

Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero

Mid-Term Evaluation of the CO-G1002 or GRT/CX-14525CO Project

GEF ID: 4610

Final Report



**Robert Hofstede (evaluator, independent consultant)
May 2018**

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Executive Summary

The objective of the Project entitled Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza- Sumapaz - Guerrero is to strengthen the hydrological buffering and regulation capacity of the upper areas of the selected watersheds located in the Project area, which are considered strategic for a significant part of the water supply system of the city of Bogota and the hydrological regulation of the Bogota Savanna. To fulfill this objective, the Project Design includes two technical components: (1) Knowledge management, and (2) Adoption of adaptation measures to address the impacts of climate variability and climate change on the hydrological balance of prioritized areas. This Project is implemented by the Inter-American Development Bank (IDB) with funds from the Special Climate Change Fund (SCCF) operated by the Global Environment Facility (GEF). The execution of the Project has been conducted by the Ministry of Environment and Sustainable Development (MADS, by its Spanish acronym) through Conservacion Internacional (CI Colombia) by delegation under a legal implementation agreement. The Project has four co-financing entities: Instituto de Hidrologia, Meteorologia y Estudios Ambientales (IDEAM), Empresa de Acueducto, Alcantarillado y Aseo de Bogota (EAB), Corporacion Autonoma Regional de Cundinamarca (CAR) and Corporacion Autonoma Regional del Guavio (CORPOGUAVIO). The Project has been planned to be executed over a period of five years beginning on August 14, 2014, and has a total budget of USD 27,924,750 (including a SCCF/GEF contribution in the amount of USD 4,215,750, local co-financing, and associated funds represented by non-reimbursable technical cooperation funds contributed by IDB).

Due to being focused on the paramo ecosystem and on adaptation to climate change, this Project is highly relevant to the global and national environmental issues. Having selected the Sumapaz - Chingaza - Guerrero corridor is strategic at the national level because it is the Andean tropical high mountain region with the greatest concentration of human population located next to natural ecosystems. In practice, this Project is presented as and considered a project on paramos. This has created both advantages and challenges. Due to the paramo area being at the core of national debate and regulations being passed on this issue, the Project's context is constantly evolving, which has affected the Project: due to the absence of decisions in connection with the guidelines for productive activities in delimited paramo areas, the Project has been unable to implement the activities under Component 2 in a key area. This situation impacts the Project in every respect. For instance, although the Project had a long inception period, it has managed to complete most of its activities under Component 1 on time, but limited progress has been made in the activities under Component 2, with the total execution of the GEF funds standing at just 21%. As a result of this, the full achievement of the outcome under Component 2 is uncertain and it will only be possible if the Project's Steering Committee (PSC) makes a forthwith decision on the implementation scenarios for the delimited paramo areas, in line with the current legislation. Due to these reasons, the Project is in the eye of the hurricane - which makes it vulnerable -, but at the same time it has good opportunities for sustained support. The Project is at a critical point of execution.

The general objective of the Project is ambitious, especially considering that its fulfillment must be measured based on its actual impact in terms of improving hydrological conditions. Due to its high level of ambition and the limited actions under Component 2, the Project has made little progress towards its general objective and there are limited possibilities to fulfill it in the medium term. Another element to be borne in mind is that the Project's main model is focused on the local action, but the overall success of the Project is measured at the watershed level. Some socioeconomic factors have a greater impact in terms of space and time than the Project had envisaged and greatly affect the use of land. The fact that these factors have not been properly considered greatly affects the Project's possibilities to achieve its general objective.

The studies contemplated under Component 1 have been conducted efficiently, but their quality and usefulness to achieve the Project's objectives vary considerably. The technical studies (climate scenarios, hydrological response and main ecological adaptive structure) have been largely good, but the vulnerability study needs considerable improvement. The studies have been well articulated and communicated, so the progress status of the *outcome* under Component 1 is good. This is thanks not only to the studies having

been conducted and properly communicated, but also to an additional process aimed at influencing local plans and policies. The technical work that supports Component 2 is good quality, though the possibility to apply it in practice is limited (restoration models, adaptation models) or it is too comprehensive (monitoring system, life plan).

During the course of the evaluation, a proper operational and administrative management of the Project has been observed, in spite of some aspects like the long inception period and the simultaneous use of different results frameworks. While the financial execution is slow, the Project's financial management is efficient. The realization of the co-financing is higher and faster than planned. The activities of the Project have been conducted in the form of consulting assignments, which has resulted in high staff turnover in the technical team and has made it difficult for the Project to draw on the institutional experience of the executing entities.

Below are the main recommendations to improve the Project's execution and achieve the expected results by the end of the Project, and for future initiatives of the implementing agency and the partner institutions:

- IDB must promptly ensure that the Project uses one same results framework. The results framework must be based on the results framework of the Project Document approved by GEF, including any additional elements necessary to improve monitoring and the possibility to evaluate the Project according to IDB standards. The adjustments to the original results framework included in the GEF Project Document must be reported in the next PIR.
- The partner institutions must report on the progress made in the outputs that contribute to the Project indicators, even if they had not been originally considered as co-financing contributions.
- MADS, in coordination with the other members of the PSC, must forthwith make a decision on the implementation of the activities under Component 2 in delimited paramo areas. Immediately following said decision, the Project's Coordination Unit (PCU) must accordingly adapt the management of all the activities until the end of the Project.
- Considering there is little time to carry out all the pending activities, the PCU must implement them using a criterion of 'minimum necessary' rather than 'maximum possible'.
- Considering the long inception period and the current scarce progress in Component 2, IDB should consider requesting a time extension for the Project execution period in order to accomplish minimum implementation of all the key activities.
- The PCU must formulate and implement a sustainability plan for the Project outcomes, actions, reports, and data. The plan must include methods, budget and people in charge, and must be immediately implemented.
- In order to avoid long inception periods in future GEF projects, IDB and the partner institutions must plan for the fulfillment of the special conditions prior to the first disbursement before executing the financing agreement.
- CI and the Project's partner institutions must find a way to retain the human experience gained during the course of this Project for future actions.

The evaluator rates the Project's performance as "Moderately Satisfactory".

Abbreviations and acronyms

APC	Agencia Presidencial de Cooperacion (Presidential Agency for Cooperation)
IDB	Inter-American Development Bank
CAR	Corporacion Autonoma Regional de Cundinamarca
PSC	Project Steering Committee
CEO	Chief Executive Officer
CI	Conservacion Internacional
NPC	National Project Coordinator
Corpoguavio	Corporacion Autonoma Regional del Guavio
TC	Technical Committee
EAB	Empresa de Acueducto, Alcantarillado y Aseo de Bogota (Bogota water and sewerage utility)
SCCF	Special Climate Change Fund
EETA	Spanish acronym for Adaptive Territorial Ecological Structure
EOT	Spanish acronym for Land Use Scheme
GEF	Global Environment Facility
IAvH	Instituto de Investigacion de Recursos Biologicos Alexander von Humboldt
IDEAM	Colombia's National Institute of Hydrology, Meteorology and Environmental Studies
INAP	Integrated National Adaptation Plan
MADS	Ministry of Environment and Sustainable Development
MADR	Ministry of Agriculture and Rural Development
POM	Project's Operation Manual
OECD-DAC	Organization for Economic Co-operation and Development - Development Assistance Committee
PEP	Multiannual Project Execution Plan
PIF	Project Identification Form
PIR	Project Implementation Report
PMR	Progress Monitoring Report
PND	Spanish acronym for National Development Plan
AWP	Annual Work Plan
POMCA	Spanish acronym for Watershed Management Plan
POT	Spanish acronym for Land Use Plan
PRICC	Spanish acronym for Regional Comprehensive Plan on Climate Change
RAPE	Region Administrativa de Planeacion Especial
SINA	Spanish acronym for National Environmental System
TNC	The Nature Conservancy
PCU	Project Coordination Unit

I. Introduction

1. This document presents the results of the Mid-Term Evaluation of the GRT/CX-14525CO Technical Cooperation Project: Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero (hereafter, the "Project"). This Project is implemented by the Inter-American Development Bank (IDB) with funds from the Special Climate Change Fund (SCCF) operated by the Global Environment Facility (GEF). The Project's executing agency is the Ministry of Environment and Sustainable Development (MADS), which has delegated the Project's execution to Conservacion Internacional Colombia (CI Colombia) under the Implementation Agreement 01 (February 5, 2015). Four partner institutions cooperate in the Project's execution: Instituto de Hidrologia, Meteorologia y Estudios Ambientales (IDEAM), Empresa de Acueducto, Alcantarillado y Aseo de Bogota (EAB), Corporacion Autonoma Regional de Cundinamarca (CAR) and Corporacion Autonoma Regional del Guavio (CORPOGUAVIO). The Project is to be executed over a period of five years starting on August 14, 2014, and its global budget amounts to USD 27,924,750 (USD 4,215,750 from SCCF/GEF, USD 11,409,000 of local co-financing and USD 2,300,000 of associated funds).
2. The objective of the Project is to strengthen the hydrological buffering and regulation capacity of the upper areas of the selected watersheds located in the Project area, which are considered strategic for a significant part of the water supply system of the city of Bogota and the hydrological regulation of the Bogota Savanna. The Project is structured based on two technical components: (1) Knowledge management, and (2) Adoption of adaptation measures to address the impacts of climate variability and climate change on the hydrological balance of prioritized areas.

II. The Evaluation

Objectives

3. The Mid-Term Evaluation of this Project was conducted during January and February of 2018. CI hired a consultant named Robert Hofstede as independent evaluator (hereinafter, the "evaluator"). Based on the Terms of Reference of this Evaluation¹, the general objective is:
 - To review and evaluate the achievements made during the implementation of the Project entitled "Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero" vis-à-vis its objectives, results framework, and indicators, as well as its work plan and other relevant execution aspects, with a view to proposing necessary adjustments and changes during the remaining execution period to improve the Project's performance and meet the proposed targets.
4. The specific objectives of the MTE are the following:
 - a. To carry out a diagnosis that shows the current situation as to the Project's execution, in relation to the execution of activities and outputs as well as the expected results as of the date of the Mid-Term Evaluation.
 - b. To qualitatively and quantitatively identify the achievements made at the technical, administrative, financial and institutional level, as well as the materialization of the main assumptions made at the design stage, and, based on this, to define a set of recommendations for a proper completion of the Project.
 - c. To evaluate the sustainability of the Project and its components in institutional and financial terms, as well as the degree of ownership assumed by its users/beneficiaries.
 - d. To propose measures, changes, mechanisms and other actions required to efficiently meet the expected targets, also considering changes in the regulatory and institutional context related

¹ Please, refer to Annex 1.

to the high-mountain area which may have taken place since the formulation and start of the Project.

- e. To evaluate the relevance of the progress and result indicators (*output/outcome*) of each component proposed at the Project formulation stage, propose necessary adjustments based on the current execution scheme and its social, political and financial environment, and suggest measures aimed at improving supervision.

Methodology

5. According to its work plan², this evaluation is based on the five criteria defined by the OECD/DAC³:
 - Relevance: The extent to which the objectives of an intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies.
 - Efficiency: A measure of how the resources/ inputs (funds, time, human resources) of the project have been converted to outputs and outcomes.
 - Effectiveness: The extent to which the intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.
 - Impact: The long-term, primary and secondary positive and negative effects produced by the project, whether directly or indirectly, and whether intended or unintended.
 - Sustainability: The likely ability of a development intervention to continue to deliver benefits after completion. The likelihood that the benefits continue in the long term.
6. For each of these criteria, the evaluator developed a set of questions to be answered during the evaluation; based on said questions, findings were derived and an overall rating has been assigned to each criterion⁴. During the course of the evaluation, the questions were slightly adjusted and additional questions were added based on the information gathered. The questions were answered based on a review of documents and on interviews focused on the performance of the Project vis-à-vis what had been stipulated in the Project Document - particularly the Results Framework and its indicators. The methodology used included three components (a) document review, (b) semi-structured interviews, and (c) field observations⁵.
7. *Document Review*: At the beginning of the evaluation, the consultant reviewed both the documents produced by the Project and other publications in order to gain deeper knowledge of the context, the Project design and planning, analyze progress, learn about tangible outputs up to date, and get an idea of the communication impact. In this report, all the observations based on documents are duly referenced.
8. *Semi-structured interviews and field observations*: Based on the review of documents, especially progress reports, and after an initial meeting with the Project Coordination Unit (PCU), a work theory on the Project's performance up to date was formulated (evaluator's personal document). The theory was validated through semi-structured interviews with the main stakeholders (implementation partners and main beneficiaries). The evaluation questions served as a guide for the interviews, and depending on the person being interviewed, different topics were addressed in more detail. For instance, greater emphasis was put on effectiveness, impact and sustainability when interviewing the main partners, on relevance and impact when interviewing decision-makers, on efficiency and effectiveness when interviewing the work team and consultants, and on effectiveness and sustainability when interviewing beneficiaries.
9. In general, interviews were individual, involving the evaluator and the person interviewed, except for the interviews with the people of MADS, which were conducted in the presence of the Project's

² Submitted by the evaluator on January 19, 2018, Annex 2

³ *Organization for Economic Co-operation and Development's Development Assistance Committee*;
<http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

⁴ Following GEF guidelines, the evaluator will rate the aforesaid criteria using a 6-point scale: Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory: <https://www.thegef.org/gef/M-and-E-in-the-LDCF-SCCF>

⁵ The execution of the detailed activities is included in the evaluation schedule; Annex 3.

focal point at MADS. Specifically with the Technical Team and the PCU, several working sessions were held with the whole group or with a part of it, during the field visits and the final meeting at the office of CI. Due to the interviews being semi-structured, the questionnaire did not include a fixed set of questions; it was rather an open conversation where the questions served as a guide and allowed room for including additional information. During the interviews, people were invited to support their observations and perceptions with tangible and objective evidence, if possible. In case of subjective perceptions and opinions, the consultant tried to cross-check the information with other interviewees.

10. In the city of Bogota, the evaluator conducted the interviews with the institutions and people involved in the Project⁶. People belonging the following institutions and bodies were interviewed:

- Ministry of Environment and Sustainable Development (MADS)
- Corporaciones Regionales (CAR and Corpoguavio).
- IDB
- IDEAM
- EAB
- National Parks Unit
- Staff of the Project Coordination Unit (PCU)
- Heads of environmental units in municipalities
- Support staff at CI Colombia
- Beneficiary

11. *Field Observations.* The consultant visited the four micro-watersheds where the Project is operating (San Francisco-Fuatavita, Sesquile-Gandoque-Gogua, Chisaca-Usme, and Chipata-Guasca) to interview direct beneficiaries (environmental management units of majors' offices, farmer families) and observe activities on the field. Staff of the PCU, the technical team and the municipalities also participated in the visits to explain the methodologies used and to hold direct conversations with the consultant, the team and the beneficiaries. In addition, the consultant sought opportunities to conduct semi-structured bilateral interviews with the direct beneficiaries.

Formulation of conclusions, lessons learned and recommendations.

12. Based on the three methodology components described (documents, interviews, and field observations), evidence-based findings were obtained including quantitative information (number of plans, hectares, beneficiaries, etc.) and qualitative information (interviewees' perceptions and opinions) relevant to the evaluation questions. The evidence was analyzed and interpreted. Based on findings, the evaluator formulated the evaluation conclusions, including his professional opinion on the Project's performance according to the evaluation criteria. In this report, each conclusion includes a reference to the finding(s) upon which it is based. The evaluator identified lessons learned from the project implementation experiences which may be applied to similar projects at other scales or for a more extended use. Such lessons learned are also referred to in the evaluation findings. Finally, the evaluator formulated a set of recommendations to improve the project execution and meet the expected results by the end of the Project. Each recommendation is based on conclusions, mentions the person responsible to take action and the estimated time for its implementation.

Evaluator's autonomy and coordination with the Project team

13. The evaluation has been conducted in full by the evaluator, who was the only person in charge of gathering and interpreting information, identifying findings and lessons learned and formulating conclusions and recommendations.

⁶ The complete list of interviewees is included in Annex 5.

14. During the execution of the valuation, there was continuous coordination and exchange of information with the PCU. The evaluator submitted a work plan to the Project's National Coordinator and agreed upon an execution agenda. He also presented a general list of documents to be reviewed and of people and institutions to be interviewed, and received suggestions regarding said lists. While many of the interviews to the stakeholders (implementation partners and Project beneficiaries) were bilateral (without the PCU staff being present), subjective observations or critical perceptions about third parties have been cross-checked with the PCU (respecting the principle of anonymity). At the end of the field mission, general observations and conclusions were presented to the PCU. A draft evaluation report was submitted to the IDB and the Steering Committee members through the Project Coordinator to get feedback on factual mistakes (findings based on incomplete or inaccurate information).

Scope and limitations

15. The evaluation analyzed the activities and achievements of the Project since its official start (August 14, 2014). Given that the last technical and financial report and the audit were prepared as of December 31, 2017, this date was taken as a cut-date for the quantitative data reported for the period under evaluation. However, if during the course of the evaluation it was found that significant achievements or developments took place after said date, such achievements or developments are considered as direct observations.
16. While this is an evaluation of the Project as a whole covering up to the mid-term phase, particular attention is paid to the outcomes and outputs achieved with GEF funds.
17. Like in any external evaluation, the time and budget available were not enough to visit all the intervention areas or to interview all the people involved in the execution and the beneficiaries or to conduct a detailed analysis of all the documents available. Therefore, the information gathering conducted through the analysis of documents, interviews and field observations necessarily covered only part of all the information available.
18. Much of the quantitative information used to analyze the progress and impact indicators was provided by the Project itself. While the evaluator tried to validate such information, it is not possible to check all the quantitative data in detail. Finally, it should be noted that the evaluator has extensive academic training in natural sciences and is widely experienced in the management of environmental projects⁷, which he can apply to a variety of technical, administrative and operative issues. However, since he is just one person, rather than a team of consultants, he is not able to judge with a technical criterion absolutely all of the Project aspects and, therefore, in some issues (like some details of the financial administration, the quality of certain technical studies), he had to exclusively rely on evidence and references.

III. The Project

Objectives and components⁸:

19. The objective of the Project is to strengthen the hydrological buffering and regulation capacity of the upper areas of the selected watersheds located in the Project area, which are considered strategic for a significant part of the water supply system of the city of Bogota and the hydrological regulation of the Bogota Savanna. In the Results Framework, this objective is coupled with two global impacts⁹ and their respective indicators (1) The hydrological buffering and regulating capacity of the high-mountain ecosystem (paramos and high Andean forests) is maintained or increases in variability and climate change conditions (2) Greater awareness of the adaptation

⁷ <http://roberthofstede.com/es/hoja-de-vida>

⁸ The description of the Project components is based on the 7th Half-Yearly Report of the Project (July 1 - December 31, 2017)

⁹ The GEF Project Document includes two "general outcomes" which support the agreements between IDB and the Project partners; in this Evaluation, such general outcomes are considered as Project impacts.

alternatives and lessons learned from the field experience in high-mountain ecosystems. To fulfill this objective, the project design includes two technical components:

- **Component 1. *Knowledge management*:** This component aims at assessing the vulnerability to climate change in the context of land use planning and watershed management. The activities carried out as part of this component are: (i) formulation of high-resolution climate scenarios that serve as an input for watershed management and land use planning; (ii) evaluation of the hydrological response in the selected watersheds; (iii) formulation of a socio-ecological vulnerability assessment for high Andean ecosystems, in terms of their capacity to supply and regulate water under climate change scenarios, focusing on priority areas that have been selected based on an assessment of their hydrological risk, on a scale ranging between 1:25,000 and 1:100,000; (iv) identification of perceptions, attitudes and behaviors of local and institutional stakeholders present in the Project area as regards climate change vulnerability and the need to implement participatory processes of adaptation to the impacts of climate change; (v) definition of an Adaptive Territorial Ecological Structure - EETA, by its Spanish acronym - to guide land use planning in the Project's influence area; (vi) a communication strategy to manage information and knowledge in order to disseminate information and build the capacities of the different stakeholders in the area; and (vii) training workshops and sessions aimed at improving stakeholders' current knowledge related to climate change, including successful adaptive management experiences. Both the vulnerability assessment and the evaluation of hydrological response will be subject to a validation process comprising a peer review by academics with widely recognized experience in the field.
- **Component 2. *Adoption of adaptation measures to address the impacts of climate variability and change on the hydrological balance of prioritized areas*:** This component is focused on advancing adaptation measures for land use. Funds will be allocated to strategic adaptation measures to directly address the net effect of climate variability and change on water regulation and storage in three prioritized areas. The actions that will be initially implemented in three hydrological units include: (i) the implementation of activities aimed at ecological restoration and improvement of connectivity between natural ecosystems, including bioengineering activities, to increase water regulation capacity; (ii) adoption of climate-resilient land use management practices by farmers and ranchers to reduce the vulnerability that climate change imposes on local hydrological conditions; (iii) new design and modification of hydraulic works in areas that are critical for water supply to increase water storage capacity; (iv) formulation of new local initiatives of adaptation to climate change seeking the sustainability and feasibility of replication of the adaptation measures to be implemented by the Project; (v) design and implementation of a monitoring and evaluation system that enables tracking the progress of the Project as a whole, as well as the impact of the adaptation measures; and (vi) training workshops and sessions geared towards municipality and community organizations, with an emphasis on potato and milk producers, educating them on the risks associated with climate change and the implementation of adaptation measures to reduce vulnerability.

20. In the GEF Project Document (hereafter, "Prodoc"¹⁰), the Project results were presented in the form of a results framework with a general objective, two general outcomes and two components. Each component has an outcome. All of the outcomes have an outcome indicator. Each component has four outputs, which are presented in the form of output indicators¹¹. All indicators include information on the target level (expected level), the baseline, and the progress expected during execution (increase in the indicator value/year). There are also some descriptive comments and the means of verification of these indicators.

¹⁰ Request for GEF CEO endorsement "Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza—Sumapáz—Guerrero." GEF Project Number 4610. May, 2013

¹¹ Output 2.1.1 is formulated in the form of an indicator and a sub-indicator.

21. The GEF Prodoc specifies in a narrative manner the general activities for each output, an economic assessment of the intervention and a presentation of the prioritized areas. After the Project received the GEF CEO's approval, IDB recommended reformulating the outcomes and changing some of the indicators of Component 2 in the results framework. The changes were based on a review of the indicators and of the feasibility to evaluate the Project conducted by the IDB Strategic Planning and Development Effectiveness Office. The revised framework was included in the IDB Project Document¹², which was used for the agreements with the executing agencies. Other key documents used for project planning were drawn up during the beginning of the execution phase, as part of the special conditions prior to the first disbursement, such as the Procurement Plan, the Multiannual Project Execution Plan (PEP) and the Annual Work Plans (AWP), which outline specific actions and include a detailed budget.

Implementation Model

22. The GEF implementation agency for this project is the Inter-American Development Bank (IDB). The Project's Executing Agency is MADS, which delegates the implementation to CI Colombia under an Implementation Agreement signed by both institutions on February 5, 2015. Financing Agreement GRT/CX-14525CO executed between the Presidential Agency for International Cooperation of Colombia (APC, by its Spanish acronym), MADS, and IDB for the execution of the Project allocated and laid down the obligations of CI and MADS, as well as the articulation of the Project's co-financing (or partner) institutions (IDEAM, EAB, CAR and CORPOGUAVIO) with MADS to channel the funds for the operation. Based on the Project's Operation Manual (POM), CI Colombia is responsible for executing and administrating the Project, including managing planning instruments, financial and accounting management, establishing the PCU and procurement and acquisition processes, preparing progress reports and convening meetings and missions of the project supervision and support committees. CI receives support from MADS and the Project's partner institutions in the execution and strategic decision-making. The partner institutions that contribute funds, report their co-financing for the execution of the specific Project activities and are represented in the Steering and Technical Committees, as provided in the Execution Agreement and the Project's association agreements signed with MADS. The relationship between the four partner institutions and MADS is regulated under the Association Agreement No. 2 signed in 2015.
23. To guarantee effective coordination and strategic alignment with the partner institutions, a Project Steering Committee (PSC) and a Technical Committee (TC) have been created. The PSC, which meets every six months, includes managers or legal representatives of MADS, EAB, IDEAM, CORPOGUAVIO, and CAR. The Committee is presided over by MADS. Broadly speaking, the duties of the PSC are as follows: (i) approve the Project's planning tools; (ii) review progress reports; (iii) make strategic recommendations for an efficient execution of the Project and for the achievement of its results; (iv) ensure the Project complies with the POM and national and sector-specific policies, and that funds are exclusively allocated to activities aimed at the achievement of results; (v) support risk management activities for the Project; (iv) act as an arbitrator in case of disputes; and (vii), along with IDB, approve changes in the Project.
24. The TC meets every three months and includes the same organizations as the PSC plus Parques Nacionales Naturales de Colombia, as a permanent guest. The TC members were designated by the PSC, for which each entity sent an official notice to the PSC through their legal representative appointing an official who could represent them at the TC. The TC is presided over by IDEAM, or by the institution designated by MADS. Broadly speaking, the duties of the TC are as follows: (i) approve the Terms of Reference for the hiring of consulting services; (ii) conduct regular monitoring of the information in the Project planning tools; (iii) review the Project's final outputs; and (iv) conduct the Project's general technical supervision.
- CI Colombia established the PCU, initially with three people: (i) a National Project Coordinator (NPC), initially vested into the Environmental Policy Director and afterwards replaced by the Land

¹² IDB: Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero (CO-G1002) - Proposed non-reimbursable financing for investment

Use Planning Manager; (iii) a procurement expert, and (iii) a financial expert. The two later positions were specifically hired to carry out project tasks in the form of consulting services. Afterwards, the following position was added: (iv) an administrative manager for CI, on a part-time basis. The expanded team for the project execution (technical team) comprises a group of consultants. The following two consultants support the overall management of the Project: (i) a supervision expert, and (ii) a consultant specialized in adaptation (GEF Project focal point), based in MADS. Other team consultants were hired to perform specific tasks: (iii) socio-environmental; (iv) planning, land use planning and climate change; (v) ecological restoration; (vi) agricultural ecology; (vii) climate change scenarios; (viii) hydrological response; and (ix) technical and operating support. For some specific studies consulting firms were hired: perceptions study, adaptive territorial ecological structure (EETA, by its Spanish acronym), socio-ecological vulnerability assessment, and the Project audit.

- The team is supported by CI Colombia, especially by the following positions: (i) the Environmental Policy Director; (ii) the Socio-economic Manager; and (iii) the Director of Operations. The Vice-President of CI Colombia supports the Project's Coordinating Unit in technical and operational aspects. The NPC must report to the Technical Director of CI, and the other members of the PCU and the consultants report to the NPC, except for the adaptation expert (GEF Project focal point), who reports to the Technical Director of Forests, Biodiversity and Ecosystem Services of MADS.
25. The rules and procedures for the management and execution of the Project, as well as for the operation of the PSC, the TC, and the duties of each member of the PCU are detailed in the Project's Operation Manual (POM) prepared based on the GEF and IDB rules and procedures, and approved by the PSC on May 21, 2015.

IV. Evaluation Findings¹³

A. RELEVANCE

R1: The Project is highly relevant to the global and national environmental issue, and is aligned with national environmental priorities.

26. The Project directly responds to the global context because it applies the ecosystems-based adaptation approach in natural and agricultural landscapes in the high-mountain area surrounding the area with the greatest population concentration in Colombia. Along with the polar areas, coasts and deltas, and the small oceanic islands, the tropical high mountains are included among the landscapes which are most vulnerable to the effects of climate change. The average temperature increase is higher at greater altitudes and, in general, the effects on precipitations are unknown. The increased temperatures and the uncertainties on the behavior of precipitations not only affect the ability to predict landscape ecosystem services, but also directly impact people's capacity to carry out their economic, social, and cultural activities¹⁴. Climate change is already evident in the high tropical mountain, and the communities living in this landscape are already forced to adapt to changes in order to secure their livelihoods, their food safety and even their health. Several studies conducted worldwide have demonstrated that, in landscapes with multiple natural ecosystems like the high tropical mountain, the concept of ecosystem-based adaptation is a suitable approach that uses sustainable management, conservation and natural ecosystem and agro-ecosystem restoration as part of a global adaptation strategy.¹⁵

¹³ Applying the evaluation criteria and questions presented in the work plan; please, refer to the document entitled "Work Plan" for a detailed description of the questions for each criterion.

¹⁴ Egon & Price 2017. Mountain Ecosystem Services and Climate Change. A Global Overview of Potential Threats and Strategies for Adaptation. Unesco, Paris. <http://unesdoc.unesco.org/images/0024/002487/248768e.pdf>

¹⁵ Ikkala Nyman 2015. Making the Case for Ecosystem-Based Adaptation: The Global Mountain EbA Programme in Nepal, Peru and Uganda. New York.

http://www.adaptation-undp.org/sites/default/files/downloads/undp_2015_mt_eba_report_final2_web_vs_041215.pdf

27. Since the adoption of the Paris Agreement under the United Nations Framework Convention on Climate Change¹⁶, climate change mitigation and adaptation actions have been considered equally urgent and a shared responsibility of all the countries in the world. Therefore, Colombia, like other countries, is responsible for formulating national plans that contribute to achieving the goal of said agreement in terms of both mitigation and adaptation. This Project will contribute to the country's efforts to meet said commitment. Its global relevance, due to the ecosystem-based adaptation topic, was evident and harnessed to include the Project in several global discussion spaces addressing this topic. The Project's progress and its conceptual and methodological framework were presented at several meetings in the context of the United Nations Framework Convention on Climate Change and to the Commission on Ecosystem Management of the International Union for Conservation of Nature. At these events, worldwide experiences with different types of ecosystems were showcased.
28. In Colombia, the paramo is the most emblematic natural ecosystem of the high-mountain area. While this Project's influence area (the Sumapaz – Chingaza - Guerrero corridor) should have probably originally accommodated extensive areas of Andean forest, nowadays the prevailing natural landscape is mostly paramo. And while the Project covers an extensive agricultural area, it is presented as and considered an adaptation Project in paramos (¶32). The increasing challenges faced by the paramos and the valuing of their ecosystem services has resulted in a considerable increase in public policies and initiatives aimed at paramo conservation in the context of climate change, among others¹⁷. Already in 2001, the Ministry of Environment launched a specific program targeted at paramos¹⁸ inviting the Corporaciones Autonomas Regionales to characterize and map their paramos and formulate management plans. Over the following years, the Ministry issued two resolutions aimed at setting mechanisms and conditions that would enable preserving said ecosystems¹⁹. One decade later, there are several laws prohibiting the development of economic activities in paramos, including mining and commercial reforestation (Law no. 1382, Section 34 of 2010, and Law no. 1377, Section 7 of 2010, respectively). The National Development Plan (NDP, by its Spanish acronym) of 2010-2014 called for a delimitation of the paramo to enable the legal enforcement of said regulations. In the Cundinamarca department (where most part of this Project's study area is located), the Governor's Office supported by UNDP developed a Regional Climate Change Plan (PRICC²⁰, by its Spanish acronym), and this Project makes a significant contribution to such Plan.
29. Given the flood emergency in 2010 and 2011, Colombia decided to understand and take action in connection with climate change as an economic and social development issue. Through a number of legislative tools, including CONPES 3700 of 2011²¹, the National Climate Change Policy and Executive Order no. 298 of 2016²², the country decided to formulate and implement comprehensive sector and territorial plans for adaptation to climate change, articulated with risk and disaster management plans and land use plans (POT, by its Spanish acronym). Also in response to the aforesaid emergencies, Colombia created the National Adaptation Fund²³. The fund had the specific mission of facilitating (national and international cooperation) funds for rebuilding the areas affected by the floods. The fund financed, among other things, the process for delimiting the

¹⁶ http://unfccc.int/files/essential_background/convention/application/pdf/spanish_paris_agreement.pdf

¹⁷ Hofstede et al. 2015. Vivir en los páramos. Percepciones, vulnerabilidades, capacidades y gobernanza ante el cambio climático. UICN, Quito, Ecuador.

https://www.portalces.org/sites/default/files/documentos/uicn_cdlp_hofstede.et_al._2015_vivirenlparamos.pdf

¹⁸ *Programa para el Manejo Sostenible y Restauración de Ecosistemas de la Alta Montaña Colombiana* (Program for Sustainable Management and Restoration of Colombian High-Mountain Ecosystems).

¹⁹ Resolution 769 of 2002 "setting forth provisions to contribute to the protection, conservation and sustainability of paramos; Resolution 839 of 2003 "setting forth the Terms of Reference of the Study on the Current Status of Paramos"

²⁰ www.priccregioncapital.org/index.php/el-pricc

²¹ "Estrategia Institucional para la articulación de políticas y acciones en materia de cambio climático en Colombia" (Institutional Strategy for the articulation of climate change policies and actions in Colombia).

²² Whereunder the organization and operation of the National Climate Change System is set forth together with other regulations.

²³ www.fondoadaptacion.gov.co

paramos and wetlands to apply the special regulations for strategic ecosystems included in the PND.

30. The paramo is also globally considered a strategic ecosystem and is included in multiple decisions and policies of the Andean Community, including the Regional Biodiversity Strategy for the tropical Andean countries (Decision no. 523²⁴), the Andean Strategy for the Integrated Management of Water Resources (Decision no. 763²⁵), and the Proposed Action Plan, which lays down a set of shared guidelines and actions to address the challenges posed by climate change²⁶.
31. Due to the aforementioned reasons - the recognized vulnerability to the effects of climate change and the national policy on climate change, including the country's need to meet the Paris Agreement - the Project's approach is highly relevant. Having selected the Sumapaz - Chingaza - Guerrero corridor is strategic at the national level because this is the Andean tropical high mountain region with the greatest concentration of human population located next to natural ecosystems. About 20% of the Colombian population, 10 million people in Bogota's metropolitan area, have the paramo at sight and directly benefit from the water coming from the high mountain.

R2: Although it is not, this Project is considered a project in paramos.

32. The Project is focused on the high mountain area, at the watershed scale (according to the Project's objective "to strengthen the hydrological buffering and regulation capacity of the upper areas of the selected watersheds..."). The outcomes and outputs are focused at the micro-watershed level and include a reference to the agricultural areas and natural ecosystems. In the Project's Results Framework, the only reference to the paramo is in the general outcome ("Hydrological buffering and regulating capacity of high mountain ecosystems - paramos and high Andean forests - is maintained or increases..."²⁷). In other words, while the Project includes paramo areas, its scope is wider and the activities of both components are implemented at the watershed level all across the corridor, including both natural ecosystems and agricultural landscapes.
33. In practice, this Project is presented as and considered a project in paramos. For example, in the Prodoc, in the first paragraphs of the justification, the Project is related to the paramo (Table 1, paragraphs 1.3, 1.5). The problem addressed by the Project is presented as the loss of hydrological regulating capacity due to the degradation of the paramos due to the effect of climate change and agricultural use (paragraphs 1.7 and 1.8), that is to say, an ecosystem-based, rather than a whole-watershed-based approach. The considerable counterpart contribution made by EAB (through its Paramo Project), the participation of the Project in the transition roundtable (as a consultative body of MADS) where entities and projects investing in more than 15 paramo complexes in the country participate, and even the Project's communication outputs identify the Project with the paramo area.
34. The Project's being identified as focused on paramos, although it is not, is bringing both advantages and disadvantages to the Project. It has helped the Project get included in one of the greatest debates in the last decades about conservation and the management of paramos. As a result of this, it has attracted greater attention from MADS at the management and ministerial levels (¶63). According to senior officials of said Ministry: "The Project is a spearhead; it will show that in practice the country is capable of changing the use of land in delimited paramo areas". On the other hand, it has also complicated the project execution because it has resulted in the current standstill in the implementation of the reconversion and restoration agreements with owners of lands located in paramos due to issues related to the interpretation of recent legislation (¶39).

²⁴ www.comunidadandina.org/Seccion.aspx?id=127&tipo=TE&title=medio-ambiente

²⁵ www.comunidadandina.org/Upload/201238181959recursos_hidricos.pdf

²⁶ SGCAN. 2009. *Ayuda de memoria de los avances realizados en la implementación de la Agenda Ambiental Andina (Mayo 2007–Diciembre 2008)* (Aide Memoir on the progress made in the implementation of the Andean Environmental Agenda, May 2007–December 2008). SG/dt 430. office of the Secretary General of the Andean Community.

²⁷ In addition, the description of this general outcome is considered non appropriate, please refer to ¶42

R3. The Project works with the appropriate institutional partners and has become part of a scaled up institutional landscape.

35. The proper management of a GEF project like this one, with such a complex multi-disciplinary structure and ambitious objectives, requires effective cooperation between public entities and organizations that are capable of effectively supervising research activities and field practices. However, for the sake of management efficiency, it is also necessary to prevent the involvement of all potential stakeholders in all of the Project's stages. The Project has been based on the structures of the National Environmental System (SINA), with MADS as the national authority and GEF focal point, the two relevant regional autonomous corporations (CAR, CORPOGUAVIO) as decentralized environmental authorities, and the research institute (IDEAM) covering the topic of climate change. In addition, there is the Bogota water and sewerage utility, as a public utility that manages a large project that directly contributes to the objectives of this Project. This institutional cluster is appropriate, considering the different official authorities in the Project area, their influencing capacity and their ability to contribute co-financing and counterpart actions. A SINA institution that is missing in this cluster is Instituto Alexander von Humboldt (IAvH), which is responsible for drawing the maps that define the reference area for the delimitation of the paramos and which is undertaking paramo conservation projects throughout the country, including the Project area. During the course of the Project's execution, a certain level of coordination with IAvH has been achieved, drawing on some of its experience through the hiring of a former officer of IAvH who is an expert in paramos. However, had he been formally included from the beginning, the projects under execution could have been better aligned and IAvH could have been an additional project's partner.
36. While the Project has not included territorial authorities (mayor and government offices, Parks Unit) in its execution structure, it has certainly properly included them in the local institutional landscape. Initially, even in the Prodoc, the idea was that the Environmental Secretariat of Bogota (also a member of SINA) would be a partner of the Project. However, according to people involved in the management of the Project, the idea was discarded due to a matter of equality among territorial entities – where most are small major offices. According to the evaluator, it was a sound decision to leave all those entities as a group of authorities which are not partners but which are certainly recognized as relevant stakeholders. It would have been neither necessary, nor efficient to include those entities in the implementation and governance of the Project because they are many and different in size and capacity (e.g. Bogota vs. Guatavita). In addition, those entities are actually beneficiaries of the Project because they are the ones that must develop and implement the land management instruments that the Project helps improve (development plans, POTs, etc.). During the course of the evaluation, it has become apparent that there is proper collaboration with the local municipalities where the Project is executed. The officials who participated in the field trips feel empowered by the Project, stated that the Project helps them build their capacities, and also feel that they have been successful in leading the Project actions in their jurisdictions, including the definition of areas of work and priority actions. The Natural Parks Unit (the territorial authority in national protected areas) participates as an observer in PSC meetings and coordinates actions in the buffer zones of the National Parks (Chingaza and Sumapaz).
37. The project execution was delegated to CI Colombia, an NGO that has been one of the main architects of the concept of the Sumapaz-Chingaza-Guerrero biological corridor²⁸. This NGO has wide experience in the management of conservation projects based on scientific information, and its objectives include influencing policies and achieving a real impact on the field. CI, by delegation of the then Ministry of Environment, has also been the agency in charge of executing the Integrated National Adaptation Plan Project (INAP; GEF 2019), which forms the basis for the conceptualization of the current Project (¶45). The Policy Director of CI in Colombia is the

²⁸ Sguerra et al, 2011. Corredor de Conservación Chingaza - Sumapaz - Guerrero. Resultados del Diseño y Lineamientos de Acción. <https://isfcolombia.uniandes.edu.co/images/documentos/corredorconservacion.pdf>

Chairwoman of the IUCN Commission on Ecosystem Management and a world-recognized expert in the implementation of the ecosystem-based approach and ecosystem-based adaptation.

R4. Due to the development of a national debate and legislation on the paramo, the Project's context is constantly evolving.

38. Over the last decade, paramo ecosystem management has become the subject matter of national debate in Colombia. On the one hand, the recognition of the importance of its ecosystem services (especially hydrological regulation) has generated a wide social base for its protection (¶128). On the other hand, though, the rise in the price of metallic and energy mining resources has put this ecosystem in the eye of mining prospecting. This has led to social confrontation - especially in the northeast of the country, over the Santurban paramo - which ended in the passing of legislation prohibiting mining, farming and livestock breeding in the paramo, and a process for delimiting it (section 202, Law 1450 of 2011²⁹). The paramo delimitation process itself, and the subsequent new legislation, like paragraph 1, section 173, of Law 1753 of 2015³⁰ (allowing mining activities in the paramo if the environmental license is prior to 2010) and two rulings of the Constitutional Court (C035 of 2016, declaring said paragraph 1 unenforceable; and T361 of 2017, repealing the delimitation of the Santurban paramo) changed the legal context of the paramo. In the meanwhile, the people living in the paramo feel they are not being considered and declared to be confused and uncertain about their future³¹.
39. Said changes in the context affect the Project in two main ways, and the Project has failed so far to conduct adaptive management to adjust to changes. One of the effects is that the rulings of the Constitutional Court hinder the implementation of the activities contemplated under Component 2 in the delimited paramo areas. While Decision C035 prohibits mining, it confirms the need to gradually replace production activities in facilities located in the delimited paramo. This provides a basis for the transition process led by MADS with MADR and its ascribed and related entities (like the Rural, Agricultural and Stock Breeding Planning Unit, UPRA by its Spanish acronym), regional corporations and territorial entities, which must finish the guidelines for the zoning and land use scheme for delimited paramo areas, and the guidelines to design, train and start programs for the replacement and reconversion of agricultural and ranching activities. To support this process, the Project participates in the Transition Round Table, a consultative body of MADS, where entities and projects with interventions in more than 15 paramo complexes in the country participate. However, the context of this process of transition and definition of guidelines changed with Ruling T361, which repealed the Santurban delimitation due to the community not having participated in the delimitation, and allowing one year for the passing of a new ruling. With this precedent, MADS decides not to carry on with any production activity in the paramo, including the agricultural and stock raising activities planned as part of the Project, until a ruling on the transition guidelines is passed.
40. Until guidelines for the replacement of production activities are defined, MADS and CAR do not allow production activities in delimited paramo areas, including those contemplated under Component 2 of this Project. This is the reason why the Project cannot implement the preliminary agreements it has signed with the owners of the 18 selected sites in the Chisaca micro-watershed, aimed at the implementation of restoration and more eco-friendly agricultural activities (silvopastoral systems, domestic orchards, smaller animals, etc. ¶151). This impediment has multiple consequences: (a) time: the Project has one and a half year of execution ahead; for a smooth development of the activities under Component 2, a minimum of 2 years had been contemplated. While the time left is very short, if the delay continues, it will be impossible to implement a minimum of activities; (b) acceptance: the owners were carefully selected and involved and their participation in the Project was based on their trust in the people in charge of executing it - if the preliminary agreements cannot be implemented, their trust will be betrayed and their willingness

²⁹ Law whereunder PND 2010-2014 was issued.

³⁰ Law whereunder PND 2014-2018 was issued.

³¹ Public declarations of female farmer representatives at the International Congress of Paramos and Mountain Ecosystems; July 12 to 14, 2017; also included in the report of the participatory workshops of the vulnerability assessment of this Project.

to cooperate with conservation activities now and in the future will be low; and (c) credibility of the Project: this Project was designed and justified to the donor and the host country as one that supports the proper management of high mountain ecosystems in practice. If the Project fails to implement the activities under Component 2 in the micro-watershed of Chisaca, it will only be left with activities with private owners in only one of the four micro-watersheds³². As a result of this, the Project's implementing agencies will miss a great opportunity to demonstrate that they can cooperate with paramo land owners.

41. The other way in which the changes in the context have affected the project execution is the motivation of certain groups of paramo land owners. Especially in the area of the Guerrero paramo, people show little willingness to cooperate with the paramo management projects presented by the environmental authorities, especially because they are confused and consider the changes in legislation "a deception" by the authorities, who have been unable to properly explain the different rules³³. This story is well summarized in a letter produced by the Paramo Project carried out by EAB³⁴. The local people's little willingness to cooperate is the main reason for the low implementation of Component 2 in the Guerrero area. Here, the Project did not implement the adaptive practices in cooperation with the community-based organizations, as it had intended to³⁵.

R5: The definition of indicators in the design of the Project and the use of different results frameworks compromise the implementation of the Project.

42. The design of the Project is logical and relevant to address the problem of adaptation in the high mountain area. However, certain design elements compromise its implementation in such a way that they affect its feasibility. For example:
 - a) The Project has placed great emphasis on different studies under Component 1 (climate scenarios, hydrological response, vulnerability, perception) and on the formulation of a monitoring system to select work areas, identify actions and measure the Project's impact on the communities and environmental aspects (including hydrology). Finally, these studies were delivered and reviewed later than originally planned (year 2) due to the long Project inception period, among other reasons (¶48). This left less time available for the implementation of the activities under Component 2. The studies only served one of their strategic purposes in part (to select areas for Component 2), since in many cases the selection of sites for the implementation of activities was made more on the basis of opportunities than on the basis of scientific information. The monitoring system, albeit high-quality, is possibly oversized because it will hardly be possible to install it during the project execution and its sustainability is uncertain (¶75, ¶93). In addition, it will probably not be used for the measurements for which it was designed (hydrological balance at the micro-watershed level).
 - b) The Project included the area of the Guerrero paramo with the same proposal as for the other micro-watersheds. Although in the first meeting of the PSC EAB remarked the difficulty in working with land owners in the area due to a long process of conflicts between land owners and different entities (including Project partners), the Project modified its intervention only partially - instead of working in the municipality of Tausa, it selected Cogua (Guandoque micro-watershed). However, to date it has not managed to agree upon adaptation activities with private land owners in the area; only restoration activities in public sites are planned. This means that, for this area, the main element of the Project's approach (families incorporating adaptation measures or climate-resilient management practices in their production systems) did not work (¶41, ¶89).

³² San Francisco; while in Chipata the Project has already made an initial approach to local land owners, it has not planned restoration and agricultural reconversion activities, and no preliminary agreements have been signed either.

³³ <http://sostenibilidad.semana.com/medio-ambiente/articulo/habitantes-de-los-paramos-envian-dura-carta-al-ministro-de-ambiente-murillo/38208>

³⁴ <https://www.rds.org.co/es/recursos/cartilla-camino-por-mi-vereda-cuidando-nuestro-territorio>

³⁵ Annex B, p. 40 Prodod; answer to GEFSEC: "CSOs will be instrumental in the implementation of gender-sensitive pilot projects ... and for the adoption of climate-resilient management practices and implementation of adaptation measures in local production systems"

- c) The Project's restoration concept has not been developed in detail. For example, the Project Document refers to "restoration activities and establishment of the connectivity of natural ecosystems", "re-vegetation activities and/or improved engineering to increase water regulation capacity" and "ecological restoration of intervened and degraded ecosystems in priority watersheds"³⁶. The three concepts (connectivity, re-vegetation for water regulation capacity and restoration of degraded areas) are different and cannot be captured in one restoration protocol, as required by output 2.1.1 of the results framework. The Prodoc provides a broad definition of restoration (both active and passive) and another one of re-vegetation without further specifications. The restoration activities were initially based on a study on adaptation management models³⁷. While the study was appropriate to estimate general costs and the implementation model, it does not clearly provide different restoration concepts (¶176). In practice, restoration activities are more diverse, including active and passive restoration, enrichment of forests and conversion of pastures (¶176), each with a different technological package and, especially, a different cost. Without having contemplated the type of restoration, the cost for the Project to meet its goals was not properly anticipated in the financial calculation of the Prodoc and is even more affected by the change of indicator (please, refer to the following paragraph).
- d) The formulation of general outcome 1 ("The hydrological buffering and regulation capacity of high mountain ecosystems (paramos and high Andean forests) is maintained or increases under conditions of climate change and variability") is not aligned with the Project's logics because it only mentions the natural ecosystems, while the Project targets its direct actions towards ecosystems which are intervened or transformed. The objective makes reference to the regulation capacity of the watershed, rather than only to that of the paramos and Andean forests. The capacity itself of these ecosystems is ensured; it is rather the area of these ecosystems that needs to be preserved or increased to improve water regulation capacity at the landscape or watershed level.
- e) Some Project indicators related to the aforementioned challenges (monitoring system and restoration hectares) were oversized and/or cannot be measured. For example:
 - i. The indicator of the Project's general outcome 1 mentioned above (a 10% increase in water yield in the intervened watersheds during dry season) is difficult to measure with the current design of the Project. This indicator suits the general objective but is scarcely accurate in terms of impact because it refers to the watershed level, while the impact refers to ecosystems. This is an indicator whose effect will be hardly noticeable only after several years of monitoring. Although this in itself is correct for an impact indicator, the Project's monitoring system is not appropriate to measure that influence because it assumes paired watersheds but the control watersheds have actions which are beyond the Project's control. Also, the Project is focused on restoring a maximum of 10% of the micro-watersheds in conditions where the land-use change in the watersheds is so dynamic that the effect related to the 10% restoration is likely to be negatively offset by other land uses not covered by the intervention approach.
 - ii. In the results framework, output indicator 2.1.1 refers to 4,000 hectares restored by the Project partners' counterpart actions³⁸. Said figure is high and difficult to achieve (¶153). According to several people involved in the initial management of the Project, it seems that this figure was an initial estimation of what the EAB Paramos Project could eventually reach. However, the representatives of EAB have not reported this figure, which is not either reported in the official documents of that project. This target is still valid for the

³⁶ Paragraphs 1.22 and 2.2 of the Prodoc

³⁷ Luis Mario Cardenas (2017) Output 4.1. *Modelo de Gestión y Ejecución de Recursos para la Implementación de Medidas de Adaptación en Restauración Ecológica en las Microcuencas Seleccionadas por el Proyecto*. (Model for the Management and Execution of Resources for the Implementation of Adaptation Measures in Ecological Restoration in the Micro-watersheds selected by the Project).

³⁸ This same indicator is included in the IDB Results Framework as 3,900 hectares - output 2.1.2 - refer to (¶144)

Project and, although in the progress reports the Executing Agency states that it is impossible to reach it, the Project has not justified the figure. With the resources currently available, the Project does stand a chance of meeting the target set for the GEF contribution (400), though not for the co-financing (4,000). Therefore, the Project would not meet its overall target of increasing the area under natural ecosystems by 3-5% in each microwatershed which, according to the Prodoc³⁹, is the basis for calculating the eventual increase in water regulation (please, refer to the previous paragraph).

- f) Some indicators are not appropriate because they do not indicate progress to their respective outcome. Especially the indicator that reads "Number of new funding proposals received by MADS to develop/ implement adaptation measures from municipal governments and CBOs" shows an increase in the capacity of municipalities and CBOs to put forward proposals, but does not indicate if they show "Increased adoption of adaptation measures to reduce water vulnerability to climate change" (outcome of Component 2). Likewise, the indicator "Number of times knowledge produced has been downloaded" says something about the interest that exists worldwide in the results of the studies, but does not measure the "Awareness of adaptation options and lessons learned from field experiences in high mountain ecosystems" (outcome of overall impact 2).
43. In the Project, there are currently 2 results frameworks in use, with different indicators: (i) the framework included in the GEF Prodoc, which is the basis for the CEO Endorsement; (ii) the adjusted framework, included in the IDB Project Document⁴⁰. This adjusted framework is the basis for the agreements with the executing entities, including the GRT_CX-14525. The reason for the adjustment is that, based on an internal analysis of the feasibility to evaluate the Prodoc, the IDB included new indicators and changed the formulation of several outcome and output indicators for Component 2. Specifically, the adjustment results from a need to differentiate restoration interventions in public sites (considered outputs by IDB) from those to be carried out in private sites (considered outcomes). These adjustments were not reported in the Project Implementation Report (PIR) by IDB to GEF because they were considered minor adjustments by the GEF-IDB Office. As a result of this, the Prodoc is still in force for GEF. In addition, IDB uses an internal monitoring system (Project Monitoring Report, PMR) with a measurement format which is slightly different from the revised matrix. These differences between the GEF results framework, the IDB results framework and the PMR format have raised objections within the Project, generated confusion among the partner institutions and resulted in progress reports being difficult to understand because they report on different indicators. Therefore, in the last Administration Mission (October 2017), this issue was discussed based on a document the Project Team prepared and discussed with IDB⁴¹. IDB was invited to participate in the preparation of a consolidated framework and, prior to the mid-term mission, make a PMR simulation with a proposal to adjust it in line with the adjustments proposed for the indicators and targets discussed. Such adjustments have not been put forward so far.
 44. There follow some examples of differences between the two results frameworks (the original one presented to GEF and the one adjusted by IDB) and the measurement method in the PMR:
 - a) The GEF results framework (Prodoc) has as its output indicator 2.1.1: *Area [ha] under restoration of high mountain ecosystems in areas critical for hydrological regulation*" with a total value of 4,000 has. In the IDB adjusted framework (IDB Project Document), this output is presented as *"Output indicator 2.1.2: Strategic areas in high mountain ecosystems under restoration process (ha. of publicly-owned land)"* with a total value of 3,900 has. In the PMR, this output is measured as *"Restored/re-vegetated areas with a gender focus, in high mountain ecosystem areas that are critical for water regulation"*, with a total of 4828 hectares. This

³⁹ Table 8 on page 70

⁴⁰ IDB: Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero (CO-G1002) - Proposed non-reimbursable financing for investment

⁴¹ Internal document entitled "20170808 Documento con la evaluación de los objetivos y metas planteadas en el proyecto ajustado_revisado AG BID.docx".

value is disaggregated as follows: 4150 restored, 398 re-vegetated, and 280 re-vegetated with a gender focus.

- b) The output indicator 2.1.2 of the Prodoc reads "*Total area -ha- under re-vegetation programs in three critical areas for water supply*", with a total value of 398 has (300 with GEF resources and 98 with co-financing resources), with the specification *re-vegetated area (ha) through gender-focused pilot projects in three areas that are critical for water supply*"; 280 has (210 with GEF resources, 70 with local co-financing). In the IDB adjusted framework this output was presented in a different way: (i) an additional *outcome* indicator no. 2 was included (*Number of families that agree to allocate land for conservation⁴² and re-vegetation practices in critical areas for water supply*); and (ii) *output* indicator no. 2.1.3 was included ("*Re-vegetation gender-focused pilot projects designed and implemented in three areas that are critical for water supply*"). The IDB people interviewed for this evaluation declared that the target for each of these indicators (number of families and number of projects) should be equivalent to the number of hectares of the output indicator 2.1.2 of the Prodoc. This is not presented in this way in the IDB adjusted framework, but it is assumed that the sum of hectares in the PMR is the sum of these different elements.
- c) Output 2.1.3 of the Prodoc (*Number of families that incorporate adaption measures or climate-resilient management practices in their production systems and increase their net income*) is presented as an *outcome* indicator (mid-term result) of Component 2 in the IDB adjusted framework (Number of families that incorporate adaptation measures or climate-resilient management practices in their production systems), but without contemplating the effect on the family income.

Conclusion 1: The Project is highly relevant to the global and national context. The fact of presenting itself as a Project focused on paramos has increased its relevance at the national level, but has also brought negative effects because the legal framework for paramos has changed and the Project has failed to conduct adaptive management (R1, R2, R4).

Conclusion 2: The entities that execute the Project are an appropriate group of public and private entities that have progressively succeeded in involving other authorities to their full satisfaction (R3).

Conclusion 3: Weaknesses in the design of the Project and weak adaptive management in face of changes in the context of the Project jeopardize the fulfillment of the results of Component 2 and, therefore, the possibility to meet the Project objectives (R4, R5).

Conclusion 4: The way adjustments to several elements of the original results framework have been handled has caused confusion within the Project and has complicated the reporting of progress (R5).

In terms of "relevance", the evaluator rates the Project as "moderately satisfactory".

B. EFFICIENCY

E1. Although not planned, the Project has properly built on other similar projects funded by GEF and others.

- 45. Apart from the initiatives for adaptation to climate change and restoration of high mountain ecosystem conducted by the partner institutions (especially EAB), the Project Document makes reference to numerous GEF projects with which coordination and complementarity is sought⁴³. Special reference is made to the *Integrated National Adaptation to Climate Change Program* (INAP) executed by CI from 2006 to 2011. Reference is also made to cooperation in terms of exchange of information and experiences with another GEF project located in Depresion Memposina and a set

⁴² It should be noted that in the original Prodoc the concept of re-vegetation is used, while in the Spanish version the concept is expanded to "conservation".

⁴³ A.7. Page 24, Prodoc

of seven projects in different parts of the world which are part of the GEF Climate Change portfolio. In addition, the Project Document mentions the relation with other regional projects in the area, especially the Regional Comprehensive Plan on Climate Change (PRICC, by its Spanish acronym) and Agua Somos of TNC.

46. At the beginning, the Project conducted a study to identify a number of initiatives with which it has sought articulation⁴⁴. This sound initiative includes the projects on ecosystem-based adaptation in the country (in Cartagena, Magdalena and Mojana) and the projects under execution in the Project area. The Project has positively worked in coordination with these adaptation projects: a roundtable addressing the Climate Change Adaptation Information System has been established to discuss the scope of each initiative, and support is given to MADS to build an Adaptation Monitoring and Evaluation system. Communication has been also frequent with other projects conducted by Project partners.
47. Although the Project identified some of the similar projects and cooperates with them, it lacks formal coordination mechanisms with all similar projects under execution or mechanisms for the inclusion of results of past projects. The workshop including different GEF projects mentioned in the Prodoc⁴⁵ was not held. There is no reference to outputs or publications of other GEF projects or other projects being executed by other organizations not included in the management of this Project. However, thanks to the fact that the entities that execute the Project and the consultants hired are very well inserted in the institutional landscape, such connection does exist informally. CI has more than 15 years' track record of interventions in the Project area and has cooperated with all the institutions present. The Project's consultants have worked in other paramo conservation and management processes: two have worked with EAB, other two with IAvH, and others with IDEAM, the INAP project and the Natural National Parks Unit. Most of the Project staff has experience in other country areas and is in direct contact with scholars in the fields of hydrology, ecology, restoration and social sciences. They have also secured informal spaces for coordination with other institutions and projects. With the establishment of the roundtable for adaptation monitoring and evaluation and the roundtable for the transition process (¶33), the Project has found formal platforms for cooperation with other similar projects.

E2. The inception process took considerable time, which had not been anticipated in the design of the Project.

48. It should be emphasized that a Project whose inception and design period took more than three years (2011-2014), involving organizations with extensive administration experience, required almost a year to draw up and execute cooperation agreements. Although this length of time is similar to that required by another GEF project implemented by IDB in Colombia⁴⁶, it is long as compared to other GEF projects that the same evaluator has analyzed in detail and whose previous conditions and staff hiring process were completed before or during the first 2 months of project execution⁴⁷. The PIF was submitted in 2011. The Prodoc was submitted to GEF in June 2013, and approved for implementation in September 2013. Almost a year later, on August 14, 2014, the Investment Grant Agreement was executed by IDB, APC and MADS⁴⁸. After the execution of the Agreement, IDB put forth a set of clauses for the start of the project execution (special conditions prior to the first disbursement). Meeting said conditions took one year: in February 2015, the implementation agreements between MADS and CI, and the association agreements with the other partner institutions were signed; in March, the first meeting of the Technical Committee was held; the Project's Operations Manual was accepted in March 2015, and the Procurement Plan was

⁴⁴ An analysis evidencing the process for the articulation of the different initiatives, projects and efforts that are under execution in the region, with special emphasis on the processes advanced by EAB, CORPOGUAVIO, CAR, IDEAM, generated in 2014".

⁴⁵ Paragraph 63, page 24 of the Prodoc

⁴⁶ GEF ID 4113

⁴⁷ e.g. GEF ID 3183 and 3813

⁴⁸ According to IDB officers, the Project took about one year to get approved by GEF and the IDB Board because during that period of time the IDB was renegotiating the umbrella implementation agreement then in effect with GEF, and IDB could not approve GEF funds until that process was completed.

granted IDB's "Non-Objection" on July 16 2015. CI received the first disbursement from IDB on September 23 of that same year.

49. The design of the Project did not foresee an inception period of one year: according to the results frameworks, the first concrete developments of the Project were already to be expected during the first year⁴⁹, which would be impossible considering a one-year inception period. According to its Administration Department, CI had to use own resources to cover certain expenses in order to manage to meet requirements. Once the Project could start hiring consultants and firms to carry out studies, its execution went fast and by the end of 2015 16 consulting assignments had already been hired. Afterwards, the Pluri-Annual Execution Plan (PEP) and the updated Annual Work Plans (AWPs) did contemplate the initial execution delays.

E3. The activities under Component 1 have been efficiently completed, and those under Component 2 show limited progress.

50. In spite of their delayed start, the studies under Component 1 were carried out relatively efficiently and fast: before the end of 2016, the studies on climate scenarios, hydrological response, adaptive territorial ecological structure, vulnerability and perceptions were delivered. Based on the design of the Project, all those studies were expected to be completed by the second year, which was fairly accomplished. The activities directly supporting the outcome of Component 1 ("Land use plans, POT, POMCA⁵⁰ or watershed management plans incorporating climate change vulnerability assessments") were carried out during 2016 and continued throughout 2017, especially because their scope increased in response to lessons learned during the execution (¶77). The activities related to output 1.1.4 ("Number of officials... trained") are running late according to the original plan, but are in line with the updated PEP. In 2017, the training plan was completed and the first courses for public servants are planned.
51. The activities under Component 2 are subject to significant delay, which could compromise the project execution. The main source of delay is the slow internal process for approval of preliminary agreements with private land owners and, secondly, that the activities under Component 2 cannot be carried out in delimited paramo lands. Based on the Project design, (according to the PMR) outcomes from restoration activities and re-vegetation proposals (outputs 2.1.2 and 2.1.3), like activities to support families in the implementation of adaptation measures (outcome of Component 2), were already expected for year 2 (2015-2016). In the adapted PEP, these activities were expected to be implemented at the beginning of 2017 (half of year 3), but now, at the beginning of 2018, the following is observed:
 - No adaptation activities have been implemented with farmer families. In San Francisco, preliminary agreements were signed at the beginning of 2017, but the implementation was only agreed in early 2018. According to different people queried who work in the Project, there are multiple reasons for the lengthy internal approval process. To begin with, the template for said agreements was first proposed to the Technical Committee and then approved by MADS. Although each party did what they should, the process took several months. It was a proper, though slow process, because it took place at the same time as the debates on the transition, among other reasons, and the legal evaluation of the template for the agreements was thorough considering it could be used for paramos as well as other areas. Afterwards, the process for selecting consulting firms to implement the agreements in private sites failed due to non-compliance with the Terms of Reference set forth by the TC. As a result of this, the PCU proposed a change in the implementation model, proposing direct implementation by the PCU. This change resulted in further delays. While this evaluation is being conducted (February 2018), preliminary agreements are about to get implemented in San Francisco. No preliminary agreements can be executed for Chisaca due to its being located inside a delimited paramo area

⁴⁹ For example, 2 restoration protocols and 3 re-vegetation pilot projects were expected to be in place, and 10 municipal and community based organizations were expected to be trained in climate change risk management (outputs 2.1.1, 2.1.3 and 2.1.4 of the IDB adjusted framework)

⁵⁰ Watershed Use and Management Plan

(¶39). No private sites have been selected in Chipata and Guandoque to conduct adaptation activities.

- Restoration activities have only started in public sites in Guandoque and Chipata.
- For output 2.1.4 (Municipal and community based organizations... trained in risk management), a detailed plan has been formulated, but no formal training has been conducted. Workshops have been held to exchange experiences with permanent participants from local organizations.
- Although a detailed monitoring plan has been formulated (output 2.1.5), it has not yet been implemented due to the other activities under Component 2 not having started.

E4. While the financial execution is slow, the Project's financial management is efficient.

52. The financial execution is slow due to a delay in the activities under Component 2. Until December 31, 2017, the Project's financial commitments totaled USD 1.4 million (33%), and payments to third parties amounted to USD 0.9 million (21%)⁵¹. CI, BID and MADS welcome the correct and transparent management of funds. No critical observation is included in the audit reports. Financial reports are considered accurate and complete and were delivered on time; once disbursement requests got approved, IDB made the relevant payments fast and without complications. The direct management of funds between IDB and CI without third parties' intervention enabled smooth financial procedures. The only issue that poses a challenge in terms of the financial administration is the double approval of disbursement requests. MADS is the entity that formally executes the Project and, although it delegates the implementation to CI, it is also MADS that must approve the reports that serve as a basis for disbursement requests before IDB reviews them. This process is properly completed by the parties and communication between MADS, CI and IDB is good (due to having a Project focal point based in MADS, among other reasons).

E5. The realization of the co-financing is higher and faster than planned.

53. The Project has been successful in mobilizing co-financing. As of December 31, 2017, some partners had reported that more than 100% of their resources had already been committed (CAR, CORPOGUAVIO and MADS), while the other two reported having committed about 68% (EAB) and 89% (IDEAM) of their planned contribution. Such co-financing, however, was not reflected in the results associated with the investment in terms of restored hectares. Overall, this indicator (2.1.2 in the PMR) stands at 10% of the estimated total, mainly due to a smaller than expected area restored by the counterparts. This has its root cause in the design, due to a potential overestimation of the size of the area restored by EAB (¶42). During the course of the evaluation, from conversations with the work team and CAR staff members, it was identified that during the last years this organization has contributed in different ways to the target related to the restored area; such contributions, however, were not reported to the Project due to not being related to a type of investment included as co-financing (which is limited to Component 1). The Project team estimated that, if CAR reports these restored hectares as a co-financing contribution, the Project will add between 1,400 and 2,000 additional hectares. IDB audits co-financing contributions, including the results of the partners' investments. This could, but should not, complicate the reporting of the results of investments not initially planned.

Table No. 1: Co-financing performed until December 31, 2017.

Source of co-financing	Name of co-financier	Type of co-financing	Amount confirmed at the time of the GEF CEO approval of the Project	Amount realized until December 2017
Local Government	CAR	In kind	550,000	566,605
Local Government	CORPOGUAVIO	In kind	250,000	341,097
Other	EAB	Funds	10,000,000	6,876,207
National	IDEAM	In kind	544,000	483,171

⁵¹ Seventh Half-Yearly Report, from July 1 to December 31, 2017.

Government				
National Government	MADS	In kind	65,000	71,767
TOTAL			11,409,000	8,338,856

54. Staff members of the different partner institutions voiced the same doubts about the reporting of co-financing contributions. The first issue is the exchange rate, because the co-financing was calculated in US dollars using the exchange rate in effect in 2013, when the US dollar was worth less than 2,000 Colombian pesos, but during the period covered by this report the US dollar reached 3,000 Colombian pesos. This means that the co-financing in US dollars is smaller than previously considered. The other issue is the retroactive nature of the co-financing report. Initially, partners accounted for their co-financing contributions from the date of the first disbursement, but it was afterwards announced that they could account for it from the moment the PIF was approved. While both issues were clarified by IDB during the Administration Missions in March and October 2017, these are common issues that seem not to have been properly clarified and disseminated from the beginning.

E6. The activities of the Project have been conducted in the form of consulting assignments, which has resulted in high staff turnover in the technical team and has made it difficult for the Project to draw on the institutional experience of the executing entities.

55. Based on the rules of the implementing agency, the beneficiary entities cannot participate in the Project formulation. Therefore, CI - which was the architect of the Project concept - was not involved in the formulation of the Project, which was undertaken by a different NGO (Ecoversa). While the formulation process was deemed positive, the opportunity to have CI - as the future Executing Agency - contribute its criteria in a constructive manner was missed. According to a CI staff member: *"although we were present at the formulation workshops, we kept a very low profile to avoid being disqualified for the execution"*. Likewise, the experience of Ecoversa - an organization with valuable experience in the field of high mountain ecosystem management - cannot be incorporated in the implementation of any activity using GEF/IDB funds.
56. At the institutional level, CI has not interacted during the project execution as it had been expected. In the POM⁵², CI mentioned that it would mobilize its institutional experience to different multiple technical areas. In practice, it has failed to do so and it limited its participation to the administration and supervision of the Project, according to people directly involved in the coordination of the Project (NPC, Policy Director and Administrative Director), and to the participation of its Vice-president in PSC meetings and Administration Missions. According to the Project's technical team, there has been little participation of managers and experts of different technical areas of CI in the execution of the Project activities.
57. In GEF projects implemented by IDB, only 10% of administrative expenses is paid to the Executing Agency, as established by GEF. This percentage is lower than the one established by CI as overhead worldwide (19%) and, therefore, the Project does not cover CI's administrative expenses. In addition, all technical activities of the Project must be conducted as consulting assignments; it is prohibited to use GEF funds to have staff of the Executing Agency conduct technical activities of the Project. Therefore, except for the PSC, the Policy Director and the Administrative Manager of CI (whose compensation is paid out of CI's own resources), no technical expert of CI participates in the implementation of Project activities. The Project's technical team is wholly comprised of external consultants who have not previously worked at CI and who will possibly not work for CI in the future. This means that there is little inclusion of CI's institutional experience in the technical activities of the Project and, on top of this, a large portion of the experience gained will not remain in this institution. The same applies to the other partner institutions, which have declared that their participation in the Project does not include the possibility to carry out activities. Their

⁵² Table 4-2, p. 17-18 POM

participation is limited to the delivery of information and the attendance to meetings of the committees (Technical and Steering). Although the evaluator respects the institutional rules of IDB, he observes that the fact that GEF funds cannot be used to deploy staff of CI in technical activities is a missed opportunity to better harness such institutional experience and support institutional capacity. On the other hand, the Project partners are already aware of this IDB rule, and should anticipate this situation.

E7. While there has been considerable staff turnover, the PCU and the current technical team are efficient and a good work environment is perceived. The Project beneficiaries consider that the Coordinators have great technical skills.

58. There has been little continuity in the Project's technical team. This is in part due to all of them being hired as external consultants (¶55). Different topics (e.g. monitoring, communication and agro-ecology) were addressed by different people. The organizations conducting the studies under Component 1 were not included in the planning process for Component 2 although their studies were (partly) used as inputs for that process. Also, the staff that would provide comprehensive support to the project execution (NPC and supervision expert) suffered a change in the middle of the Project. According to PCU and Technical Team members interviewed, such changes initially posed a challenge to the consistency of the Project. During the second half of the project execution period, greater continuity of consultants was sought. This is one of the reasons why it was decided that the implementation of the agreements under Component 2 would be carried out using individual consultants integrated in the Technical Team and coordinated by CI, instead of hiring an external consulting firm for the whole of the implementation.

59. While the uncertain continuity of individual consultants remains a threat to the achievement of the expected outputs, those in charge of the overall management of the Project have created a positive work atmosphere in the technical team. The evaluator has noticed there is proper teamwork, and the effective cooperation among different experts (joint field visits, comparative analyses of data, peer reviews, etc.) is evident. The NPC, the Supervision Expert and the Adaptation Expert (GEF focal point) provide proper leadership and enable coordination with the partner institutions. The evaluator has ascertained that the partner institutions effectively associate said people with the Project and with CI and MADS, respectively. The beneficiaries interviewed (farmers and municipalities) stated that the technical team is properly qualified and effectively communicates and provides timely information.

E8. The governance of the Project is efficient, though not all of the partner institutions participate with the same frequency. The partner institutions deem inter-institutional cooperation to be positive.

60. The Project has two governance bodies: the PSC and the TC. The PSC has met six times since its creation in May 2015. This is the agreed frequency and, in general, the designated members or their representatives have participated in the meetings. The delegate of the TC participated in the PSC meetings only a few times, which should be avoided to prevent a conflict of interests. The evaluator reviewed the minutes of the meetings and confirmed that the agendas and decisions are consistent with their terms of reference. The TC met 14 times (3 times by virtual means). The participation of CI, Corpoguavio, MADS and IDEAM has been permanent and constant, and usually with an extended team. Other partner institutions (EAB and CAR) have missed several meetings of the TC. The Natural Parks Unit (as a special guest of the TC) has participated in many occasions. The operation of the TC is efficient in terms of its administrative roles (evaluating consulting TORs, approving reports). The participants interviewed during the course of this evaluation mentioned that the Committee addressed administrative issues rather than conducting technical debates. The evaluator has noticed that the space provided by the TC does seem appropriate to address technical topics and agree upon bilateral follow-up meetings, and thinks it advisable to take advantage of this additional space.

61. The representatives of the partner institutions interviewed during the course of this evaluation said to be satisfied with the inter-institutional cooperation. Remarks like the following evidence a high level of satisfaction with the cooperation by the participating institutions: *"this has been the first*

time we have collaborated during the whole management of a project", "we finally know what the others are doing and how these activities are developed", "this is an excellent opportunity for other institutions to know and use our information", and "the project provides a proper space for collective decision-making on the territory". However, the evaluator has not been able to identify cooperation from these institutions in the activities included in the Project (studies, adaptive actions, restoration) beyond the direct scope of the PSC or the CT. Cooperation has certainly flowed bilaterally between CI and the partner institutions, though not among said institutions.

E9. The Project has properly managed the different management instruments.

62. The Project has formulated its different management instruments in a timely manner. An example of said instruments are the PEP, AWP, half-yearly reports, financial and audit reports (including co-financing) and disbursement requests. Following the implementation model established by IDB, the PEP and the AWP are based on procurement processes rather than on activities, outputs and people in charge, which is the usual practice in other implementing agencies. On the other hand, half-yearly reports, especially the fifth and the sixth, are thorough, and directly link the activities to the achievement of outputs and their indicators - including those achieved with GEF funds as well as those achieved with co-financing. Said reports also include analyses of the reasons for the variation of activities or the delays in the achievement of outputs. IDB submits the PIR to GEF using the wording of the half-yearly reports.

E10. The administrative and technical support provided by the organizations in charge of implementation is appropriate, with some aspects that could be improved.

63. There are three organizations that share the main responsibility for the Project's implementation: IDB (as the implementing agency), MADS (as GEF focal point and formal Executing Agency), and CI (the Executing Agency by delegation). According to different people from the PCU, the Technical Team and the TC, IDB's administrative support is appropriate, fast, and efficient, although certain indications should have been communicated in a timelier manner (¶154). IDB's technical support is welcome, but according to some interviewees with experience in other GEF projects, the frequency and intensity of said support is relatively low. In other projects, the task manager of the implementing agency forms part of steering committees (though without voting rights) and is continuously involved in technical matters. The management of the Project by IDB is shared by two specialists, one based in Bogota and the other one in Washington. The specialist based in Bogota provides considerable support, but in the opinion of the interviewees he has a merely advisory role and participates less frequently in meetings and missions than the task manager based in Washington. IDB's administrative support through the operations analyst based in Bogota is considered efficient and appropriate. IDB applies many of the same administrative standards and rules to all of its projects, whether they involve a credit, a grant or the implementation of GEF funds. This guarantees a correct administration but also entails a challenge in terms of institutional involvement, as explained in paragraphs ¶155 -58.
64. The support provided by MADS to the Project is greater than expected, especially because this is a central topic of the debate on the high mountain ecosystem in Colombia. In only a few other projects the Vice-Minister has participated in administrative missions or meetings of the PSC, as it has been the case in many occasions with this Project. As a result of the debate on the paramo (¶134), this Project has been followed by both the Directorate of Forests, Biodiversity and Ecosystem Services and the Directorate of Climate Change, whose technical directors have participated in all the meetings of the PSC. Thanks to the great degree of participation of MADS, some meetings of the Project have been attended by the maximum entity among the partner institutions. The administrative support within MADS (approval of instruments and reports) has sometimes been considered slow, although it has not caused critical delays in the activities (¶152). Hiring an Adaptation Expert located in MADS has been of great help in including the Project in the management agenda and has also helped mitigate the slow administrative process. According to the Implementing Agency and the partner institutions, CI provides very efficient and high level technical and administrative support. Internally, there are doubts at CI about its capacity to

provide sufficient technical support to the team due to it not being able to mobilize its accumulated experience (¶56).

Conclusion 5: The Project's administrative management is efficient and correct, the same as its technical management, although the activities under Component 2 are suffering delays due to factors that are partially external to the Project. As a result of this, the financial execution of the GEF resources is very low, while the execution of co-financing resources shows progress (E1, E3, E4, E5, E7, E9, E10).

Conclusion 6: The application of the IDB rules to the implementation of the Project resulted in a long inception period and prevented drawing on the institutional experience of the organizations executing the Project (E2, E6).

Conclusion 7: Inter-institutional cooperation is limited to the participation in committees, but it is nevertheless welcome by their representatives (E8).

In terms of "efficiency", the evaluator rates the Project as "moderately satisfactory".

C. EFFECTIVENESS

Ef1. The Project has made considerable progress in the outputs of Component 1, with varied quality levels.

65. The efficient management of the activities under Component 1 has resulted in the Project's achieving the indicators related to outputs 1.1.1 (area included in the climate change scenarios assessment), 1.1.2 (area included in the hydrological response assessments), and 1.1.3 (vulnerability assessment). For output 1.1.4 (number of officials trained), which is to be completed during the last two years, implementation plans have already been formulated and there are high chances of achieving the target. In addition, this output has received considerable support from counterpart actions carried out by the partner institutions (Table 2).
66. The studies conducted under Component 1 are of varied quality. The climate vulnerability⁵³ and hydrological response assessments⁵⁴ have drawn on a wealth of information available from IDEAM, which has been downscaled to the micro-watershed scale. The reports are detailed and the information is appropriate for the work scale being used and clearly shows both the differentiated impact of climate change and its relationship with land use and hydrological response. IDEAM experts have remarked the good cooperation with CI in the formulation of these studies and the quality of the reports. The study on EETA⁵⁵ - an input for the outcome of Component 1 ("Number of plans... that include climate change vulnerability assessments") – is also a valuable output based on the concept of ecological structure, which attempted to include the concept of climate change. While at first glance it appears to the evaluator that this exercise of adding the concept of climate change yielded no results other than an increase in the areas prioritized for conservation, the exercise and the assumptions can be validly applied in other similar studies. The studies on climate variability, hydrological response and EETA were also useful in planning actions under Component 2, including the selection of sites and the monitoring system.

Table No. 2 Progress of indicators (of both the GEF results framework and the IDB adjusted results framework) up to the date of this Mid-Term Evaluation (December, 2017)⁵⁶. The levels of achievement expected until 2017, the value achieved until 2017, and the level planned to be achieved by the end of the

⁵³ Guillermo Armenta, Jennifer Dorado. 2016. Escenario de cambio climático en Chingaza, Sumapaz, Guerrero (*Climate Change Scenario in Chingaza, Sumapaz, Guerrero*).

⁵⁴ Marinella Valencia. 2016. *Evaluación de la respuesta hidrológica ante escenarios de cambio climático y cambios en las coberturas de la tierra* (Evaluation of the hydrological response in scenarios of climate change and changes in land covers).

⁵⁵ INGEAG S.A. 2016. Main ecological structure of the Sumapaz-Guerrero-Chingaza area

⁵⁶ The data included in this table is based on information provided by the Project team, including the half-yearly report no. 7 (July-December 2017), validated and supplemented with additional information of the evaluator.

Project (2019) are discriminated by funds contributed by GEF and co-financing contributed by the Project partners (counterpart).

<i>Indicator (GEF Prodoc Results Framework)</i>	<i>Indicator (IDB adjusted Results Framework)</i>	<i>2017 (planned)</i>	<i>2017 (completed)</i>	<i>2019 (planned)</i>
COMPONENT 1				
Outcome Indicator 1 for Outcome #1 Component 1 (I.O.C.1.1): Number of land use plans, POTs, POMCAs or Watershed Management Plans, that incorporate climate change considerations (environmental determinants).	Outcome indicator 1, Component 1 (I.O.C.1.1): Number of land use plans, POTs, POMCA or Watershed Management Plans that include cc vulnerability assessments (environmental determinants)	GEF: 1 Partners: 1	GEF: 0 (considering the exact formulation of the indicator. However, there are 16 municipal development plans that have been formulated with support from the Project, and climate change considerations are being incorporated in 3 Land Use Schemes (EOTs, by its Spanish acronym).	GEF: 2 Partners: 4
Output indicator 1.1.1: Area of the Corridor covered by maps indicating the distribution of climate variables under climate change scenarios (expressed in km2)	Output indicator 1.1.1: Area of the Corridor (expressed in km2) covered by maps indicating the distribution of climate variables under climate change scenarios	GEF: 5500	GEF: 6000	GEF: 5500
Output Indicator 1.1.2: Area of the corridor (in Km2) covered by maps assessing the changes in expected hydrological response of the high Andean ecosystems (analyzed on scales of 1:25,000 or finer)	Output indicator 1.1.2: Area of the Corridor covered by maps assessing the changes in the expected hydrological response of the high Andean ecosystems	GEF: 5500	GEF: 6000	GEF: 5500
Output Indicator 1.1.3: Technical/scientific vulnerability report, prepared and subjected to peer review, assessing the hydrological response of high Andean ecosystem to the changes described in the CC scenarios, and incorporating precipitation, temperature and cloud cover.	Output indicator 1.1.3: Technical/scientific vulnerability report assessing the hydrological response of the high Andean ecosystem to climate change	GEF: 1	GEF: 1	GEF: 1
Output Indicator 1.1.4: Number of officials from Ministry of Housing, City or Territory, MADS, EAAB's, rural and municipal water supply systems and regional environmental agencies (CARs) trained in the use of climate change scenarios and vulnerability assessments	Output indicator 1.1.4: Number of officials from MVCT, MADS, EAAB's water supply systems and CARs trained in the use of climate change scenarios and vulnerability assessments	GEF: 50 Partners: 0	GEF: 0 (training plan accepted, implementation to start in 2018) Partners: 400	GEF: 100 Partners: 400
COMPONENT 2				
Outcome Indicator Component 2.1 (I.O.C.2.1):	Outcome Indicator Component 2 (I.O.C.2-1):	GEF: 2	0	32

<i>Indicator (GEF Prodoc Results Framework)</i>	<i>Indicator (IDB adjusted Results Framework)</i>	<i>2017 (planned)</i>	<i>2017 (completed)</i>	<i>2019 (planned)</i>
Number of new proposals for funding received by MADS for developing / implementing adaptation measures from municipal governments and CBOs in (a) the Chingaza, Sumapaz, Guerrero corridor, and (b) outside the corridor.	Number of new proposals for funding received by MADS for developing / implementing adaptation measures from municipal governments and CBOs.			
	Outcome Indicator 2, Component 2 (I.O.C.2.1-2): Number of families that agree to allocate land for conservation and revegetation practices in critical areas for water supply	GEF: 40 Partners: 100	GEF: 0 (62 preliminary agreements signed with families). While this does not necessarily evidence that they allocated land for adaptation practices, it is a good indicator. Partners: 484 reported by EAB	GEF: 60 Partners: 300
	Output indicator 2.1.1: Protocols for restoration of strategic areas agreed with land owners/authorities	GEF: 3 Partners: 0	GEF: 0 (protocols planned for 2018) Partners: 3 (CAR, CORPOGUAVIO and EAB have developed protocols)	GEF: 3 Partners: 0
Output Indicator 2.1.1: Area (ha) under restoration of high mountain ecosystems in areas critical for hydrological regulation.	Output indicator 2.1.2: Strategic areas in high mountain ecosystems under restoration process (ha. of publicly-owned land)	GEF: 150 Partners: 400	GEF: 0 (progress has been made in agreeing upon actions for the ecological restoration of 140 ha. vs. a target of 250 ha.) Partners: 463	GEF: 250 Partners: 4000 ⁵⁷
Output indicator 2.1.2. Total area (ha) under re-vegetation programs in three critical areas for water supply.		GEF: 210 Partners: 0	GEF: 0 Partners: 0	GEF: 300 Partners: 98
Output indicator 2.1.2i: Re-vegetated area (ha) through gender-focused pilot projects in three areas that are critical for water supply.		GEF: 160 Partners: 0	GEF: 0 Partners: 0	GEF: 210 Partners: 70
	Output indicator 2.1.3: Re-vegetation gender-focused pilot projects designed and implemented in three areas that are critical for water supply.	GEF: 9	GEF: 0	GEF: 9
Output Indicator 2.1.3: Number of families that incorporate adaption measures or climate-resilient management practices in their production systems and increase their net income.	Intermediate Outcome Indicator, Component 2: Number of families that incorporate adaptation measures or climate resilient management practices in their production systems.	GEF: 40 Partners: 100	GEF: 0 (same info. as IOC 2.1.-2; IDB framework) Partners: 484 reported by EAB (same info. as IOC 2.1.2)	60 (300)

⁵⁷ Based on the IDB Adjusted Results Framework, the value expected for 2018 is 3,900.

Indicator (GEF Prodoc Results Framework)	Indicator (IDB adjusted Results Framework)	2017 (planned)	2017 (completed)	2019 (planned)
	Output indicator 2.1.4: Municipal and community organizations, with emphasis on potatoes and milk producers, trained in climate change risk management and adaptation measures	GEF: 35	GEF: 0 (Strategy designed to reach 72 organizations, but not training has started yet)	GEF: 65
Output Indicator 2.1.4: Monitoring and evaluation system (M&E) to track the impacts of adaptation measures in the water cycle deployed.	Output indicator 2.1.5: Monitoring and evaluation system to track the impacts of adaptation measures in the water cycle deployed.	GEF: 1	GEF: 0 (Program designed though not implemented)	GEF: 1

67. The social studies of Component 1 have collected a large number of data on many social aspects. This is highly useful in itself and provides a highly detailed picture of the territory and its inhabitants. However, the data has not been used optimally - the vulnerability assessment is particularly weak⁵⁸. It is a highly complex study based on the vulnerability assessment conducted under the PRICC⁵⁹, expecting to mainly apply the biophysical analysis of this study to a local scale and supplement it including more social and economic considerations. This resulted in a large number of data and lengthy reports that prevent having an immediate vision of results. Based on an analysis made by the evaluator, the output of the study has many issues that are expected to be checked by the peer review (currently underway). For example:

- The study uses a large number of variables that determine the different aspects of vulnerability (exposure, sensitivity, capacity), but the relationship of each factor with vulnerability is arbitrarily decided, often without a basis. For example, to determine vulnerability at the municipality level, a number of variables related to population, increase in the agricultural area, GDP, municipality income, etc. are considered, but only an absolute figure - rather than a relative value - is used to rate vulnerability (population by area, income by population, etc.). Likewise, for the "future precipitations" factor, it is considered that less rain means more vulnerable, and more rain means less vulnerable, without considering that in some areas an increase in humidity would cause problems just like a lack of rain.
- To calculate an overall vulnerability value, all variables were used, combining those related to sensitivity, exposure and capacity in a statistical analysis assigning to all of them the same importance, although that type of analysis requires weighting the variables based on an analysis of the context and of literature to establish the main factors.
- An arbitrary (non-based) generalization of the main production systems in each micro-watershed is made, without providing context-related data.
- An analysis of potential future scenarios for the economic and political context is made, but the origin of the data is not justified, the interaction among different factors and dynamics is not considered and no objective analysis is made of the potential impact on vulnerability (e.g. while the new infrastructure is detrimental to natural ecosystems, it provides new alternatives in terms of economic capacity and thus its effect on vulnerability is not completely negative).

68. Due to the aforesaid, the vulnerability rating is based on arguable concepts (e.g. "depending on the external market reduces vulnerability", even though the most economically powerful producers,

⁵⁸ ECOSIMPLE. 2017. *Análisis de vulnerabilidad socioecológica área Chingaza-Sumapaz-Guerrero* (Analysis of socio-ecological vulnerability Chingaza-Sumapaz-Guerrero area)

⁵⁹ PRICC (IDEAM, PNUD) Policy paper 05. *Vulnerabilidad de la Región Capital* (Vulnerability of the Capital Region).

who thus have a great capacity for adaptation, depend on the market to derive income). Finally, the result is not presented at an adequate level for it to be applied in the selection of sites for Component 2 (the plan was to work with the most vulnerable groups), and it was neither useful as an input for the management plans (outcome of Component 1). This work could supplement existing PRICC studies, but without appropriate review and information management it may bring more confusion than answers. The study on perceptions⁶⁰, albeit also containing a wealth of data, is better presented because it used an extensive base of surveys and considers the fact that perception is subjective. Although it lacks a comparison between perception and the measured and known phenomena (e.g. perceived v. actual temperature variations), it is valid in itself due to being true to peoples' opinions.

Ef2. The Project has made limited progress towards producing the outputs under Component 2.

69. There is not much progress towards the indicators for the outputs of Component 2. Although restoration protocols for the micro-watersheds of San Francisco and Chisaca do exist (output indicator 2.1.1, IDB adjusted framework), they have not been implemented yet. Until December 31 2017, the Project still did not have any area under restoration funded with GEF funds. Based on the last half-yearly report, using GEF resources, progress has been made in agreeing upon actions for the ecological restoration of 140 of the 250 ha. planned, but these implementation actions are still at the preparation phase. The partners' contributions account for 463 ha. in total (10% of the expected co-financing contribution; output 2.1.2 in the IDB adjusted framework). Agreements on adaptation measures with farmer families have been drawn up for the Chisaca and San Francisco watersheds, but have not been implemented, so there are still no areas covered by these actions (output indicator 2.1.3 of the original GEF framework, and intermediate outcome indicator of Component 2 of the IDB adjusted framework). There is no progress either in the output indicator 2.1.4 (IDB adjusted framework "Municipal and community organizations... trained in cc risk management and adaptation measures"). While a plan does exist and there have been informal meetings with different entities, no formal process has started using GEF funds because it is to be developed in combination with the implementation of adaptation measures through different strategies like the sharing of experiences, community work, workshops and formal training activities. Based on the 7th half-yearly report, it is going to be developed from the first half of 2018. For this element, there is a good plan supported by a good communication strategy. The monitoring plan (output indicator 2.1.4 in the GEF framework, output indicator 2.1.5 in the IDB adjusted framework) is designed though not implemented.
70. The achievement of the outputs of Component 2 is mainly affected by difficulties in the implementation of the preliminary agreements with the owners of the selected sites (¶151). The preparation for this phase was timely, including the development of planning instruments (a model for the implementation of Component 2, a model for the selection of sites based on the reports of Component 1, a protocol for the implementation of the different adaptation activities and the development of a concept - adaptive life plan - to be applied at different scales, which includes interaction with land owners). However, due to delays in the Project's internal processes for approval of the agreement templates, the implementation in sites outside the delimited paramo area did not start until February 2018, almost a year after the agreements were executed. In Chisaca, the implementation could not be done due to a lack of clarity over the implementation in lands within delimited paramo. Due to it not being possible to conduct restoration activities in private lands, the Project did make progress in the agreements for restoration of public sites, especially in Guandoque, with the municipality, and in Chipata, with Corporacion and the municipality, but it has failed to implement them, except in some experimental/pilot parcels. On top of this, the area for restoration by the partner institutions as a co-financing contribution is also much smaller (10%) than contemplated in the results framework (4,000). The monitoring system,

⁶⁰ BIOTOPO. 2016. *Resultados del estudio de percepción sobre la vulnerabilidad y adaptación al cambio climático en el área de Chingaza, Sumapaz y Guerrero* (Results of the study on perceptions about climate change vulnerability and adaptation in the area of Chingaza, Sumapaz and Guerrero).

which was to be implemented in year 3, is not operational because it has been designed to be implemented together with the adaptation measures.

71. Based on the reasons mentioned in ¶70, it seems that the causes for the little progress seen in the indicators of Component 2 are beyond the control of the Project. In the opinion of the evaluator, this is only partially correct. The difficulty implementing actions in delimited paramo area stalls the activities in Chisaca, but also in the San Francisco area, where there are no activities to be implemented in delimited paramos, the activities suffered considerable delays due to internal administrative issues (¶51). The causes are not under the direct control of the Project, but they are certainly under the control of the Project's partner institutions.
72. According to the evaluator, in view of the slow progress seen in Component 2, the Project should have implemented timelier adaptive management. The non execution of the preliminary agreements with private land owners is handled as a bottleneck that delays other outputs in Component 2 (cooperation with CBOs), and the Project has apparently not implemented other alternatives. For instance, there is no evidence of works being done in lands located in Chipata while awaiting the development of agreements in other watersheds. However, a possible solution could be to proceed to select alternatives in Chipata in order to manage expectations. The same applies to the monitoring system - while awaiting progress in the agreements with private land owners, the Project could have implemented at least part of the monitoring system.
73. The evaluator observes that the outputs related to the restoration of public lands could be produced within the Project's time frame because they are under the control of the Project and its partners. The outputs in private lands (restoration, re-vegetation and adaptive actions) depend on the passing of a decision to allow activities in delimited paramo areas. If the Project manages to start implementing the preliminary agreements with land owners, it will be able to accomplish these outputs on time. However, at this point (one year and a half from the Project's closure), it will be hardly possible to implement adaptive activities, and it will not be possible to assess their success or the owners' satisfaction or the impacts on the families' adaptive capacity. This applies also to the lands located in the micro-watershed of San Francisco, which will start implementing adaptive activities in February 2018.

Ef3. The methodological and monitoring tools guiding the outputs of Component 2 are good quality, but tend to be over-designed.

74. The Project has prepared a series documents to guide implementation (¶70). The documents are of good technical quality, and have been prepared using technical information from Component 1 and drawing on consultants' knowledge of the local context. Some of them seem oversized considering their usefulness. For example, the model for the selection of sites and the adaptive life plan are excellent documents in theory, but in practice decisions on the selection of sites and activities are made based on the application of the model and also considering convenience reasons like access, the opportunity to cooperate, the availability of the owner, etc. These factors are as valid as a proper application of a technical tool and, although it is certainly important to have a quality tool, said factors do have implications in terms of its usefulness.
75. The Project's monitoring system integrates hydrological, ecological, social, and economic aspects for its application at different scales. Jointly with the relevant consultants, the evaluator has analyzed the model and the indicators proposed for the monitoring system and has provided technical feedback directly to them. Overall, the evaluator observes that the system involves high quality academic and technical work. It is highly ambitious because it has been designed to measure change at different scales in different aspects of the environment and society. If it works, it can be an exemplary model for the Andean high mountain region, which in itself is a valuable contribution of the Project. Apart from some technical details (calibration v. monitoring period, concept of control watershed and measurement) the evaluator's main observation was the cost (in terms of time, human resources, and financial) for the implementation of such a detailed monitoring system, and its sustainability (who will run the system once the Project has concluded

and who will manage and interpret data) - two issues that have not been sufficiently considered by the Project.

76. Together with the Project's Technical Team, the evaluator visited some of the sites where adaptive and restoration activities were being carried out. He provided technical feedback directly to the consultants. Generally speaking, he has observed that the range of adaptation measures (combining production, hydro-engineering and restoration activities) is varied and appropriate for this territory. The evaluator observed that the added value in terms of climate change should be considered at all times - what are the elements that make these plans adaptive to climate change rather than a mere collection of sustainable measures. He has also observed that in practice the restoration measures have posed some challenges to the Project. The base-line study for the restoration management model⁶¹, albeit useful to estimate costs and time, lacks a technical guide for implementation and does not include a conceptual development. In this regard, the National Restoration Plan⁶² has a better development of different concepts, but is too general to guide the specific implementation of the Project's activities. In practice, the base-line documents were hardly applicable and the Project team had to design the restoration or re-vegetation activities "on the go", so they supported them with a number of ad-hoc technical visions. Consequently, the restoration activities were not necessarily designed with a view to restoring hydrological functionality, but rather the vegetation cover. While they seem related, under certain conditions, the objective of restoring the natural cover implies other restoration actions which are different from restoring hydrological functionality. On the other hand, the Project has properly diversified the different restoration methods, which had remained undefined in the design of the Project (¶42).

Ef4. The outcome 1 of the Project shows good progress considering an expanded scope.

77. The good outputs of Component 1 have made a relevant contribution to the outcome of such component (climate change vulnerability assessments used as an input for land use and watershed management plans). This is thanks to not only the generation of the studies and their proper communication, but also an additional process involving seeking to influence local plans and policies. In 2017, the "Capacity-building strategy for the incorporation of climate change considerations in land use planning and management in the Chingaza-Simapa-Guerrero Area" was formulated and implemented. With this strategy, the Project proposes not only to impact on the land use plans, as contemplated in the original outcome indicator (2 land use plans, POTs, POMCA or Watershed Management Plans that include cc vulnerability assessments), but also to expand the outcome to other planning instruments for land management which may incorporate climate change, like the municipal development plans, the environmental management plans and the risk management plans. An exercise involving a prioritization of planning instruments and an analysis of strengths and weaknesses of the prioritized instruments was carried out, and it was concluded that it was appropriate to initially focus on the development plans of the municipalities. An indication of this is that there are currently 16 municipal development plans in the corridor that were developed with the aid of the Project. These plans created a positive atmosphere of cooperation with mayor offices and have paved the way for the current works being done to incorporate climate change considerations in 3 territorial planning systems (EOT, by its Spanish acronym) for Sesquile, Guasca and Cogua. Therefore, the Project will achieve much more results in terms of plans and policies than originally planned. However, given that these management plans have not been accepted yet, for the time being the Project must report 0% of progress in this outcome indicator, but if the expansion in the formulation of the outcome gets approved, the positive contribution of the Project in impacting on the region's local policy could be recognized.

⁶¹ J.M. Cárdenas. 2017. Output 4.1. *Modelo de Gestión y Ejecución de Recursos para la Implementación de Medidas de Adaptación en Restauración Ecológica en las Microcuencas Seleccionadas por el Proyecto.* (Model for the Management and Execution of Resources for the Implementation of Adaptation Measures in Ecological Restoration in the Micro-watersheds selected by the Project).

⁶² MADS 2015. *Plan Nacional de Restauración. Restauración ecológica, rehabilitación y recuperación de áreas disturbadas* (Ecological restoration, rehabilitation and recovery of disturbed areas).

78. The effects of outcome 1 can be even greater considering the cooperation with the environmental entities in the Project and the inclusion of the Project in an appropriate local institutional context (¶136). On the one hand, the partner institutions also help the territorial entities include climate change adaptation considerations in their plans and policies, as reported in their counterpart activities. But the interaction of these activities at the level of policy making, generation of technical information and training of officials from public entities is a model that supports the general mission of the environmental authorities to accomplish better environmental management in the region.

Ef5. The achievement of outcome 2 is uncertain.

79. The outcome of Component 2 ("Increased adoption of adaptation measures to reduce water vulnerability to climate change") shows little progress due to the non generation of outputs. The indicator "Number of new funding proposals received by MADS" has not been reported yet and the two indicators of this outcome that were added to the adjusted framework ("Number of families that agree to allocate land" and "Number of families that incorporate adaptation measures") depend on the implementation of activities in private lands. Although progress reports indicate progress in this indicator, they report on the number of preliminary agreements, but they are not implemented yet. While it is possible that adaptation measures be effectively adopted in private lands in a micro-watershed (San Francisco) and in public lands during the time left until the end of the execution phase, without the outputs planned for the other watersheds, the Project loses part of its outcome as it had been formulated.
80. The full achievement of the outcome of Component 2 will only be possible if the PSC takes a forthwith decision, preceded by a MADS decision, on the implementation scenarios. There are three possibilities: (i) that guidelines on zoning and land use (¶140) be issued in the short term (April 2018), which would enable implementing the activities in Chipata belatedly but as planned; (ii) that CAR and MADS agree to the implementation of the activities under Component 2 in delimited paramo areas while the national institutions progress towards the definition of the guidelines, based on the existing legislation⁶³ and on a memorandum of understanding; and (iii) in case the definition of guidelines takes longer, that alternative sites in Chipata, outside the paramo area, be selected in the short term. This would have a high strategic and political cost because it means revoking the preliminary agreements in Chisaca and also that the Project would fail to implement adaptation activities within the emblematic paramo ecosystem.

Ef6. The Project started with a limited risk mitigation strategy, but has adapted it properly. Many risks have materialized and new ones have appeared.

81. The GEF Project Document includes a brief risk assessment including plans and people responsible for their mitigation. It only had two identified risks: (i) lack of commitment of different stakeholders to contribute to the Project; and (ii) local communities not adopting adaptation measures⁶⁴. During its execution, the Project has properly monitored the risks and identified new ones, which have been reported in the PIR: (iii) the fact that adaptation activities cannot be implemented in the Guerrero paramo; and (iv) not being able to meet the restoration targets, considering budget constraints and the institutional goals of the partners⁶⁵. While brief, this risk mitigation strategy is appropriate, especially due to its immediate adjustment at the beginning of the Project based on a better understanding of the implementation context.
82. The first risk, the lack of commitment of partners and other public stakeholders, did not materialize: the Project has managed to generate satisfactory levels of ownership among the different stakeholders (¶136). The low effectiveness in the implementation of Component 2 (¶179-

⁶³ E.g. paragraph 1, Section 3 of Resolution 769 of 2002, which holds CARs responsible for conducting the study on the current condition of paramos, and Resolution 839 of 2003, which sets forth the terms of reference for the formulation of the Study on the Current Condition of Paramos and the Environmental Management Plan for Paramos.

⁶⁴ Please, refer to section A.6, risk matrix, p. 24 of the Prodoc, for a complete formulation and a detail of mitigation plans.

⁶⁵ Please, refer to Project Implementation Reports 2016 and 2017 for a complete formulation of risks and details of the mitigation plan.

80) is an indication of the materialization of the second risk: the communities did not adopt adaptation measures or do not support them. In fact, the initial risk mitigation plan, as included in the GEF Prodoc, was not enough to eliminate it because a part of the plan could not be actually implemented - the plan was not to work with the communities until the relevant resources were committed, in order to avoid raising expectations. However, the Project had to work with the communities before resources were committed because otherwise it was not possible to reach preliminary agreements. Expectations were created and the delay in the implementation (which has just started in some sites) has lowered the spirits of the communities. It should be noted that the mitigation strategy could not be implemented and was not enough to control the external factors. This risk is now high. In addition, in the current context of the Project a new risk has arisen: not being able to implement activities in private lands already subject to preliminary agreements due to changes in the legal and/or political context (¶40).

83. The third risk identified in the PIR (that adaptation not be possible in the Guerrero paramo) has also materialized. The mitigation plan drastically changed between the PIR for 2016 (where a comprehensive intervention in the area to overcome historical mistakes was planned) and the PIR for 2017 (that recognizes that the local environment has not changed positively and proposes exploring alternatives for the implementation of activities in other areas within the Project intervention area). The latter strategy has been implemented, avoiding interventions in private lands in Guerrero. While this issue could have been anticipated since the beginning of the execution, and although it affects the potential impact of the Project in the Guerrero area (¶41-42, 89), its implementation has been effective in reducing the risk for the Project as a whole. The fourth risk (achievement of restoration goals) is materializing only in part, but not mainly due to the cost of restoration but rather due to a lack of clarity in the total target included by the partners (¶42, 70). The plan to mitigate this risk must include a way to report on the hectares restored by the Project's partners (¶53).

Conclusion 8: The Project is on its way to achieve the outcome and outputs of Component 1, with good quality and effects beyond the original expectations (Ef1, Ef3).

Conclusion 9: The Project is at a critical point in the achievement of the outcome and outputs of Component 2. It depends on decisions by partner institutions, but at levels which are beyond the control of the Project. Adaptive management related to such decisions is urgent if the Project is to achieve said outcome (Ef2, Ef5).

Conclusion 10: The Project has formulated a good technical and methodological base to guide its actions. Challenges in practice posed barriers to their proper implementation (Ef2, Ef3).

Conclusion 11: The Project risks have increased during execution. While the Project has monitored its risks and properly adapted its risk analysis and mitigation plan, this has not been enough and it must adapt to the current political and legal context (Ef6).

In terms of "effectiveness", the evaluator rates the Project as "moderately satisfactory".

D. IMPACT

11. The Project has made little progress towards the general objective of strengthening the hydrological buffering and regulation capacity of the upper watershed, and there are limited possibilities of achieving it in the middle term.

84. The general objective⁶⁶ ("Strengthen the hydrological buffering and regulation capacity of the upper watershed of Chingaza-Sumapaz-Guerrero") is ambitious, especially considering that its

⁶⁶ As explained in ¶42, the description of the general outcome 1 is not aligned with the Project or with its indicator. Therefore, the progress towards this impact is not considered in this section.

fulfillment must be measured in terms of a real impact on the improvement of the hydrological condition ("Percent increase in water yield during dry season as per calibrated model, due to the adoption of climate change adaptation measures"). The logics of the Project is to achieve this objective especially through different conservation and restoration activities in natural ecosystems and a change in land use in the areas that are a priority in terms of hydrological regulation. It is estimated that, across the whole corridor, these activities are required in almost 300,000 hectares, of which⁶⁷ less than 5,000 are covered by the Project. It is evident that the Project's work on each restored or better managed hectare is important for the ecological condition of this area. However, with this local action it would not accomplish a measurable impact on the hydrology of the corridor or at the micro-watershed level.

85. The main model of the Project is focused on the local action (at a hectare scale), and its success is measured through outcome indicators at this scale. However, the general impact is measured at a larger scale (micro-watershed) and the Project does not consider this difference in scales. Although the Project includes some activities at a larger scale, like supporting a better institutional and political enabling environment for the management of the high mountain, they are not reflected in the outcomes. Component 1 seeks to include vulnerability and adaptation elements in the land planning instruments, and trains public officials in the assessment of risks and vulnerability. Component 2 seeks funding proposals for adaptation projects from municipalities (outcome indicator) and plans training municipal and community organizations in climate change risk management and adaptation measures (outcome indicator 2.1.4 of the IDB adjusted Results Framework). In addition, due to the active cooperation of environmental authorities in their capacity as Project partners, a positive impact is expected on an area that exceeds the Project's direct intervention area. However, none of these larger-scale institutional and political activities has an outcome directly related to changes in the territory that could contribute to improving hydrological capacity.
86. Some socioeconomic factors have a greater impact in terms of space and time than the Project had envisaged and greatly affect the use of land. All of the Project area is a peri-urban territory and the development of road infrastructure, industrial and urban projects, the increase in tourism and the development of the new peasantry (recreational estates) have a great impact on the social and economic dynamics of the countryside. This impacts on how the different stakeholders (individuals, communities, public entities) take decisions concerning the territory and, thus, how they incorporate climate change and hydrological regulation considerations. Such time-related dynamics will probably have a greater impact on land use, ecosystems and hydrological regulation at the landscape scale than a project focused on a better use of restored land at the hectare scale. The fact that these factors have not been properly considered greatly affects the Project's possibilities to achieve its general objective. The vulnerability assessment mentions some of these dynamics, but they are related to the current vulnerability concerning the level of production systems and does not consider interactions at different scales (¶167).

12. The Project is on its way to create greater awareness of adaptation alternatives in high mountain ecosystems.

87. The Project has progressed towards its second general outcome⁶⁸ with certain results: the creation of greater awareness of adaptation alternatives, and lessons learned from the on-site experience in high mountain ecosystems. The Project's implementation model involving the main environmental authorities and cooperation with territorial authorities has opened the way to multiple levels of decision-making (¶135-36). And, while no concrete results are observed on the field, it has certainly rendered the Project visible, and enabled interaction with major stakeholders. The fact that the Project is considered to be focused on paramos and is deemed a pioneer in proving that production reconversion is possible in paramo areas has placed the Project at the core of the

⁶⁷ Paragraph 1.9, p. 3, Investment Grant Proposal, IDB Project Document.

⁶⁸ As explained in ¶142, the indicator of this outcome is inappropriate and not considered in this evaluation.

national debate (¶34), providing the Project with a proper platform to debate and disseminate its lessons and visions.

88. As a supplementary activity, the Project has a good communication strategy⁶⁹. During the Evaluation Mission, the communication consultant presented a strategy that, albeit implemented late during project execution, is highly appropriate because it includes multiple elements to both communicate the outcomes and outputs of the Project, and create greater impact on target groups. Regarding the latter aspect, the communication strategies supporting the training provided to public officials, the involvement of farmer families, capacity building for CBOs and the dissemination of the results of studies already show positive results. The amount of knowledge generated as a result of this is a significant immaterial asset of the Project which would be a key input to raise awareness among different target groups.

13. As an unexpected result, the Project implementation experience itself is generating new and valuable knowledge and understanding of the high mountain reality.

89. The evaluator has identified several lessons learned by the PCU and Technical Team members during project execution. This is new and valuable knowledge and a more complex understanding of the environmental, social and economic reality in paramo areas (¶96). For instance, the Project has learned that, while the environmental context is similar, the socio-cultural and economic context in the different micro-watersheds is so diverse that each would require a completely different methodological approach. The Project's model has worked in San Francisco, but faces difficulties in Guerrero, where there is a different type of land owners and the potato market is in a different situation. Other lessons have been learned from the development of the monitoring model, of the hydrological response scenarios, and from the implementation of the Adaptive Life Plan and adaptation measures. While the implementation of these tools is partial or imminent, the development process itself is properly documented and has produced so much knowledge that it is worth systematizing it carefully.

Conclusion 12: Due to being mainly focused on restoration and land use change activities at the hectare scale without properly considering social and economic developments at larger spatial and time scales, the Project has little potential to contribute to its general objective (I1).

Conclusion 13: In spite of challenges in terms of effectiveness and impact, the Project generates considerable knowledge and understanding and is capable of using it positively to raise awareness among different target groups (I2, I3).

In terms of "impact", the evaluator rates the Project as "moderately satisfactory".

E. SUSTAINABILITY

S1. The Project is in the eye of the hurricane - which makes it vulnerable, but at the same time it has good opportunities for sustained support. *The Project is at a critical point of execution.*

90. Due to depending on a regulation about the guidelines for the transition process, the Project needs a forthwith decision to be taken to achieve its planned outcomes (¶80). This makes it quite vulnerable, because the success, reputation and credibility of the executing entities depends on this situation. At the same time, this has placed the project on the focus of attention at a higher institutional level, since said institutions are committed to the Project's success because otherwise their credibility would be harmed. The ownership by said institutions paves the way for the sustainability of the Project.

S2. The long-term sustainability of Project results fully depends on public institutions and new funds.

⁶⁹ A communication strategy has been developed since the beginning of the activities under Component 1, but only in 2017 a person was hired to implement it.

91. The Project's expected results (areas under restoration and re-vegetation, implementation of adaptation measures, monitoring system, local land use plans and policies) are a set of positive measures that may jointly have a positive impact - at least at the local level. However, none of the results can be sustained without institutional support because they are not technically, financially or socially independent. The experience with multiple development projects has demonstrated that, without institutional and technical support once the funding has been completed, the activities finish immediately and results are not sustained⁷⁰. In this case, this is very relevant because the different actions require considerable activity and good coordination with owners (whether private or public) in order to continue. While the partner institutions are responsible for and capable of ensuring continuation (¶92), they require more human and financial capacity to do it.

S3. The partner institutions have sufficient capacity to sustain results in the future, but if results are not completely achieved by the end of the Project, this could pose a risk.

92. The partner institutions, as the main environmental authorities, have all the technical and legal capacity required to follow up on the actions carried out by the Project. The Project has demonstrated how to design the management model, has delivered the contemplated studies and data and has trained the local authorities, so the institutional capacity should not be a barrier against the sustainability of results after the Project's closure. In addition, the themes addressed by the Project are part of the scope of responsibility of the partner institutions (MADS, IDEAM, CAR and CORPOGUAVIO), so they are obliged to follow up on positive results. However, an aspect that they have considered unique of this Project is the possibility for inter-institutional cooperation created by the Project, which deserves in itself to be sustained.

93. If results are not fully accomplished at the end of the Project, a continued effort will be required to accomplish them. This is a challenge for many outputs and outcomes under Component 2. As an optimal scenario, the Project will succeed in implementing adaptation measures in selected private lands and will start restoration activities in private and public lands. Also in an optimal scenario, the monitoring system will get implemented. However, considering that the Project barely has one and a half year of implementation ahead, the implementation of adaptation, restoration and monitoring measures is likely to remain incomplete because it requires initial monitoring, continuous communication with owners, and correction of implementation failures, at least for one year once the implementation has finished. As a result of this, it can be said that the sustainability of this Project is highly vulnerable in case no institution may closely monitor the implementation of activities in the sites and the operation of the monitoring system after August 2019.

S4. There are enough opportunities to mobilize more funds for the sustainability of results and increase the expected impact.

94. The aforementioned findings point at a critical situation in terms of sustainability because multiple actions that depend on public entities and external funding are required. Fortunately, there are good opportunities to get to mobilize such funds. Colombia may benefit from both being a transition economy, with the advantage of having considerable domestic resources, and being a developing country, which enables it access to technical cooperation resources. Therefore, Colombia is well positioned for credit programs that may contribute to its full sustainability. This country has also voiced its desire to be a worldwide pioneer in mitigation and adaptation actions. Therefore, it has invested own resources and has been an important recipient of international funding for climate change related issues. In general, funding for climate change adaptation has increased worldwide after the implementation of the Paris Agreement. Especially funding coming from the Green Climate Fund could be a good option to consolidate and upscale the results of this

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<https://www.fomin.org/DesktopModules/EasyDNNNews/DocumentDownload.ashx?portalid=11&moduleid=4488&articleid=212&documentid=276>.

Project, to more significantly contribute to the achievement of the general objective set for this Project.

Conclusion 14: The Project will require numerous actions after the funding is completed to ensure the sustainability of its results. This fully depends on the public partner institutions and external funds. Fortunately, the institutional context is positive and the possibility to mobilize funds is high (S1, S2, S3).

In terms of "sustainability", the evaluator rates the Project as "moderately satisfactory".

V. Conclusions, Lessons and Recommendations

A. CONCLUSIONS

95. Based on the Evaluation findings, which are grounded on data and evidence, the evaluator has formulated the following evaluation conclusions⁷¹, including his professional opinion on the Project's performance according to the evaluation criteria:

1. The Project is highly relevant to the global and national context. The fact of presenting itself as a Project focused on paramos has increased its relevance at the national level but has also brought negative effects because the legal framework for paramos has changed and the Project has failed to conduct adaptive management (R1, R2, R4).
2. The entities that execute the Project are an appropriate group of public and private entities that have progressively succeeded in involving other authorities to their full satisfaction (R3).
3. Weaknesses in the design of the Project and weak adaptive management in the face of changes in the context of the Project jeopardize the fulfillment of the results of Component 2 and, therefore, the possibility to meet the Project objectives (R4, R5).
4. The way adjustments to several elements of the original results framework have been handled has caused confusion within the Project and has complicated the reporting of progress (R5).
5. The Project's administrative management is efficient and correct, the same as its technical management, although the activities under Component 2 are suffering delays due to factors that are partially external to the Project. As a result of this, the financial execution of the GEF resources is low, while the execution of co-financing resources shows progress (E1, E3, E4, E5, E7, E9).
6. The application of the IDB rules to the implementation of the Project resulted in a long inception period and prevented drawing on the institutional experience of the organizations executing the Project (E2, E6).
7. Inter-institutional cooperation is limited to the participation in committees, but it is nevertheless welcome by their representatives (E8).
8. The Project is on its way to achieve the outcome and outputs of Component 1, with good quality and effects beyond the original expectations (Ef1, Ef3).
9. The Project is at a critical point in the achievement of the outcome and outputs of Component 2. It depends on decisions by partner institutions, but at levels which are beyond the control of the Project. Adaptive management related to such decisions is urgent if the Project is to achieve said outcome (Ef2, Ef5).
10. The Project has formulated a good technical and methodological base to guide its actions. Challenges in practice posed barriers to their proper implementation (Ef2, Ef3).

⁷¹ These conclusions are the same as those provided after each evaluation criteria.

11. The Project risks have increased during execution. While the Project has monitored its risks and properly adapted its risk analysis, its mitigation plan has not been sufficient and it must adapt to the current political and legal context (Ef6).
12. Due to being mainly focused on restoration and land use change activities at the hectare scale without properly considering social and economic developments at larger spatial and time scales, the Project has little potential to contribute to its general objective (I1).
13. In spite of challenges in terms of effectiveness and impact, the Project generates considerable knowledge and understanding and is capable of using it positively to raise awareness among different target groups (I2, I3).
14. The Project will require numerous actions after the funding is completed to ensure the sustainability of its results. This fully depends on the public partner institutions and external funds. Fortunately, the institutional context is positive and the possibility to mobilize funds is high (S1, S2, S3).

B. LESSONS

96. Based on findings and conclusions, the evaluator has derived the following lessons learned over the first years of the execution of this Project, which may be applied to projects of this same nature by the same or other stakeholders, at other scales or with a more extended use:
 - When the theme of a Project is related to a major social debate and is politically sensitive, its relevance increases, but, at the same time, this may pose an additional risk if the context evolves rapidly. Although this Project has focused on the whole of the high mountain area, including paramos, forest and other intervention areas, it has been strategically planned as a Project in paramos. Because the paramo management issue has received considerable social and political attention in the past few years, this identification has helped the Project receive greater attention from public entities and has created policy-making spaces for the Project, like the roundtable on transition. However, it has also complicated its execution because the change in legislation and the slow decision-making process related to the new legislation currently operate as external factors that hinder the implementation of the Project and jeopardize its success (R2, R3, Ef1, I1, Conclusion 1).
 - Operating properly, a project's Steering Committee can provide a space for analysis and even for decision-making on issues which are not within the direct control of a project. This Project has been affected by elements that are beyond its specific control, but within control of the institutions that are part of the Project. The PSC comprises those institutions and can trigger decision-making at the highest level. In this regard, the PSC has become a space for constructive analysis of guidelines for production activities at delimited paramo areas. Without replacing the mission of the roundtable on transition, the PSC operates as a complementary space because it analyses the problem from the perspective of a concrete challenge: the implementation of activities under Component 2. Therefore, the PSC may operate as a body that triggers decision-making by its member institutions beyond the specific scope of the Project (E8, Ef5, I1, S1, Conclusion 9).
 - When a Project is not executed by the government environmental authority, but does demand considerable interaction and coordination with such agency, it is effective to specifically invest funds in the coordination with it. Although this Project is executed by an NGO by delegation from a national authority (MADS), it demanded considerable investment from MADS in technical and management meetings, administrative processes, adjustments to other public activities and processes in the area and political analysis of implications and challenges for the Project. Considering the limited capacity in relation to number of people and amount of resources available, the Project hired an Adaptation Expert using GEF funds and placed him at

MADS. This was of great help in ensuring direct and free-flowing communication, inserting the project in the management agenda and streamlining the slow administrative process (E10).

- Vulnerability and climate change perceptions are variables with both objective and subjective elements. Therefore, rigorous data collection and use only partly determines the quality of a vulnerability assessment. It is necessary to combine it with the development of a conceptual framework that defines what factors affect vulnerability in what way, and to weight those factors. This is a subjective - though critical - exercise in nature, and needs to be done in cooperation with a large group of experts and involving the people whose vulnerability is under analysis (Ef1).
- With the practical experience implementing projects like this one on the field, the range of ecosystem-based adaptation activities increases, but also conceptualization turns more complex. This Project has implemented numerous activities that are considered adaptive to climate change under a few common denominators, especially "restoration", "re-vegetation" and "production practices involving an efficient use of water and climate resiliency". During the implementation phase, numerous conceptual challenges arose which constantly demanded the reformulation of adaptive activities. While this situation somehow complicates the execution of an adaptation project, it enriches the experience and the adaptation alternatives (Ef3, E5, R4, R5, Conclusion 1). For example:
 - The Project focuses on hydrological regulation and is thus focused on restoring the original vegetation cover, considering that this is what best guarantees a better regulation. However, the ecological restoration concepts and tools (mainly focused on biodiversity restoration) are not necessarily the most appropriate to restore hydrological regulation.
 - There exists a range of vegetation cover restoration activities which is more varied than that included during the project design in the study on restoration tools, and even more varied than those included in the national restoration plan. The restoration undertaken by this Project is not limited to re-vegetation or active reforestation, but also includes passive restoration, aided regeneration, placing of green barriers to protect areas, and restoration of ecological functions through soil application or hydrological measures (without necessarily planting vegetation). Each measure is relevant as part of a diversified restoration strategy at the landscape level, but each also has very different requisites and costs and thus a different cost-effectiveness balance.
 - For this Project, passive restoration was specifically considered as a low-cost adaptation measure to increase the original vegetation cover in large stretches of land. While it is an appropriate strategy and the evaluation recommends a more detailed accounting of the areas under passive restoration as part of the total outcome of the Project, other challenges are also noticed. For example, there is a thin line between passive restoration and preservation. The earlier is focused on the increase of the vegetable cover through (active) removal of the factors that threatened it, and the latter involves protecting the existing vegetation cover. However, when it comes to differentiating them, it is difficult to tell one from the other and define how to count the hectares of a new natural reserve which is partly under natural regeneration and partly under advanced succession.
 - Climate-resilient production practices are not easy to define as such in this Project: in most cases they are a technological package that has been implemented for many decades in sustainable agricultural development projects or agro-forestry projects. Although these activities involve a better use of land and water, their climate resilience is based on logical assumptions rather than empirical evidence, and their economic benefit, as an alternative to conventional activities, is highly uncertain, which is evidenced by their low adoption in previous projects that promoted such activities.

Only this Project's monitoring system could provide (part of) the answers. What was certainly evident during the implementation of this Project is that a technological package that is acceptable for a certain context may be inapplicable in a different context (e.g. the production activities in delimited paramo farms are not applicable, even in sites completely transformed in agricultural areas).

- A detailed and ambitious technical basis is essential to the quality of any conservation project, but may turn too big if the implementation and management of such knowledge is not properly planned. Many of the studies of this Project, especially on vulnerability, perceptions and hydrological response, are highly detailed and, irrespectively of their quality (¶167), their real application in the Project has been limited and they have not been used other than in the context of this Project. Another example is the multi-variable monitoring system for conservation and land-use change actions - it is a very well designed system but only useful if operated in the long term. Therefore, in a project like this one, it is necessary to consider right from the beginning the people who will be responsible, the costs and the protocols for the operation of such a detailed system after the project closure, including data interpretation and management (Ef3, I3, S3).
- To successfully formulate relevant policy instruments in a changing and complex political, social and institutional context, as is the case of the paramos, adaptive management is even more important than ex-ante planning. During project execution, it has been learned that instead of pre-selecting certain planning instruments to influence them, it was more effective to conduct a prioritization analysis involving the existing instruments, including an analysis of their strengths and weaknesses at that time, in order to better target the efforts of the Project to influence policies (Ef4).
- There is not a single solution to the adaptation challenges at the landscape level; each situation is so unique that may require a different approach and response to suit complex local issues. During project execution it has been observed that, in four micro-watersheds with similar biophysical conditions, the historical, social, cultural and economic factors are so different that the Project's general approach only worked in one (San Francisco) or two cases at the most (incl. Chipata). In fact, each watershed would need a different institutional, methodological and strategic approach (including different adaptation activities) (Ef2, I3).

C. RECOMMENDATIONS

97. Based on conclusions, the evaluator has formulated the following recommendations to improve project execution and achieve the expected results at the end of the Project, and for future initiatives of the implementing agency and the partner institutions:

Recommendations related to the Results Framework of the Project (all referred to Conclusion 4)

- i.IDB must promptly ensure that the Project uses one same results framework. The results framework must be based on the results framework of the Project Document approved by GEF, including the additional elements necessary to improve monitoring and the possibility to evaluate the Project according to IDB standards. In case of proposing adjustments to the formulation of elements of the framework as included in the GEF Prodoc, such adjustments must be based on logical or strategic considerations. Adjustments to the GEF Results Framework must be reported in the next PIR.
- ii.IDB and MADS must invite the Project's Steering Committee to propose a review and/or reformulation of some elements of the results framework that are not relevant due to logical considerations (related to failures in the original project design, ¶142). Specifically:
 - a) Overall Impact 1 ("Hydrological buffering and regulation capacity of high mountain ecosystems - paramos and high Andean forests - is maintained or increases under conditions of climate change and variability") is neither aligned with the general objective,

nor with the logics of the Project (¶42). It is suggested focusing on hydrological regulation at the watershed level, in line with the general objective, for example: "The hydrological buffering and regulation capacity of the upper watershed of Chingaza – Sumapaz - Guerreo has improved due to the maintenance of the area of natural ecosystems and an increase in restored or re-vegetated areas in areas that are critical for hydrological regulation".

- b) Considering the difficulty in measuring and attributing to the Project the indicator for the Overall Impact 1 ("10% increase in water yield during dry season in the prioritized areas"), this indicator could be replaced with a new one showing the area of the landscape elements with good hydrological response, for instance: "An x% increase in the vegetable covers considered positive for hydrological regulation in high mountain watersheds, including, among others, paramos, Andean forests, wetlands, secondary forests and scrublands".
 - c) The indicator "Number of times knowledge produced has been downloaded" does not measure the Overall Impact 2 ("Increased awareness of adaptation options and lessons learned from field experience in high mountain ecosystems"). This indicator must be adjusted so as to measure the increased awareness or positive attitude of a specific target audience, which can only be assessed by means of a specific study or survey. Although it is difficult to measure this without having established a baseline at the beginning of the Project, an element for assessing effectiveness could be included in the communication strategy.
 - d) The indicator that reads "Number of new funding proposals received by MADS to develop/ implement adaptation measures from municipal governments and CBOs" does not indicate the outcome of Component 2 "Increased adoption of adaptation measures to reduce water vulnerability to climate change". This indicator should be focused on adoption, and a possible wording could be as follows: "Number of new public initiatives implemented by municipal governments and CBOs that include adaptation measures developed by and similar to those of the Project".
- iii. IDB and MADS should invite the Project's Technical Committee to formulate a new definition for those indicators that cannot be accomplished due to strategic considerations (related to changes in the context). Specifically: This unique framework should be reviewed and adjusted, if necessary, in the light of the current circumstances of project execution.
- a) The outcome indicator of Component 1 ("Number of land use plans, POTs, POMCA or Watershed Management Plans that include cc vulnerability assessments") should be expanded to include development plans of territorial authorities, and its target should be considerably increased according to a prioritization of planning instruments and an analysis of the strengths and weaknesses of the prioritized instruments (Ef4).
 - b) The target for the indicator on the number of hectares restored by counterpart actions carried out by the Project's partners must be reviewed and supported with a based explanation for the adjustment and the new target. This would entail an associated reduction in the target for the indicator of the Overall Impact 1 (if this overall impact is maintained; please, refer to recommendation ii).
- iv. In the next Progress Report, the Project's partner institutions must report their co-financing outputs according to the new indicators and retroactively.
- v. Partner institutions must report on the progress made on the outputs that contribute to the Project indicators, even if they had not been originally considered as co-financing contributions. If these outputs have been produced during the project execution period and directly contribute to the general objective and have not been reported as a contribution to another project, their investment and outcome can be considered a co-financing contribution to this Project.

Recommendations for the implementation of the rest of the Project

- vi. MADS, in coordination with the other members of the PSC, must forthwith (April 2018) make a decision on the implementation of the activities under Component 2 in the delimited paramo areas and complete the execution of the GEF funds. Considering this is a complex issue and there are low possibilities that a resolution will be passed on the guidelines for a transition in delimited paramo areas in the near future, the evaluator suggests that the best scenario for Component 2 is: (i) to amend the preliminary agreements with private owners in Chisaca to only carry out restoration activities and no production activity, and (ii) to select, in the very short term, a number of private sites in the Chipata watershed to completely implement the activities under Component 2 (restoration and adaptation measures, Conclusion 9).
- vii. Immediately following a decision on the activities under Component 2 in the delimited paramo area, the PCU must accordingly adapt the management of all the activities until the end of the Project. The Project management tools (PEP, AWP, Procurement Plan) must be adjusted accordingly. Also, the risk assessment must be updated based on this new condition, and IDB must report these changes in the next PIR (Conclusions 9 and 11).
- viii. Considering there is little time to carry out all pending activities, the PCU must focus on implementing them following a criterion of 'minimum necessary' rather than 'maximum possible', and prioritize expenses according to this vision (Conclusion 5, Ef3).
- ix. Considering the long inception period, the current scarce progress in the activities and low financial execution in Component 2, IDB should consider requesting GEF a time extension for the Project execution period in order to achieve a minimum implementation of all the key activities (Conclusions 5 and 9).
- x. The PCU must formulate and implement a sustainability plan for the Project outcomes, actions, reports, and data. The plan must include methods, budget and people in charge, and must be immediately implemented. This is important not only to secure support to the Project's direct beneficiaries, like public and private owners of the field activities, but also in relation to the monitoring system (I3, Conclusion 14).
- xi. To increase its responsiveness and functionality, the Technical Committee must find a way to address administrative issues, like the approval of TORs, by e-mail and based on a "no objection" scheme, so that meetings in person may be used to debate technical issues - as dictated by its mandate to conduct the general technical supervision of the Project (Conclusion 6, E8).
- xii. The members of the Technical and Steering Committees need to ensure greater continuity in the attendance of their delegates to the meetings. It should be considered inviting Instituto Alexander von Humboldt as a permanent guest of the TC (Conclusion 6, E8).
- xiii. The PCU should consider systematizing in an analytical and academically rigorous manner the knowledge and improved understanding of the paramo dynamics gained during the implementation of this Project, as an additional output of the Project and as an input for other similar processes in the high mountain (Conclusion 13).
- xiv. To ensure the inclusion of social and economic dynamics at different time and spatial scales and based on the improved knowledge of the current condition in the corridor (Recommendation xiv), the PCU should consider formulating policy proposals at different scales as an additional output of the Project to contribute to the general objective (Conclusion 12).

Recommendations for future initiatives

- xv. Before starting a project, the PCU should identify and seek direct coordination with all similar projects (GEF and non-GEF) and define joint actions to increase the effectiveness and impact of the project (Conclusion 1, E1).
- xvi. In future similar projects, the GEF project implementation agency should review all the elements of the results framework internally to check if they are aligned with its own policy and practices, so as to avoid adjusting them once the GEF approval process has concluded (Conclusion 4, R5).
- xvii. In order to avoid long inception periods in future GEF projects, IDB and the partner institutions must plan on the fulfillment of the special conditions prior to the first disbursement before executing the financing agreement (Conclusion 7).
- xviii. The studies (of Component 1) to guide the intervention activities (Component 2) should generate information at the same scale as the intervention (farms or watersheds), or otherwise their usefulness is limited (Ef1).
- xix. CI and the Project's partner institutions must find a way to retain the human experience gained within the context of the Project for future actions (Conclusions 5 and 6).

Annex 1. Terms of Reference for the Evaluation

Project entitled "Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero"

Terms of Reference
Mid-Term Evaluation Consultant

I. Background

On August 14, 2014, the Investment Grant Agreement No. GRT/CX-14525-CO was executed between the Presidential Agency for International Cooperation of Colombia (APC), the Ministry of Environment and Sustainable Development (MADS) and the Inter-American Development Bank (IDB) for the execution of the Project entitled "Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero". The Agreement sets forth the obligations of CI and MADS, as well as the articulation with the Project's co-financiers - Instituto de Hidrologia, Meteorologia y Estudios Ambientales (IDEAM), Empresa de Acueducto, Alcantarillado y Aseo de Bogota (Bogota water and sewerage utility, EAB), Corporacion Autonoma Regional de Cundinamarca (CAR) and Corporacion Autonoma Regional del Guavio (CORPOGUAVIO).

On February 5, 2015, MADS and Conservation International Foundation (CI) executed Implementation Agreement No. 1 for the execution of the project "under the terms and conditions set forth in this Agreement and Agreement GRT/CX-14525CO".

The general objective of the Project is to strengthen the hydrological buffering and regulation capacity of the upper areas of the selected watersheds, which supply drinking water to the Bogota D.C. metropolitan area and the adjoining municipalities. A total of 22,088 households directly benefit from the activities funded by the Project. In addition, more than 7 million inhabitants in 11 rural municipalities and in urban and peri-urban areas of Bogota D.C. will receive the indirect benefits of drinking water supply.

The Project has the following components:

COMPONENT 1: KNOWLEDGE MANAGEMENT: The objective of this component is assessing climate change vulnerability - a priority factor in land-use and watershed planning. The accomplishment of this objective will be measured based on the number of land management plans, Land Use Plans (POT) and Watershed Management Plans (POMCA) that incorporate climate change considerations (environmental determinants). This process must include a transfer of information and knowledge related to climate impacts on hydrological regulation in the area under conservation, and the effects on the local communities and other stakeholders, which will serve as a basis for a more effective environmental and hydrological management.

The activities carried out as part of this component are: (i) formulation of high-resolution climate scenarios that serve as an input for watershed management; (ii) evaluation of the hydrological response in the selected watersheds; (iii) formulation of a socio-ecological vulnerability assessment for high Andean ecosystems, in terms of their capacity to supply and regulate water under climate change scenarios, focusing on priority areas that have been selected based on an assessment of their hydrological risk, on a scale ranging between 1:25,000 and 1:100,000; (iv) definition of an Adaptive Territorial Ecological Structure - EETA, by its Spanish acronym - to guide land use planning in the Project's influence area; (v) a communication strategy to disseminate information to the different stakeholders in the area; and (vi) training workshops and sessions aimed at improving stakeholders' current knowledge related to climate change, including successful adaptive management experiences. The vulnerability and the hydrological response assessments will be subject to peer review by scholars at the international and national levels.

COMPONENT 2: ADOPTION OF ADAPTATION MEASURES TO ADDRESS THE IMPACTS OF CLIMATE VARIABILITY AND CHANGE ON THE WATER BALANCE OF PRIORITIZED AREAS: This component is focused on advancing adaptation measures for land use and the execution and planning of watersheds. Funds will be allocated to strategic adaptation measures to directly address the net effect of climate variability and change on water regulation and storage in three prioritized areas. The actions that will be initially implemented in three hydrological units include: (i) the implementation of activities aimed at ecological restoration and improvement of connectivity between natural ecosystems, including bioengineering activities in areas requiring erosion control, to increase water regulation capacity; (ii) adoption of climate-resilient land use management practices by farmers and ranchers -including agro-silvoral systems, improved micro-irrigation and more drought-resistant pastures in the local production systems - aimed at reducing the vulnerability posed by climate change on local hydrological conditions; (iii) redesign and modification of hydraulic works in critical water-supply areas to increase water storage capacity; (iv) formulation of new local initiatives of adaptation seeking the sustainability and feasibility of replication of the adaptation measures to be implemented by the Project; and (v) design and implementation of a monitoring and evaluation system that enables tracking the progress of the Project as a whole, as well as the impact of the adaptation measures.

Paragraph 4.14 of the only annex to the Grant Agreement No. GRT/CX-14525-CO provides for an external partial evaluation to be conducted once 40% of the IDB/SCCF funds have been disbursed. The evaluation will establish the level of progress towards the Project objectives, the degree of participation of the different stakeholders, positive changes as a result of the intervention and necessary adjustments to the implementation strategy. Based on the Project's cash flow projection, said execution level is estimated to be reached by the end of the year.

Finally, it should be noted that the Project's Administration Mission carried out between March 21 and 24, 2017, recommended that a diagnosis containing an evaluation of the Project be prepared during the following 3 months, and that recommendations be formulated based on such evaluation in order to guide actions related to the indicators matrix and the monitoring plan of the Project, if necessary. Such evaluation will be reviewed during the Mid-Term Mission, which is expected to be carried out during the last week of January of 2018.

II. OBJECTIVES OF THE MID-TERM EVALUATION CONSULTING ASSIGNMENT

a. General Objective

To review and evaluate the achievements made during the implementation of the Project entitled "Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero" vis-à-vis its objectives, results framework, and indicators, as well as its work plan and other relevant execution aspects, with a view to proposing necessary adjustments and changes during the remaining execution period to improve the Project's performance and meet the proposed targets.

b. Specific objectives

- a. To carry out a diagnosis that shows the current status of project execution, in relation to the execution of activities and outputs as well as the results expected as of the date of the Mid-Term Evaluation.
- b. To qualitatively and quantitatively identify the achievements made in the technical, administrative, financial and institutional aspects, as well as the materialization of the main assumptions made at the design stage, and, based on this, define a set of recommendations for a proper completion of the Project.
- c. To evaluate the sustainability of the Project and its components in institutional and financial terms, as well as the degree of ownership assumed by its users/beneficiaries.
- d. To propose measures, changes, mechanisms and other actions required to efficiently meet the expected targets, also considering any changes in the regulatory and institutional context related to the high mountain area which may have taken place since the formulation and start of the Project.

- e. To evaluate the relevance of the progress and result indicators (output/outcome) of each component proposed at the Project formulation stage and propose necessary adjustments based on the current execution scheme and its social, political and financial environment, as well as suggest measures aimed at improving supervision.

III. ACTIVITIES

During the performance of the Consulting Assignment, the following activities will be carried out, apart from others that may be proposed to complete the assignment:

a. Document review

In performing his/her assignment, the Consultant will consider at least the following documents:

- a. The Grant Agreement No. GRT/CX-14525-CO executed between IDB, APC and MADS.
- b. The GEF Monitoring and Evaluation Policy.
- c. The Project preparation documents submitted to FMAM (including the Results Matrix⁷²) and their annexes.
- d. The GRT/CX-14525-CO Project Document
- e. The Project's Operation Manual
- f. The Multiannual Project Execution Plan (PEP)
- g. The Implementation Agreement executed between MADS and CI
- h. The Association Agreement executed between MADS and the Project partners (EAB, CORPOGUAVIO, CAR and IDEAM)
- i. The minutes of the meetings of the Project's Steering Committee and Technical Committee
- j. The memorandums of the missions conducted by the Inter-American Development Bank.
- k. The Financial Statements of the Project for 2016 and 2017.
- l. The Project's Annual Work Plans (year 1: July 2015 to June 2016; year 2: July 2016 to June 2017; and year 3: July 2017 to June 2018).
- m. The half-yearly reports submitted to IDB
- n. The annual reports submitted to GEF
- o. The final reports of the Consulting Assignments which concluded before this mid-term evaluation.
- p. The financial and technical reports issued by the Project partners with the relevant co-financing contributions.

b. Design and execution of interviews and queries

The Consultant will prepare and implement a program of interviews with relevant people directly or indirectly related to the Project to get the opinions and perceptions of the following stakeholders on the performance of the Project:

- a. Inter-American Development Bank staff in charge of the design and the technical and fiduciary supervision of the Project
- b. Representatives of government institutions that participate or have participated in the Project (MADS, EAB, Corpoguavio, CAR and IDEAM)
- c. Staff of the Project Coordination Unit (PCU)
- d. Additional staff of Conservacion Internacional, as the funds executing entity
- e. Other cooperation entities and programs related to the Project

In addition, if practicable, the Consultant will make telephone inquiries or interviews with the consulting firms and individual consultants in charge of carrying out the studies, activities and works which are specific of the Project, as well as other professionals experienced in the development of similar projects in other contexts, whether national or international.

⁷² The results matrix of GEF and IDB and the PMR should be considered.

c. Analysis and presentation of the information gathered

The Consultant will present the information enabling a clear visualization of results and including:

- a. An integrated comparison of the activities planned v. executed, the outputs obtained, and the degree of fulfillment of Project results, based on the current Results Matrix.
 - b. The state of compliance with contractual conditions.
 - c. An identification of Project deviations from the initial design, together with an analysis of the proposals for adjustments put forth till then in relation to the technical, financial, economic and institutional framework for project execution.
 - d. Establishing the relevant challenges and limitations that the project team may have come across during the execution until the date of the Mid-Term Evaluation, and their relevance for the remaining period of execution.
 - e. Defining weakness and strengths of the processes related to the execution of the Program.
 - f. An analysis of the efficiency in the use of resources in general.
 - g. An analysis of stakeholder involvement and ownership, and of the commitments assumed by local partners and collaborators. This includes an analysis of the co-financing contribution, comparing the contribution committed when the Project was approved with the contributions executed up to date.
 - h. Key lessons learned for the execution of pending activities of the Project and future perspectives.
 - i. Recommendations and adjustments to improve the effectiveness in the execution of the Project, the relationship among the results obtained and the resources used-invested.
 - j. An evaluation of potential alliances and joint investments that could be made with other institutions, organizations and/or projects to achieve value-added outputs.
 - k. An analysis of the degree of materialization of the main assumptions that guided project design.
- d. To complete his/her assignment, the Consultant will propose a work methodology that enables ensuring the fulfillment of the objectives of these Terms of Reference.
- e. The Consultant will perform his/her work following the guidelines of the Project Coordination Unit (PCU) and will be directly supervised by the National Project Coordinator. The Consultant will start his/her assignment with a meeting with the IDB team in charge of the technical and fiduciary supervision of the operation to finish defining the work methodology and schedule.
- f. The Consultant will conduct the relevant interviews, with both the Project team and its beneficiaries and consultants. The Consultant will also visit the sites and/or works supported by Project resources.
- g. The Consultant will hold a results dissemination workshop where results will be presented and discussed and feedback will be received from the Beneficiary, Participating Institutions (partners), the Executing Entity, the PCU, the GEF Operational Focal Point, namely the Office of International Affairs of MADS, and the Bank to prepare a final evaluation document and a Memo about the Workshop held. This Workshop will be carried out at two different levels - an executive meeting at the managerial level, and another meeting with the operative staff.
- h. The Consultant will make a presentation of his/her main conclusions as part of the Mid-Term Evaluation during the last week of January of 2018.

IV. REPORTS / DELIVERABLES

The Consultant will deliver the following:

- a.** *A Work Plan, within 7 calendar days of the date of execution of the contract.*
- b.** *A Draft Mid-Term Evaluation Report forty-five (45) calendar days after the start date of the contract. The Draft Report will contain, among other information:*

- a. Degree of completion of the activities and outputs of the Project and their subcomponents.
- b. Weaknesses and strengths of the project execution processes.
- c. Shortcomings and achievements in the project execution.
- d. Key challenges.
- e. Results obtained from the project execution until then, and a forecast of results and impacts at the end of the Project.
- f. Evaluation of the indicators used in the results matrix.
- g. Lessons learned for the execution.
- h. Proposed adjustments to meet the Project's intended objectives, including an analysis of the Project's critical path in view of the progress made to date and the time and resources left, and recommendations to the PCU.
- i. Proposed adjustments to the Project's outcome indicators.
- j. Proposed Project budget allocation, including co-financing from each Project partner, and an updated Logical Framework.
- k. PowerPoint presentation of the evaluation results geared towards the people involved in the execution of the Project and the Mid-Term Evaluation, detailing the Consultant's main conclusions and recommendations.

c. Project Mid-Term Evaluation Final Report. Within 15 calendar days of the completion of the activities related to paragraph 3.7 of these Terms of Reference, the Consultant (a) will deliver:

- a. A Final Report including all the observations and comments made.
- b. A PowerPoint presentation adjusted to include the results of the Dissemination Workshop.

All reports will be submitted to the Bank electronically and in one sole file including a title page, the main document and annexes.

Note on the submission of reports and preservation of documents:

- a. All reports and deliverables will be submitted in the original form accompanied by a digital copy (CD or DVD)⁷³.
- b. By executing the contract, the Consultant undertakes to preserve all documents and records related to IDB-funded activities for a period of seven (7) years after completion of the assignment contemplated in the contract.

V. BUDGET

The budget for this consulting assignment is included under the item "2.6.5.1 Mid-Term Evaluation" in the Project Procurement Plan. The Consultant's consideration under this contract will be negotiated with the selected Consultant.

VI. PAYMENT TERMS

A first payment for an amount equivalent to 40% of the agreed consideration upon delivery of deliverable 4.2 included in these Terms of Reference at the recipients' satisfaction. A final payment for an amount equivalent to 30% of the agreed consideration upon delivery of deliverable 4.3 included in these Terms of Reference at the recipients' satisfaction.

For each payment, the Contractor will submit to CI the relevant statement of services or invoice supported by the following documents:

⁷³ The original report and the digital copy must be delivered with the invoice or equivalent collection document to CI. A copy of the report is intended for the supervisor of the contract.

- a. A copy of the documents evidencing payment to the integrated social security system in its three health, pensions and professional risk sub-systems.
- b. A copy of the RUT.
- c. A certificate issued by the Contract Supervisor confirming technical and contractual compliance with the contract during the invoiced period, with the approval of the Technical Coordinator.
- d. Documents approved by the Supervisor in a CD and in hard copy.

The final payment is subject to the execution of a contract settlement certificate after obtaining the approval of the Project Coordinator.

VII. CONSULTANT PROFILE

Academic education: Undergraduate degree in any of the following fields:

- Natural sciences, Earth sciences
- Social and human sciences, economics, law
- Engineering

Graduate degree in project management, MBA, or subjects related to the subject matter of the contract or the scope of the Project.

Professional experience: Fifteen (15) years in areas related to his/her education.

Specific experience: At least eight (8) years in any of the following:

- Research on high mountain related issues
- Evaluation of projects (at least 2) that include knowledge generation and management related to high mountain ecosystems, as well as the implementation of activities with rural communities, preferably related to climate change and ecosystem-based adaptation.

Availability to travel to the Project areas is a must.

Oral and written English command is a must.

VIII. INPUTS TO BE PROVIDED BY THE HIRING PARTY

For the fulfillment of the consulting assignment, the hiring party will provide the documents referred to in section V.1 and any other technical or administrative document that may be required to fulfill the purpose of the contract.

IX. SUPERVISION

The supervision of the consulting assignment will be conducted by the National Project Coordinator.

Annex 2. Work plan for this Evaluation

Robert Hofstede
January 19, 2018

1. Background

Technical Cooperation GRT/CX-14525CO: The Project entitled *Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz – Guerrero* is funded by the Inter-American Development Bank (IDB) with funds from the Special Climate Change Fund (SCCF) operated by the Global Environment Facility (GEF). On August 14, 2014, an Investment Grant Agreement was executed between the Presidential Agency for International Cooperation of Colombia (APC), the Ministry of Environment and Sustainable Development (MADS) and the Inter-American Development Bank (IDB) setting forth the obligations of CI and MADS, as well as the articulation with the Project's co-financiers - Instituto de Hidrologia, Meteorologia y Estudios Ambientales (IDEAM), Empresa de Acueducto, Alcantarillado y Aseo de Bogota (Bogota water and sewerage utility, EAB), Corporacion Autonoma Regional de Cundinamarca (CAR) and Corporacion Autonoma Regional del Guavio (CORPOGUAVIO). To complete the Project, there is a term of five years and a total budget of USD 27,924,750 (including the SCCF/GEF contribution in the amount of USD 4,215,750, the local co-financing and associated funds).

The objective of the Project is to strengthen the hydrological buffering and regulation capacity of the upper areas of the selected watersheds located in the Project area, which are considered strategic for a significant part of the supply system of the city of Bogota and the hydrological regulation of the Bogota Savanna. The Project is structured based on the following technical components:

1. Knowledge management: This component aims at assessing the vulnerability to climate change in the context of land use planning and watershed management. The activities carried out as part of this component were: (i) formulation of high-resolution climate scenarios that serve as an input for watershed management; (ii) evaluation of the Hydrological Response in the selected watersheds; (iii) formulation of a socio-ecological vulnerability assessment for high Andean ecosystems, in terms of their capacity to supply and regulate water under climate change scenarios, focusing on priority areas that have been selected based on an assessment of their hydrological risk, on a scale ranging between 1:25,000 and 1:100,000; (iv) definition of an Adaptive Territorial Ecological Structure - EETA, by its Spanish acronym - to guide land use planning in the Project's influence area; (v) a communication strategy to disseminate information to the different stakeholders in the area; and (vi) training workshops and sessions aimed at improving stakeholders' current knowledge related to climate change, including successful adaptive management experiences.

2: Adoption of adaptation measures to address the impacts of climate variability and change on the water balance of prioritized areas: This component is focused on advancing adaptation measures for land use and the execution and planning of watersheds. The actions that will be initially implemented in the hydrological units include: (i) the implementation of activities aimed at ecological restoration and improvement of connectivity between natural ecosystems, including bioengineering activities, to increase water regulation capacity; (ii) adoption of climate-resilient land use management practices by farmers and ranchers -including agro-silvoral systems, improved micro-irrigation - aimed at reducing the vulnerability posed by climate change on local hydrological conditions; (iii) redesign and modification of hydraulic works in critical water-supply areas to increase water storage capacity; (iv) formulation of new local initiatives of adaptation seeking the sustainability and feasibility of replication of the adaptation measures to be implemented by the Project; and (v) design and implementation of a monitoring and evaluation system that enables tracking the progress of the Project as a whole, as well as the impact of the adaptation measures.

The Mid-Term evaluation of this Project is to be executed between January and March, 2018, according to paragraph 4.14 of the sole Annex to the Grant Agreement No. GRT/CX-14525-CO. A consultant (Robert Hofstede) has been hired as external evaluator. This document describes the work plan and methodology of the evaluation. The Evaluation complies with the GEF Monitoring and Evaluation Policy.

2. Evaluation objectives

General Objective. To review and evaluate the achievements made during the implementation of the Project entitled "Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero" vis-à-vis its objectives, results framework, and indicators, as well as its work plan and other relevant execution aspects, with a view to proposing necessary adjustments and changes during the remaining execution period to improve the Project's performance and meet the proposed targets.

The specific objectives of the MTE are the following:

- a. To carry out a diagnosis that shows the current status of project execution, in relation to the execution of activities and outputs as well as the results expected as of the date of the Mid-Term Evaluation.
- b. To qualitatively and quantitatively identify the achievements made in the technical, administrative, financial and institutional aspects, as well as the materialization of the main assumptions made at the design stage, and, based on this, to define a set of recommendations for a proper completion of the Project.
- c. To evaluate the sustainability of the Project and its components in institutional and financial terms, as well as the degree of ownership assumed by its users/beneficiaries.
- d. To propose measures, changes, mechanisms and other actions required to efficiently meet the expected targets, also considering any changes in the regulatory and institutional context related to the High-Mountain area which may have taken place since the formulation and start of the Project.
- e. To evaluate the relevance of the progress and result indicators (output/outcome) of each component proposed at the Project formulation stage and propose necessary adjustments based on the current execution scheme and its social, political and financial environment, as well as suggest measures aimed at improving supervision.

3. Evaluation criteria and main questions

The evaluation is based on the five criteria defined by OECD/DAC⁷⁴: relevance, effectiveness, efficiency, impact and sustainability. For each of these criteria, a set of main questions expected to be answered during the evaluation was designed. During the course of the evaluation, the questions may be slightly adjusted and additional questions may be added based on the information gathered. The questions are answered based on a review of documents and on interviews focused on the performance of the Project vis-à-vis what has been stipulated in the Project Document - particularly the Results Framework and its indicators. The evaluator recognizes that adjustments have been made to the indicators during the course of Project implementation; the evaluator will consider the last approved version and will evaluate the appropriateness of the adjustments made and new indicators proposed.

Relevance (the extent to which the objectives of an intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies)

- Are the implementation objectives and strategies consistent with the global, national and local environmental issues and sector (environmental/social) policies? Has this (regulatory, political, social) context changed during the implementation of the Project? Is the Project appropriately implementing adaptive management to address external changes (in the context) or internal changes (related to its performance and identified through monitoring)?
- Did the Project appropriately identify the main stakeholders? (government, producers, organized

⁷⁴ <http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

- civil society groups, etc.). Is the Project meeting the main stakeholders' expectations and needs?
- Are the indicators defined by the Project in the results framework properly measuring the progress of outcomes and outputs? Are they relevant to the current social, political and financial context? Are the adjustments made to and/or proposed for the results framework and/or indicators justified by changes in the context or lessons learned from the implementation?

Efficiency (a measure of how the resources/ inputs - funds, time, human resources - of the project have been converted to outputs and outcomes)

- Has the Project been executed as planned? (In terms of time, responsibilities and funding). What are the main reasons for any delays or changes in the implementation?
- Has the Project properly drawn on the existing knowledge, similar projects (GEF and non-GEF), the partners' institutional capacity and cooperation with other institutions?
- Is the Project management (Executing Agency, National Coordinator, PCU) appropriate, effective and efficient? (In terms of capacities, leadership, coordination among them and with others).
- Is the inter-institutional coordination with other Project partners efficient, transparent and effective?
- Is the Project governance efficient and effective? (Steering Committee)? Is its support timely and relevant? Are its recommendations effectively incorporated to Project management?
- Is the financial management of the Project transparent and correct? (Validated by external audits). Is the financial management having a positive impact on project execution? (In terms of activity efficiency, staff support, smooth procedures).

Effectiveness (the extent to which the intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance)

- How successful has been the Project in producing the expected outputs, in terms of quantity, quality, timeliness, and applicability?
- How efficient is the Project in achieving the expected outcomes, and how likely are outcomes to be achieved within the remaining period of the Project? Specifically:
 - Climate change vulnerability assessments are used as an input in land use and watershed management plans.
 - Greater adoption of adaptation measures to reduce the vulnerability of water to climate change.
- What factors have contributed to the progress or lack of progress towards the Project outputs and outcomes?
- Have Project assumptions materialized and have risks been properly managed?
- How informed and involved are local and national government institutions?
- Are GEF funds being executed according to schedule? What about the realization of additional funds?

Impact (the long-term, primary and secondary positive and negative effects produced by the project, whether directly or indirectly, and whether intended or unintended)

- How advanced is the Project in achieving the objective set (to strengthen the hydrological buffering and regulation capacity of the upper watershed of Chingaza-Sumapaz-Guerrero that supplies drinking water to the Bogota metropolitan area and adjoining rural municipalities)? Specifically, is the Project progressing towards its expected global impacts?
 - Hydrological buffering and regulation capacity of high mountain ecosystems - paramos and high Andean forests - is maintained or increases under conditions of climate change and variability
 - Is there greater awareness of adaptation alternatives and have lessons been learned from the field experience in high mountain ecosystems?

Sustainability (the likely ability of a development intervention to continue to deliver benefits after completion, the likelihood that the benefits continue in the long term)

- Are the implementing institutions of the Project creating enough institutional capacity (at the technical, organizational and financial level) to monitor results after the Project closure?
- Is the ownership level of the main stakeholders enough to ensure the sustainability of Project results in the future?
- To what extent does the continuity of the Project and its impacts depend on external financial resources? Will the Project succeed in mobilizing such resources?

4. Evaluation Methodology

To accomplish the evaluation objectives, the methodology proposed includes three components (a) document review, (b) semi-structured interviews, and (c) field observations.

Document Review.

At the beginning of the evaluation, the consultant will review the documents produced by the Project with different purposes.

- To expand his knowledge of the Project context, academic and technical publications on hydrological management and cc adaptation in high mountain areas will be gathered and analyzed.
- To learn about the design and planning of the Project, a review will be made of the Project document, the current results framework, the Project's Operation Manual, the Multiannual Project Execution Plan, contracts and sub-contracts.
- To analyze the Project's progress, a review will be made of half-yearly and audit reports.
- To learn about the tangible outputs of the Project to date, the technical documents and outcomes generated by the Project will be examined.
- To get an idea of the Project's communication impact, references to the Project or its activities and results will be sought on the Internet, newspapers and other media.

Semi-structured interviews.

Based on the review of documents, especially half-yearly reports, and after an initial meeting with the Project Coordination Unit (PCU) and the Project's Technical Team, a work theory on the Project's performance up to date will be formulated. The theory (which is a personal work document of the consultant) will be validated with semi-structured interviews with the main stakeholders (implementation partners and main beneficiaries). The questions included in section 3 will serve as a guide for the interviews, and depending on the person being interviewed, different topics will be addressed in more detail. For instance, greater emphasis will be put on effectiveness, impact and sustainability when interviewing the main partners, on relevance and impact when interviewing decision-makers, on efficiency and effectiveness when interviewing the work team and consultants, and on effectiveness and sustainability when interviewing beneficiaries.

In general, interviews are individual. Due to the interviews being semi-structured, the questionnaire does not include a fixed set of questions; it is rather an open conversation where the questions serve as a guide and allow room for including additional information. During the interviews, people will be invited to support their observations and perceptions with tangible and objective evidence, if possible. In case of subjective perceptions and opinions, the consultant will try to cross-check the information with other interviewees.

People from the following categories will be interviewed:

- MADS executing entities (International Affairs Office, GEF focal point, Ecosystems Directory, Project focal point) and Conservacion Internacional (Executive Director, Policy Director)
- Project partner institutions (co-financiers) (EAB, CORPOGUAVIO, CAR and IDEAM), both the technical staff directly involved as the institutional representative at the Steering Committee.
- IDB (IDB/GEF representative in Colombia in charge of managing the Project agreement)
- Project staff (PCU, technical team=
- Main consulting firms (Consultores Ambientales Ltda BIOTOPO INGEAG ECOSIMPLE, Ecovera)

Field Observations

The consultant will visit at least three - four if possible - micro-watersheds where the Project is operating (San Francisco, Guandoque, Chisaca and Chipata) to interview direct beneficiaries (farmer families, municipal environmental management units) and observe field activities. Staff of the PCU, the technical team and the municipalities will participate in the visits to explain the methodologies used and to hold direct conversations with the consultant, the team and the beneficiaries. In addition, the consultant will seek opportunities to conduct semi-structured bilateral interviews with the direct beneficiaries.

5. Formulation of conclusions, lessons learned and recommendations.

Based on the three methodology components described (documents, interviews, and field observations), evidence-based findings are obtained including quantitative information (number of plans, hectares, beneficiaries, etc.) and qualitative information (interviewees' perceptions and opinions) relevant to the evaluation questions. The evidence will be analyzed and interpreted. Such evidence will be compared with the values of the relevant indicators reported in the half-yearly reports. Based on findings, the evaluator will formulate the evaluation conclusions, including his professional opinion on the project's performance according to the evaluation criteria. Each conclusion includes a direct reference to the relevant finding(s). From the Project implementation experience, the evaluator identifies lessons learned and formulates constructive recommendations to improve project execution and achieve the expected results by the end of the Project. Each recommendation is based on findings and/or conclusions, mentions the person responsible to take action and the estimated time for its implementation.

6. Evaluator's autonomy and coordination with the Project team

The evaluation is conducted in full by the evaluator, who is the only person in charge of gathering and interpreting information, identifying findings and lessons learned and formulating conclusions and recommendations. However, during the course of the evaluation, the evaluator is expected to continuously work in coordination with and inform the PCU and the technical team. Said coordination has three purposes: (i) creating an environment of transparency and information so that the evaluation be a learning exercise for the Project team, (ii) validating field observations and third party perceptions with the work team, and (iii) increase the efficiency of the consultant's work, thanks to operational arrangements and logistical recommendations of the PCU. To this end, the evaluator submits a work plan to the Project's National Coordinator and agrees upon an execution agenda. He also presents a general list of documents to be reviewed and of people and institutions to interview, and the PCU is expected to provide concrete suggestions regarding said lists. While many of the interviews with stakeholders (implementation partners and Project beneficiaries) are bilateral (without the PCU staff or the work team being present), subjective observations or critical perceptions about third parties can be cross-checked with the PCU and the technical team (respecting the principle of anonymity). At the end of the field mission, general observations and conclusions are presented to the PCU and the Technical Team and, eventually, to the Project's partner institutions. The draft evaluation reports will be submitted to the Steering Committee through IDB to get feedback on factual mistakes (findings based on incomplete or inaccurate information).

7. Evaluation deliverables

The consultant will deliver the following:

(a) A work plan and methodology (this document).

(b) A Draft Evaluation Report: a report on the evaluation results including final findings, conclusions, lessons learned and recommendations. This report includes the following information, among other:

- **Relevance:** analysis of the evolution of the context and relevance of the Project. Analysis of the adaptive management and evaluation of the indicators used in the results framework according to the current context.

- Efficiency: degree of fulfillment of the activities and outputs of the Project and its sub-components; weaknesses and strengths of the project execution processes, analysis of the use of both the GEF resources and the co-financing.
- Effectiveness: results obtained until then with the execution of the Project and a forecast of results and impacts at the end of the Project. Limitations and achievements in the execution of the Project.
- Impact: progress towards the Project's objective and general outcomes. Materialization of assumptions and key challenges to accomplishing the desired impact.
- Sustainability: the likelihood of maintaining results in the long terms and challenges in this regard.
- Conclusions: the consultant's personal opinion about the Project's performance according to the evaluation criteria and based on findings.
- Lessons: new experience or understanding derived from the project execution that may be applied by the project partners or others to similar projects in the future, in another place or at a different scale.
- Recommendations: proposed adjustments to fulfill the Project's intended objectives, including an analysis of the Project's critical path in view of the progress made to date and the time and resources left, and recommendations to the PCU. Proposed adjustments to the Project's outcome indicators. Proposed Project budget allocation, including co-financing from each Project partner, and updated Logical Framework.
- Annex: people interviewed, documents reviewed and detailed activities of the evaluation.

(c) *PowerPoint presentations*: The evaluator will deliver two oral presentations. One at the end of the mission in Colombia (February 26) with preliminary observations, and another one during the Project's Administration Mission (March 19) including findings and final conclusions and recommendations. The presentations will be delivered in PowerPoint.

(d) Final report: based on the observations and feedback received from the Project's Steering and Technical Committees and the Administration Mission, the draft report is adjusted and turned into a final report.

8. Scope and limitations

The evaluation will analyze the activities and achievements of the Project since its official start (August 14, 2014). Given that the last technical and financial report and the audit were prepared as of December 31, 2017, this date is taken as the cut-date for the quantitative data reported for the period under evaluation. However, if during the course of the evaluation it is found that significant achievements or developments took place after said date, such achievements or developments will be considered as direct observations.

Like in any external evaluation, the time and budget available is not enough to visit all the intervention areas or to interview all the people involved in the execution and the beneficiaries or to conduct a detailed analysis of all the documents available. Therefore, the information gathering conducted through the analysis of documents, interviews and field observations necessarily covered only part of all the information available. The evaluator, in cooperation with the PCU, will carefully select a representative sample, placing emphasis on the different achievements and developments (including both positive and negative examples).

The evaluator will rely on the PCU and the Technical Team providing him with documents and contact information timely.

Annex 3. Evaluation schedule

December 22 2017	Kick off
December 26 2017 - January 3 2018	Review of official Project documents
January 4-5 2018	First field visit (Guandoque and San Francisco) together with the PCU
January 19 2018	Submission of draft work plan and methodology
January 22 - February 9	Review of additional documents
February 12-16	Information gathering in Colombia: second field visit (Chisaca and Chipata) with the PCU, the technical team and land authorities, interviews with UCP members, partner institutions, IDB. End of mission presentation to the PCU and Technical Team
February 19 - March 6	Data processing and preparation of draft report
March 2	Presentation of main findings to the Project's Steering Committee
March 7	Presentation of draft report
March 8 - April 2	Period reserved for the review of the draft report by IDB and partners (feedback to the evaluator)
March 20	Presentation of findings, conclusions and recommendations to the administration mission
April 20	Presentation of final report

Annex 4. People interviewed during this Evaluation

Project partners

Mariana Rojas Laserna
Climate Change Director
Ministry of Environment and Sustainable Development - MADS

Cesar Rey
Director of Forests, Biodiversity and Ecosystem Services
Ministry of Environment and Sustainable Development - MADS

Maritza Florian Buitrago
Adaptation Coordinator
Climate Change Directorate
Ministry of Environment and Sustainable Development - MADS

Marcos Urquijo Collazos
Deputy Director of Environmental Management
Corporacion Autonoma Regional del Guavio - CORPOGUAVIO

Leydi Pardo Murillo
Coordinator of Biodiversity and Strategic Ecosystems
Corporacion Autonoma Regional del Guavio - CORPOGUAVIO

Henry Alexis Rodríguez
Engineer in Water Resources.
Corporacion Autonoma Regional del Guavio - CORPOGUAVIO

Rafael Robles
Advisor to the Technical Directorate of Environmental and Land Planning
Corporacion Autonoma Regional del Cundinamarca - CAR

Maria Elena Baez
Professional Expert on Climate Change
Corporacion Autonoma Regional del Cundinamarca - CAR

Rolando Higueta Rodriguez
Director of Environmental Management of the Hydrological System
Empresa de Acueducto, Alcantarillado y Aseo de Bogota (Bogota water and sewerage utility) - EAB ESP

Camilo Rodriguez
Empresa de Acueducto, Alcantarillado y Aseo de Bogota (Bogota water and sewerage utility) - EAB ESP

Paula Andrea Lopez Arbelaez

Global Change Coordinator

Instituto de Hidrologia, Meteorologia y Estudios Ambientales (Colombia's National Institute of Hydrology, Meteorology and Environmental Studies) - IDEAM

Constantino Hernandez Garay

Technical Expert, Global Change

Instituto de Hidrologia, Meteorologia y Estudios Ambientales (Colombia's National Institute of Hydrology, Meteorology and Environmental Studies) - IDEAM

Inter-American Development Bank

Alfred Grünwaldt – Task Manager

Manuel Jose Navarrete – Water Division, Co-Task Manager

Jose Luis Alba – Administrative support to the GEF Project

Olga Lucia Bautista – Monitoring of Operations

Alfonso Tique – Monitoring of Operations

Beneficiaries

Maria de los Angeles Muñoz, Manuel Rodriguez, Juana Isabel Rodriguez, Ana Delia Rodriguez, Blanca Velandia and Nubia Rojas (El Pino Estate, Sesquile)

Maritza Rivera, Camilo Lopez and Jorge Acero (Major's Office of Sesquile)

Ciro Alberto Clavijo Gonzalez (Major's Office of Guasca)

Mauricio Torres (Major's Office of Cogua)

Conservacion Internacional - Members of the Project Coordination Unit

Angela Andrade

Policy Director - CI

National Project Coordinator (until March 2017)

Patricia Bejarano M.

Land Use Planning Manager - CI

National Project Coordinator (from March 2017)

Dorelly Estepa

Administrative Manager - CI

Omar Gerardo Martínez Cuervo

Procurement Consultant

Andrea del Pilar Torres Latorre

Financial Consultant

Conservacion Internacional - Members of the Project Technical Team

Andres Felipe Oliveros Ariza
Adaptation Consultant (GEF Project Focal Point)
Ministry of Environment and Sustainable Development - MADS

Carlos E. Sarmiento P.
Supervision Support Consultants

Luz Helena Hernández
Socio-Environmental Consultant

Gustavo Adolfo Carrion
Planning, Land Use Planning and Climate Change Consultant

Sandra Liboria Díaz
Ecological Restoration Consultants

Ana Margoth García
Agro-Ecology Consultants

Jose David Moncaleano E.
Technical and Operations Assistant

Jennifer Dorado
Climate Change Scenarios

Luisa Cusguen
Monitoring System

Mario Gonzalez
Communications

Consulting Firm

Fabian Navarrete Le Bas
ECOVERSA (preparation of the Prodoc)