the moment this TE was taking place, project partners were expecting to promote dissemination of project results and communication with ministries, local governments, academics and cooperation projects. This activity was initially planned to happen as a presential Binational Symposium on International Water. Due to the Covid-19 crises, this event was adapted to a series of online events that will be divided into different topics according to its target audience. These online events were expected to happen before project closure.

[8] UNDP GEF ID9566 project 'Integrated Management of Water Resources of the Mira-Mataje and Carchi-Guáitara, Colombia – Ecuador Binational Basins'; UNEP GEF ID9770 project 'Implementation of the Strategic Action Programme to ensure Integrated and Sustainable Management of the Transboundary Water Resources of the Amazon River Basin`; and UNDP GEF ID5748 project 'Integrated Water Resources Management in the Titicaca-Desaguadero-Poopo-Salar de Coipasa (TDPS) System'.

[9] UNDP GEF ID 9124 project 'Coastal Fisheries Initiative-Latin America' (2017 to 2021), one of the child projects of the Global Coastal Fisheries Initiative Program. The project promotes ecosystem-based management and improved governance of coastal fisheries in Ecuador and Peru. The project activities take place in the coastal / estuarian region of the 3 Basin project. The source-to-sea approach is one of the core principals of GEFIW.

[10] Although there are face-to-face or virtual training events, such as those offered by IWLEARN, they usually are only accessed by very few project actors, and often the knowledge is not properly socialized with other project stakeholders. Therefore, it should be considered the benefits and costs to implement under the GEF IW projects a permanent basic training (i.e. carried out every year) in Spanish, in view of the multiple changes of authorities and officials. This training must be at different levels of the PCU, officials of public institutions and implementing partners.