TERMS OF REFERENCE
REQUEST FOR PROPOSALS No. 239

TITLE: GCF FUNDING PROPOSAL PROJECT BOGOTÁ-REGIÓN

1. GENERAL BACKGROUND

Conservation International (CI), in collaboration with the Governments of Colombia, has developed a Concept Note for the Green Climate Fund (GCF) Project titled *Building a Water-Resilient Bogota-Region Landscape*, hereinafter Bogotá-Region, please see: (Annex 3)

In the Bogotá-Region Landscape, covering Bogotá and 21 municipalities, climate change impacts water security. Spanning 606,000 ha, it accommodates 19.7% of Colombia's population, contributing 26.9% to GDP. This transformative project targets 9,523,627 residents, prioritizing integrated water resources management (IWRM). It emphasizes disaster risk reduction, strengthening local water supply systems, and preserving natural resources. The initiative integrates ecosystem-based adaptation measures, benefiting 467,964 vulnerable rural community members. It promotes climate-resilient livelihoods, governance, and regional coordination. Urban areas benefit from green infrastructure integration, enhancing adaptive capacity. The project aligns with Colombia's climate goals, fostering innovation through nature-based solutions. It supports the Updated Strategic Plan in six priorities: Ecosystems, Food, Infrastructure, locally led Adaptation, Innovation, and Green Finance. This holistic approach addresses future water hazards, fostering sustainable development and resilience in Latin America and overcoming financial barriers for long-term impact. The project serves as a model within the Country Project, showcasing localized solutions with a broader regional influence.

2. PROJECT OBJECTIVES

The Bogotá-Region project will serve as a catalyst for transforming water management in Colombia's central region at a critical moment in the nation's history in which people, the economy, and the industry are threatened by the abrupt decrease of water availability. With water security increasingly threatened by climate hazards, population growth, and institutional complexity, this initiative is poised to address these challenges head-on. The project aims to make a paradigm shift in water security through economic and financial solutions, science-based decision-making, governance structures and field interventions that foster integrated water resources management, ecosystem-based adaptation, and climate-resilient livelihoods. It aligns with Colombia's climate goals, supporting strategic priorities, including ecosystems, food, infrastructure, locally led adaptation, innovation, and green finance, fostering sustainable, cost-effective solutions for regional impact.

The project is expected to deliver significant benefits, including:

1. **Population Impact:** Strengthening water security and mitigating risks for a population of 9,523,627 people.
2. **Direct Beneficiaries:** Supporting climate-resilient livelihoods for 467,964 direct beneficiaries in highly vulnerable rural communities.
3. **Ecosystem Conservation:** Effective conservation, restoration, and management of high mountain ecosystems covering 172,499 hectares.

4. **Urban Community Resilience:** Enhancing adaptive capacity and strengthening resilience in urban communities through well-managed integration of grey-green infrastructure in the Bogotá urban area.

By strengthening water governance, conserving high mountain ecosystems, and implementing urban resilience strategies, this project will benefit 9,523,627 people, foster climate-resilient livelihoods for 467,964, and conserve 172,499 hectares. With financial sustainability and climate innovation, it aligns with Colombia's goals, ensuring a paradigm shift in water security for lasting regional impact.

Project Outcomes:

1. **Enhanced Local Water Governance:** Promoting effective coordination of regional climate change adaptation efforts and strengthening local water governance.
2. **Urban Resilience:** Fostering urban resilience through the restoration of urban forests and wetlands, coupled with well-managed integration of grey-green infrastructure in the Bogotá urban area.
3. **Financial Sustainability and Innovation:** Catalyzing climate innovation in integrated water resources management (IWRM) and overcoming financial barriers for long-term sustainability and scalability.

3. OBJECTIVES OF THE CONSULTANCY

3.1 Subject of the contract

Support CI and its partners in developing a GCF Funding Proposal for the Project *Building a Water-Resilient Bogota-Region Landscape*.

3.2 Objectives

Conservation International is seeking consultancy services provided by a suitably qualified consulting firm or organization (for simplicity, referred to as "Consultant" in this document) to contribute to the development of a GCF Funding Proposal for the Project based on the Concept Note described in Annex 3 of this ToR, and following the approved PPF proposal in Annex 4 of this ToR. The Funding Proposal (FP) development work will be funded in part by CI co-financing and in part by the GCF Project Preparation Facility ("PPF Grant"). The Consultant's work will be subject to the requirements of GCF and its fiduciary agent, the United Nations Office for Project Services (UNOPS), as included in the eventual contracting agreement.

The Consultant will support CI and its partners to develop feasibility studies, design interventions, develop indicators, conduct economic and financial analysis, provide detailed analysis and plans to address environmental, social, and gender safeguards, conduct stakeholder engagement and consultations with the partners participating in the Project as described in this ToR for PPF Activities 1-3 (collectively, "PPF Activities"). The consultant shall ensure alignment with CI-GCF policies, frameworks, and Funding Proposal requirements. Work is expected to begin no later than the first trimester of 2025 (subject to prime donor funding) and proceed according to the delivery schedule included in Section 8.

The Consultant team will report to, liaise regularly with, and take technical guidance from Conservation International Colombia. The interaction of the Consultant with the Project stakeholders and Partners will be in close coordination with CI. CI Colombia staff will supervise the Consultant's performance and be responsible for guiding the process, reviewing and approving all written deliverables. The Consultant team, under the CI-

Colombia project lead, will also conduct its activities in close consultation with the Colombian government and partners. The Consultant team will incorporate feedback from the stakeholder engagement process, CI technical experts, the CI-GCF Agency (acting as the PPF Project GCF Accredited Entity [AE]), and the GCF. Payments for all deliverables are subject to approval by both CI Colombia and the CI-GCF Agency.

The consultancy will preferably be carried out by a team of international and local professionals under the supervision of a Lead Consultant. The team shall have relevant experience in the water sector as well as in the Bogota - Region in order to successfully complete the deliverables for PPF Activities required by CI to develop the Funding Proposal. The objectives, responsibilities, outputs, and required qualifications included in Section 5 have been organized under fields of expertise but can be re-arranged depending on the team composition proposed by the Consultant. CI values consortia and subcontracting of local consultants that are inclusive and diverse in composition, leveraging the breadth of national expertise in Colombia to best achieve the consultancy aims and objectives.

This work will be undertaken within 10 months of signing the contract. The consultant(s) shall also be available during the rest of the months to address any questions by CI and the other project partners and between months 11-20 to address any feedback/requested revision from GCF.

4. KEY ACTIVITIES

A summary of activities and key deliverables are as follows. For all deliverables, the consultant will be expected to address reviews and feedback to respond to CI, EE partners, and GCF input and make changes as requested.

Activity 1: Pre-feasibility, Feasibility Studies, and Project Design

- Inception report
- Participation in kick-off meeting
- Feasibility study:
    - Bogota-Region profile *(Output 1.1)*
    - Climate Change Vulnerability Assessment *(Output 1.2)*
    - Overall risk identification and Assessment for the Project *(Output 1.3)*
    - Biodiversity and Climate Baseline Assessment *(Output 1.4)*
    - Options Analysis *(Output 1.5)*
    - Analysis Of National and Subnational Policies and Regulatory Frameworks *(Output 1.6)*
    - *Feasibility assessment and design of proposed interventions - Component 1. Mainstreaming ecosystem-based adaptation (Output 1.7)*
    - *Feasibility assessment and design of proposed interventions - Component 2: sustainable livelihoods for a just labor transition (Output 1.8)*
    - *Feasibility assessment and design of proposed interventions – Component 3: Regional and local water governance (Output 1.9)*
    - *Feasibility assessment and design of proposed interventions – Component 3: Financial mechanisms and long-term sustainability and scalability strategy (Output 1.10)*
    - *Feasibility assessment and design of proposed interventions – Component 4. Decision-making platform to forecast climate hazards and mainstream EBA (Output 1.11)*

- Financial & Economic Analysis *(Output 1.12)*

Activity 2: Environmental, social, and gender studies

- Environmental and Social Impact Assessment (ESIA) and Management Plan (ESMP) *(Output 2.1)*
- Stakeholder Assessment, Stakeholder Consultation Summary and Stakeholder Engagement Plan (*Output 2.2)*
- Gender Assessment and Gender Action Plan *(Output 2.3)*
- Accountability and Grievance Mechanism and Manual *(Output 2.4)*
- Community Health, Safety and Security Plan *(Output 2.5)*
- Indigenous Peoples and Cultural Heritage Plan *(Output 2.6)*

Activity 3: Project Implementation Design and Indicators

- Project ToC/Logframe and country-specific sub-activities as appropriate. *(Output 3.1)*
- Project indicators, workplan and implementation timeline and milestones (*Output 3.2)*
- GHG Emissions Baseline Assessment *(Output 3.3)*
- Monitoring and impact evaluation plan *(Output 3.4)*
- Implementation arrangements and co-financing (*Output 3.5)*
- Adaptation beneficiary methodologies and calculations *(Output 3.6)*
- Operations and Maintenance Plan *(Output 3.7)*
- Exit Strategy (*Output 3.8)*
- Funding Proposal *(Output 3.9)*
- Project Budget (*Output 3.10)*
- Procurement Plan *(Output 3.11)*
- Legal due diligence (*Output 3.12)*

5. DELIVERABLES

The key activities and related deliverables for this consultancy, to be delivered in the formats prescribed by GCF, are summarized below.

ACTIVITY 1: PRE-FEASIBILITY, FEASIBILITY STUDIES, AND PROJECT DESIGN

Deliverable 1: Inception Report

The Inception Report should contain the detailed workplan and Gantt chart for PPF Activities 1-3, including the kickoff meeting with the executing entity and local consultants, Project partners, and CI staff; a narrative describing the overall approach; templates for subsequent deliverables; proposed frequency of communications and coordination meetings; the strategy to assure close coordination with CI for all consultations and engagement with stakeholders and project partners; and the schedule for field visits related to the stakeholder consultation process.

The consultancy firm is expected to participate in a kick-off meeting organized by Conservation International.

The consultant will deliver the feasibility study, which considers background and baseline information, a review of policies and regulatory frameworks, an assessment of technical and financial feasibility and design of each project component. The feasibility study should also analyze scenarios 'with and without' investments by GCF, capture current baselines, and provide updated language on the Project description based on the synthesis of the outcomes of the study. Specifically, the study should include the following information:

Deliverable 2a: Feasibility Study, outputs 1.1 to 1.6

1) General Feasibility information, including a climate change vulnerability assessment, Natural Capital and Freshwater Ecosystem Services Assessment, and synthesis of financial mechanisms and long-term sustainability and scalability strategy and action plan

- *Bogota-Region profile (Output 1.1):* The consultant will provide a brief overview of the biophysical and biological nature of the area covered by the project and will describe its social and cultural diversity, hydrological dynamics, regional and local supply systems, political systems, farming customs, demography, and the nature of local economies and limitations to economic development.

- *Climate Change Vulnerability Assessment (Output 1.2):* The vulnerability assessment will focus on the Bogotá- Region landscape and the selected Project site locations[1] and should include a description of the current climatic conditions, projected climate change impacts, and an assessment of the target ecosystems, economic activities and populations' (direct and indirect beneficiaries) vulnerability to the current and future impacts of climate change. This will also assess the vulnerability of the surrounding High Andean ecosystems to climate change and the potential impacts on ecosystem services provided by these to local communities. This vulnerability assessment should use the most downscaled climate models available, the same time periods for analysis of each climate variable and contribute to the identification of project adaptation beneficiaries and associated stand-alone annex to the FP.

- *Overall risk identification and assessment for the Project (Output 1.3):* Develop a comprehensive Risk Identification and Assessment, that involves a thorough examination of risks to vulnerable communities, government staff and partners that may affect project implementation or result from project actions. The assessment will identify potential risks related to external factors (macroeconomic, regulatory, political, economic, conflict, and natural disasters), project-related factors (financial, operational, technical and innovation, legal, ESS, IP, SEAH) and partner-related factors that could impact project implementation. The assessment should develop tailored mitigation measures. The GCF PROM framework will be used in this risk identification. The assessment should include an inherent risk description, consequences of the risks, risk rating 1-5 for both likelihood (1=unlikely and 5=almost certain) and imapct (1=none and 5=catastrophic).

- *Climate and Biodiversity Baseline Assessment (Output 1.4):* Baseline information will be thoroughly reviewed and, if necessary, collected to establish key indicators for the Project, enhance the climate rationale, and guide the design of prioritized actions in the Project's implementation sites. This comprehensive review of baseline survey data will provide a solid foundation for setting specific indicators for both project outputs and activities. The analysis will offer detailed insights into the climate

[1] Project sites were determined based on a preliminary climate change vulnerability assessment and a consultation process with local partners and the Colombian government.

rationale, focusing on climate variability and change across the project's target sites. Special attention will be given to the impacts of extreme events, such as floods and droughts, highlighting their significance in the context of climate change.

- Considering the strategic geographic location of the Bogotá-Region Landscape, revise the existing baseline, and implement a baseline survey focused on clearly land, water, biodiversity, and other natural resources characterization to establish much needed impact indicators that will be used to monitor impact on key result areas and overall sustainable development and water resilient potential. It will also include a reference to the design of effective measures for the conservation of biodiversity.

- Options Analysis (Output 1.5): The Options Analysis will analyze different intervention options in the territory that could meet the project's objectives to support local communities and enhance the Bogota Region's water security, including previous work and lessons learned. The analysis should assess the comparative advantage of the Project-selected approaches based on the efficiency, effectiveness, feasibility, buy-in, trade-offs, and financial and economic analysis, and provide a rationale and justification for the chosen project design.

- *Analysis of National and Subnational Policies and Regulatory Frameworks (Output 1.6):* Based on existing studies, this output will deliver a focused analysis of the regulatory and legal frameworks critical to achieving water resilience and watershed protection in the Bogotá - Region. The study will analyze and develop a: a)Comprehensive overview and policy alignment, detailing inventory of relevant national and subnational policies, plans, and strategies, legal and regulatory frameworks related to water security, climate resilience, land use, and environmental management, an assessment of how well the project's objectives align with these current policies, identifying any gaps, barriers inconsistencies, or overlaps that could hinder effective implementation or undermine sustainable water management efforts, b) analysis of institutional roles and responsibilities of government agencies, departments, and other relevant institutions involved in water resource management, including coordination mechanisms between different levels of government and across sectors. , c) existing stakeholder engagement and participation mechanisms (government agencies, civil society, and the private sector), d) assessment of climate change considerations mainstreaming into government agencies mandates, policies, and institutional arrangements, e) regional and cross- jurisdictional policy policies and agreements affecting water resources in the Bogotá-Region, including inter-jurisdictional issues, how the project aligns with regional water management strategies and identify opportunities for coordination and collaboration across jurisdictions, f) existing economic instruments and financial incentives designed to promote watershed protection and regulatory frameworks related to payments for ecosystem services (PES), water pricing, tax incentives for conservation efforts, and other financial mechanisms, identifying gaps and proposing reforms to strengthen these instruments, fostering a paradigm shift towards innovative, sustainable water management practices in the Bogotá-Region landscape. Based on findings, consultants are expected to provide recommendations for specific policy and legal reforms needed to optimize the project's impact, enhance policy coherence, close identified gaps, and strengthen the regulatory frameworks to support the project's goals of sustainable water security and resilience.

  This analysis will ensure that the project is underpinned by strong, aligned regulatory and legal frameworks, enabling a paradigm shift towards a transformative pathway of a water-resilient Bogotá-Region Landscape.

Deliverable 2b: Feasibility Study, outputs 1.7 to 1.12

- *Feasibility assessment and design of proposed interventions - Component 1. Mainstreaming ecosystem-based adaptation (Output 1.7):* Building on existing studies conducted by CI and partners (spatial analysis, ecosystem health and services, identification of degraded areas and conservation restauration areas and sustainable production opportunities)[2], this deliverable will review site selection methodology and assess the technical and financial feasibility of proposed activities to achieve project outcomes, considering barrier identification and interventions proposed to overcome such barriers. Consultants will refine the proposed interventions, considering barriers identified, and provide recommendations to strengthen the ToC and Logframe. Consultants will review existing methodology for monitoring the water and natural resources of the Bogotá-Region landscape, exploring linkages with national and regional monitoring systems to ensure integration and consistency in tracking ecosystem health and service delivery, and provide recommendations and adjust project design and implementation model. All consultations and engagement with stakeholder and project partners will be in close coordination and through CI personnel, responding to the coordination strategy proposed in the inception report and adopted in the kickoff meeting. This component will be supported and validated by CI, key partners, such as IDEAM and IavH and national universities.

- *Feasibility assessment and design of proposed interventions - Component 2: sustainable livelihoods for a just labor transition (Output 1.8):* Consultants will assess technical and financial feasibility of proposed project activities to achieve intended project outcomes for an equitable and resilient livelihoods just labor transition with a focus on integrating bioeconomy principles, including the promotion of sustainable agroecological products and tourism. For this, consultant will build on existing assessments conducted by CI and partners (current livelihoods and economic activities, identification of skills and training needs, identification of sustainable livelihood opportunities and alternatives, resilient value chain assessments, integration of social equity and inclusion measures, monitoring and evaluation framework); and on additional assessment to identify new alternative sustainable economic activities for rural population in the Bogota-region landscape. New alternatives are needed since currently most population rely on potato farming and small cattle herds, both environmental impactful activities and economically impacted by the international free trade agreements signed by Colombia. Rural tourism, in particular, needs an specific assessment and a promotion strategy.

- Consultants will refine the proposed interventions, considering barriers identified, and provide recommendations to strengthen the ToC and Logframe. The Sustainable Livelihoods for a Just Labor Transition Assessment will be supported and validated by CI and key partners such as Agrosavia and IavH (Bogota Region Bioeconomy Hub). All Consultant consultations and engagement with stakeholder and project partners will be in close coordination and through CI personnel, responding to the coordination strategy proposed in the inception report and adopted in the kickoff meeting.

- *Feasibility assessment and design of proposed interventions – Component 3: Regional and local water governance (Output 1.9)* building on a governance regulatory and institutional assessment, the consultant will propose the approach to establish a regional governance structure to coordinate water security and environmental efforts of the several authorities and local governments with jurisdiction on the Bogota Region. This structure will align priorities and investments to maximize collective impact. This output shall identify the alternative legal backings for a regional structure and assess pros and

[2] CI Colombia will provide existing studies to the consulting firm.

cons to recommend the best choices. A strategy to establish and implement the structure and the plan to develop governance instruments to coordinate efforts including an Integrated Water Resources Management Plan for the Bogota Region Landscape. Local water governability instruments will also be assessed to devise a local water governability strengthening strategy. Consultant will assess technical and financial feasibility of proposed project activities to achieve intended outcomes for regional and local governance and enabling conditions needed to enhance IWRM and resilience at regional and local level across the Bogotá Region. Consultants will refine the proposed interventions, considering barriers identified, and provide recommendations to strengthen the ToC and Logframe. This outcome will require close collaboration with CI and Fondo Acción, as co- Executive Entity, local consultants and key partners such as SDA and CAR. All Consultant consultations and engagement with stakeholder and project partners will be in close coordination and through CI personnel, responding to the coordination strategy proposed in the inception report and adopted in the kickoff meeting.

- *Feasibility assessment and design of proposed interventions – Component 3: Financial mechanisms and long-term sustainability and scalability strategy (Output 1.10):* This deliverable will guide the establishment of a robust financial framework to support EBA for water resilience and environmental sustainability for the Bogota-Region. This output will evaluate the technical, financial and market feasibility of proposed mechanisms (PES, Tariffs, Fund) and other potential (bonds, Private- Public Partnerships, funds, biodiversity credits), by considering policy, legal, regulatory, governance, technical and other requirements, conditions to support their creation, as well as and barriers identified. Develop innovative financial instruments and mechanisms that can attract and leverage private and public investments for long term water resilience outcomes. This output will outline a strategy to identify revenue streams, risk mitigation approaches, and financial public and private partnerships, as well as to articulate existing sources of finance. Additionally, component 3 will include pathways for scaling the successful implementation of nature-based solutions for climate change adaptation and water security in the 31 micro watersheds prioritized in the GCF project, ensuring their replication and adaptation across the entire Bogota-Region Landscape. The output entails analyzing existing financial mechanisms and initiatives in the region, such as the Bogotá Water Fund, assessing and identifying complementarities.

  A main task of consultants is to assess the feasibility, barriers and enabling conditions for a PES scheme and environmental fee, and provide a detailed financial structure for each instrument, based on international best practices. This activity will be complemented by activities implemented through CI partners and individual local consultants hired by CI who will lead the institutional architecture to operationalize the financial instruments and mechanisms based on local regulations and in close coordination with regional and local stakeholders. The work will be supervised and guided by CI and Fondo Acción as co- Executive Entity, key partners such ANDI, SDA and EAAB, and the Global research nonprofit WRI. Complementary activities will be implemented through CI and partners. All consultations and engagement with stakeholder and project partners will be in close coordination and through CI personnel, responding to the coordination strategy proposed in the inception report and adopted in the kickoff meeting.

- *Feasibility assessment and design of proposed interventions – Component 4. Decision-making platform to forecast climate hazards and mainstream EBA. (Output 1.11):* Based on existing studies conducted by CI and partners, the consultant will assess technical and financial feasibility to establish a digital data-driven platform for Integrated Water Resource Management informed decision-making at the Bogota-Region Landscape level. This output will design the project strategy, to incorporate the latest scientific advancements in climate science to update existing climate change scenarios of the Bogota-Region, and build on the best resolution geographic data available for the Bogota Region in

order to model more accurate and detailed projections of climate impacts at local and regional scales as well as model the incidence of land cover changes in water security and hydrological disaster risk. By refining these scenarios and assess the impact of land use changes in water security and disaster risk, the project seeks to improve the reliability of climate risk assessments and support decision making on EBA investments to strengthen water resilience and risk reduction, enabling more effective planning and implementation of adaptation and mitigation strategies. The output will focus on designing the project activities to establish a platform that integrates environmental, climate, social, and economic data to evaluate various water risk scenarios, providing updated analytics and predictive modeling. By incorporating Ecosystem-Based Approaches (EBA), the platform will identify cost effective implementation plans that leverage natural processes to enhance water security, mitigate flood risks, and reduce the impacts of droughts. The design will include user-friendly interfaces for stakeholders, ensuring accessibility and practical application in policy and management decisions. The platform should be built on the informatic platform for Monitoring, Evaluation, Accountability and Learning (MEAL) system for the Project. This output will be supported and validated by CI, key partners such as IDEAM, EAAB and CAR, International Consulting Firm, and the national and international universities. All Consultant consultations and engagement with stakeholder and project partners will be in close coordination and through CI personnel, responding to the coordination strategy proposed in the inception report and adopted in the kickoff meeting.

Financial & Economic Analysis (EFA) (Output 1.12): Complete a financial and economic analysis (EFA) report, including an Excel spreadsheet and accompanying narrative report required for Annex 3, which details the results of the FEA for the Funding Proposal. The FEA should cite data sources and evidence, explain assumptions and methods used, provide interpretation of the results, and include the project's Economic Internal Rate of Return (EIRR) and Financial Internal Rate of Return (FIRR), and a sensitivity analysis. The Excel spreadsheet should show all the calculations used for the EFA. Worksheets should be unlocked, well-organized, include all formulas and clearly label data and results. The EFA will create a brief narrative on the project options, respective interventions, incentives, and financing models based on the Feasibility Study, describe the financial efficiency and effectiveness of the proposed Project, considering the proposed financing and the adaptation impacts that the project aims to achieve, and explain how this compares to an appropriate benchmark, determine the expected economic internal rate of return (EIRR) based on a comparison of scenarios with and without the project, include the economic impacts / ROI of each component, determine the Project's expected financial internal rate of return (FIRR) on investment to illustrate the need for GCF funding and illustrate overall cost effectiveness relative to current practice and known alternatives, determine the opportunity cost for business-as-usual activities in a "with" and "without" project scenario, describe the Financial and Economic Analysis in a spreadsheet format to be used as Annex 3 of the FP. The deliverable will include a narrative description of the Financial and Economic Analysis and key results from it, this will also be incorporated into the Project Feasibility Study. FEA will also analyze a subset of the options not included in project design from the Options Analysis for comparison with the selected Project interventions / activities.

ACTIVITY 2: ENVIRONMENTAL, SOCIAL AND GENDER STUDIES AND RELATED PLANS

The consultants, working closely with CI and Project partners, are responsible for undertaking desk research and primary data collection, including interviews, focus groups, and consultations with stakeholders to conduct a thorough assessment of target stakeholder groups (including women, youth, and vulnerable/marginalized groups), and gender. These assessments will inform the development of the required ESMF plans, that includes the development of the Stakeholder Engagement Plan, Gender Assessment and Action Plan

incorporating SEAH safeguarding measures, the Environmental and Social Impact Assessment (ESIA) which includes the Environmental and Social Management Plan, the ToC, Project Log frame and workplan. Based on guidance from CI and GCF, these assessments will investigate the influences/interests/impacts of stakeholders related to the Project; gender-differentiated roles and responsibilities in the management and use of resources and habitats in the locations where the Project will take place; Gender-based violence (GBV), and social dynamics vulnerable communities in the Bogotá-Region.

All the ESMF plans, including but not limited to the ESIA and ESMP, Gender Assessment and Action Plan (GAAP), Indigenous Peoples Plan, Resettlement Plan, Livelihood Restoration and Compensation Plan, Health, Safety and Security Plan, Biodiversity Action/Management Plan, etc will be made available in person and online for comment for one (1) month prior to GCF board consideration of the Funding Proposal.

Deliverable 3: Environmental, social and gender studies and related plans

Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) (Output 2.1).

An ESS screening was realized during the Concept Note stage, representing a start point for ESS work. Consultants should carry out a limited Environmental and Social Impact Assessment (ESIA) and a Management Plan (ESMP) based on the proposed activities in the Project logical framework. The ESIA should identify, predict, and assess the potential environmental and social impacts of the Project based on the ESS screening which suggests addressing mitigation measures for ESS standards 2, 4,6, 8 and perhaps for standards 3, 5, 7 and 9. The ESIA must also include an Analysis of Alternatives, Grievance Redress Mechanism, and information disclosure, consultation and participation related to the project. Based on the ESIA, develop the ESMP including appropriate mitigation, management and monitoring measures following the process and format described in the CI GCF Agency's ESMF. The consultant will also identify capacity needs for implementing the ESMP and then develop a capacity building plan, with budget, indicating any resource and capacity building activities needed to make the ESMP operational during the project execution phase. Furthermore, the consult will conduct an ESMF capacity assessment covering all the ESS Standards to identify the capacity needs for implementing other associated ESMF plans such as the IPP, Resettlement Plan, Livelihood Restoration and Compensation Plan, Health, Safety and Security Plan, Biodiversity Action/Management Plan, etc. as applicable.

For details of additional requirements for the content of the ESMP, see the CI GCF Agency's ESMF to ensure that all CI and GCF environmental and social policy requirements are respected.

Stakeholder Assessment, Stakeholder Consultation Summary and Stakeholder Engagement Plan (Output 2.2).

The consultant firm should carry out consultations in each of the seven (7) intervention areas. All consultations and engagement with stakeholders and project partners will be in close coordination and through CI personnel, responding to the coordination strategy proposed in the inception report and adopted in the kickoff meeting. This output entails the following:

1. Stakeholder Engagement Assessment and Strategy to identify and evaluate Project key stakeholders and stakeholder groups, including rural and urban communities, to be consulted and engaged in connection with the Project and develop a stakeholder and rural and urban communities' engagement strategy responsive to stakeholder and rural and urban communities needs and based on gender and equity considerations. Special attention must

be given to assess, according to GCF ESMF policies, the potential presence of indigenous communities in the urban intervention area.

2. Stakeholder Consultation: Convene consultation meetings, focus group discussions, and interviews with key stakeholder groups, including rural and urban communities to support the completion of stakeholder and gender assessments and to engage key stakeholders, specially rural communities, in the development of Project activities, action plans, and budgets and to contribute to the design of the Theory of Change (TOC), Logical Framework ("Logframe") and workplan, in an inclusive, transparent and participatory manner.
3. Stakeholder Consultation Summary: Compile evidence of consultations and create a summary of all consultations conducted during FP development, including gender-disaggregated information on participants, meeting notes, and key inputs received.
4. Stakeholder Engagement Plan: The Stakeholder Engagement plan will follow GCF's guidance note on designing and ensuring meaningful stakeholder engagement during implementation of GCF-financed projects.
5. Community Engagement Plan: A detailed Community Engagement Plan will be developed following GCF's guidance note on designing and ensuring meaningful rural and urban community engagement during implementation of GCF-financed projects. This Engagement Plan will be co-designed by CI, key partners, and International Consulting Firm,
6. Project design validation: Once Project design and documentation is in final draft stage, participate in a final Project validation meeting with key stakeholders to present the Project and obtain validation prior to its submission to GCF.

Gender Assessment & Action Plan (Output 2.3).

The Gender Assessment will explore and assess the differentiated vulnerabilities of men, women and those with diverse gender identities, to climate change with a focus on rural communities and the Gender Action Plan will detail how the project can address these differing needs and priorities. Gender-responsive actions and outputs will facilitate implementation of activities that promote gender equality and women's empowerment. the gender assessment should support the understanding the relationships between men, women, and those from diverse gender identities, their access to resources, their activities and the constraints they face in relation to each other. It involves examining the different roles, rights, needs and opportunities of women and men, boys and girls in the context of the project.

The Gender Action Plan will also specify performance indicators, timelines and responsibilities for implementation and a budget for implementation of activities. The plan will include provision for a full-time gender expert dedicated to the Project and tasked with implementation and monitoring (in collaboration with monitoring and evaluation staff) of the Gender Action Plan. Last, the plan will include a proposed terms of reference for the gender expert position.

The Gender Assessment should follow the requirements set out in the CI GCF Agency's ESMF and Action Plan (following GCF's format). Please refer to the GCF gender mainstreaming manual to ensure that the relevant information for the Gender Assessment and Gender Action Plans is collected and included: https://www.greenclimate.fund/node/7607

The consultants, working closely with CI and other Project partners, are responsible for completing a Gender Action Plan in the GCF template format for the Project, informed by the gender assessment and based on the Log frame and baselines that identifies actions to mitigate and/or minimize barriers to equal participation of men and women as well as opportunities to maximize the participation of marginalized groups.

The consultants will use the preparation of the gender assessment to collect data and evidence on gender issues in the sectors/(s) of intervention and the context Project planning, implementation, and monitoring. The gender-responsive baseline data should identify project beneficiaries (sex-disaggregated) and vulnerable groups, and the barriers that could prevent their participation and access to project benefits; engage with the identified beneficiaries and groups during the stakeholder engagement to validate gender baseline data and information and seek input into the design of the project to address the identified barriers for men, women, and vulnerable groups.

This assessment will include consideration of gender-based violence, sexual exploitation and other acute issues and concerns. The assessment will identify responsible entities to address gender issues in the Bogotá-Region to be included as part of the project steering and technical committees as appropriate (e.g., district secretariat responsible for women's affairs, gender focal points and experts). In addition, stakeholder engagement and consultations during project preparation will identify the needs and priorities of men and women that the Project can address. The information collected will provide insights on the challenges and opportunities presented for women and ensure that collection of information includes the needs and priorities of women and men in relation to the Project. The assessment of challenges and opportunities will also include economic and social dimensions in the local context so that the Project will be able to meet its objectives. Information collected through the Gender Assessment will be analyzed and used to identify opportunities to increase participation and access to Project benefits by both men and women, including the Project's activities that offer targeted opportunities.

The Gender Action Plan will include gender-sensitive performance indicators with sex-disaggregated targets, timelines, and responsibilities. Targets will include vulnerable groups (such as female-headed households) as beneficiaries of the Project. Targets should be based on the information collected as part of the baseline and vulnerability assessments. The consultants will also ensure full incorporation of outcomes of the gender-related studies and develop specific activities related to gender into the design of the Project, its logical framework and its funding proposal including sex-disaggregated targets and gender sensitive indicators. A budget will be developed to appropriately fund GAP activities during Project implementation.

Accountability and Grievance Mechanism (Output 2.4).

Develop and socialize an Accountability and Grievance Mechanism (AGM) with key stakeholders and partners to ensure communication channels and processes are adequate to meet the needs of all stakeholder groups effectively, including access to the AGM for all Project stakeholders and beneficiaries. The AGM needs to address CI's and GCF's grievance redress policies, and any national requirements, and must provide information on GCF's independent redress mechanism.

Community Health, Safety and Security Plan (Output 2.5).

Conduct a risk assessment and the development of mitigation and risk management interventions for identified risks to community health and safety.

Indigenous Peoples and Cultural Heritage Plan (Output 2.6).

A key element of the project is the recovery and maintenance of El Tunjo wetland (an urban wetland complex within the Tunjuelo River basin). This intervention will reconnect the wetland complex with the river and will recover its capacity to retain extra water flow of the river during extreme rainfall events, mitigating the risk of downstream flooding. Achieving this goal, however, is complicated by the variety of actors and institutions

with relationships, influence, and interests in the wetland. These relationships range from community-level commitments and participation, which have been active for over a decade, to different levels of public institutions, such as Community Action Boards, Bogotá's Department of Environment, and the city's Water Utility, which all have responsibilities for managing and caring for the wetland. However, tensions arise due to differing visions of management. These diverse visions and perceptions can lead to conflicts between the institutions and the community, highlighting the challenge of harmonizing all strategies related to the wetland. One of the stakeholders in the area is a small community self-identify as an indigenous Muisca community.

This output shall develop an indigenous peoples and cultural heritage plan to identify the potential impacts (both positive and negative) of the project on the Muisca Community and their cultural heritage, design appropriate mitigation measures where negative impacts cannot be avoided, agree upon and negotiate benefits with the community, and adhere to the Free, Prior and Informed Consent (FPIC) process. Note that if the community is living in voluntary isolation and wishes to be uncontacted, the project is required to oblige this request.

ACTIVITY 3: PROJECT DESIGN & INDICATORS

As part of this activity, the consultant will be responsible for developing the final Theory of Change (TOC) for the Project, based on CI's draft TOC, as well as the logical framework, workplan and implementation plan, including the timetable with milestones and indicators for all activities included in the Project. This work should be based on the Feasibility Study, as well as inputs from stakeholder engagement and gender-related assessments. In addition, the consultant will develop a detailed workplan and narrative that includes a summary of the implementation plan. All of the following should align with GCF's Integrated Results Management Framework and the GCF's Evaluation Operational Procedures and Guidelines for Accredited Entity-led Evaluations.

Under this activity, the consultant will develop additional documentation required to complete the GCF Funding Proposal package. This includes a map of sites, project budget, project operations and maintenance plan, inputs for the procurement plan, and the legal due diligence.

Deliverable 4: Project Design and Indicators

Overall Project Theory of Change/Logframe and specific sub-activities as appropriate. (Output 3.1).

This Output will describe the paradigm shift to be achieved by the Program as required in the GCF's Integrated Results Management Framework, and how the Program is addressing key barriers (as identified in the Concept Note and elaborated upon in the Feasibility Study). Co-benefits will also be identified as appropriate and which must be measured during Project implementation. This Output will result in a completed logical framework in the GCF template which identifies all Program Components, Outcomes, Outputs, Activities, Sub-Activities, and corresponding Deliverables.

The Theory of Change and Log frame should describe very clearly the rationale for the Project, connect outcomes, outputs, activities and co-benefits, and justify who benefits and in what ways from the Project. The ToC logically explains how the Project will implement specific activities to overcome identified barriers to achieve the desired adaptation outcomes. A narrative of the ToC should be prepared along with a ToC diagram. The narrative should clearly describe the current paradigm / systems / practices and barriers that prevent adaptation from taking place. Barriers can be social, cultural, political, economic, financial, or market based. The ToC narrative will also describe how the project will overcome these barriers to achieve desired outcomes through implementation of specific activities.

The Logical Framework will adhere to the requirements of the GCF IRMF and will be developed in close cooperation with CI and project partners / Executing Entities to ensure common understanding of the Project structure, Indicators in the logical framework should be as quantifiable as possible – some qualitative indicators are possible (as described in the GCF IRMF), but they should be limited. Means of Verification should be clear for each activity and will contribute to the M&E plan Annex 11 for the Project. A summary excel table of the logical framework will also be developed for sharing and validation with stakeholders.

The narrative should also include description of results expected from the paradigm shift against performance indicators. The Results against performance and the paradigm shift should help justify investment in the Project and feed into the Project's sustainability and exit strategies.

Develop the Project indicators, workplan and implementation timeline and milestones (Output 3.2).

This output will be based on information from the Feasibility Study, the ToC/Log frame as well as inputs from the stakeholder engagement and gender-related assessments. Indicators will include number of direct and indirect beneficiaries disaggregated by sex. Means of Verification will also be developed for all Project indicators. Indicators will be incorporated into the Project Logical Framework.

The consultant will develop a work plan, implementation timetable, and milestones for all activities included in the proposed Project. The work plan and implementation plan should include all the necessary details for implementation of the activities described in the four Components of the Concept Note. The workplan will be an internal document for the Project partners that will indicate the resources that will be needed for each activity so that the budget can be developed. The implementation timetable (FP annex 5) will be a simplified version of the workplan that includes Project milestones in the format required by GCF.

GHG Emissions Baseline Assessment (Output 3.3).

Develop a GHG emissions baseline assessment that elaborates on the climate rationale of the Project and helps inform the Options Analysis to be completed for the Feasibility Study. Climate change threats, drivers, and how those drivers impact local communities and surrounding ecosystems will be included. This work will describe the climate change context and GHG emission profile for the Bogotá-Region and each project site. Include a clear explanation of how loss and degradation of different ecosystems results in increased emissions, and how interventions to reverse these trends can result in emissions reductions. Where feasible, include data on greenhouse gas emissions and/or sequestration rates for each ecosystem identified to enable quantification of project mitigation impacts. The assessment will contribute to the stand-alone GHG emissions reduction calculation annexed to the FP. A narrative of the methodology will accompany the mitigation impact calculations (Emission Reductions) that have to be fully align with national reporting, by including the updated procedures and regulations by Colombias's Ministry of Environment.

Monitoring and impact evaluation plan (Output 3.4)

Develop the Monitoring and Evaluation Plan for the Project, including all indicators and means of verification, paradigm shift and co-benefits, periodic targets, methodology and calculations per indicator – this work will link directly to the overall Project logical framework and the Feasibility study. This output shall describe data collection methodologies including estimated timelines and detailed budgets (GCF estimates that M&E should make up approximately 5% of the Project budget). It should summarize the overall project impacts. With guidance from CI and Project partners, the consultancy will develop the M&E plan, including indicative budget at the output level for the project as Annex 11 to the FP. The M&E plan should include an analysis of options

for monitoring impacts beyond the end of the Project implementation period, for example, through existing national or regional monitoring programs. Utilizing information from the GHG emissions baseline, develop the GHG emissions reduction calculations and methodologies. In addition to the narratives produced in the feasibility assessment and Deliverable 9 above, create an excel annex showing Project emission reduction (ER) calculations across mitigation interventions (reduced degradation, on-farm interventions, etc.). The technological platform used for Monitoring Plan and Impact Evaluation should be the same used to build the decision-making platform of Project Component 4.

To accomplish Output 3.4, develop an annex that describes the adaptation beneficiary methodologies & calculations. This annex will indicate the number, location, and type of Project adaptation beneficiaries and the methodologies for these calculations. Calculating the expected adaptation benefits that will be generated by the project and expressing them in terms of direct and indirect beneficiaries. An Excel spreadsheet and the methodology narrative will be developed for the beneficiary calculation, that will also include the specific adaptation beneficiary calculation together with its detailed methodology narrative.

Implementation arrangements and co-financing (Output 3.5).

A document describing the implementation arrangements and flow of cofinancing at the Activity level will be developed. The CI Team Leader and the project partners will collectively develop the implementation arrangements and co-financing protocol. This output will also include coordinating with other similar projects (as described in the Concept Note) to identify synergies, avoid duplication and coordinate co-financing. A draft manual for the roles and responsibilities of the Steering Committee and a Technical Committee will be developed.

Adaptation beneficiary methodologies and calculations (Output 3.6)

Develop the document that describes the adaptation beneficiary methodologies calculations for both direct and indirect beneficiaries for the Bogotá-Region, including an excel format with accompanying narrative.

Operations and Maintenance Plan (Output 3.7)

Develop the Project Operations and Maintenance Plan (output 3.8) including maintenance requirements and budget for Project procured durable goods both during implementation and beyond the project period of performance - based on the GCF template and in coordination with participating partners and institutions.

Exit Strategy (Output 3.8)

Develop the narrative on the overall sustainability and exit strategies of the Project to describe how the Project interventions will continue beyond the Project implementation period. The document should be based on the project design / logical framework, budget, financial and economic analysis, operations and maintenance plan, and co-finance contributions. The narrative should be clear on how GCF funding is catalytic for future investments and justified in the Project context.

Funding Proposal (Output 3.9)

Based on the ensemble of design documents for the Project , compile the Project Funding Proposal based on GCF's Funding Proposal template in coordination with regional and local governments and partners.

Project Budget (Output 3.10)

In close coordination with CI, who will be leading budget development, government and partners, the consultant will contribute to the design and development of the project budget based on GCF template including comprehensive information and analysis to justify the cost associated with the project (budget notes, cost analysis, detailed cost breakdown).

Procurement Plan (Output 3.11)

Based on the budget, logical framework, and corresponding procurement needs, a detailed procurement plan for durable goods will be developed to support Project implementation.

Legal due diligence (Output 3.12)

The legal opinion will include information consistent with the requirements set forth in the section describing Annex 9: Legal due diligence (Regulation, Taxation, and Insurance) on pages 163-165 of the GCF Programming Manual.

Additionally, the consultant will lead the technical editing to ensure the use of high-quality referenced data to justify mitigation and adaptation needs and quantify and qualify impacts of intended mitigation and adaptation actions to ensure any maladaptive impacts are avoided. The consultant will also ensure that the final versions of the proposal documents are written clearly in English, and will coordinate with CI for technical, financial, and operational project inputs which will contribute to the funding proposal. It is finally important to mention the participation in the kick-off meeting and in regular meetings to be scheduled with CI staff and key stakeholders to ensure a timely and effective implementation of the project preparation plan.

5.1 Deliverables schedule

The deadline for execution of this consultancy is 20 months from the signing of the contract. Note that the inception report should identify milestones for the deliverables and the frequency of contact needed with CI staff and partners to ensure regular dialogue and coordination and to ensure that there is a common understanding of the expectations for each deliverable. In addition to the timelines for the draft deliverables indicated below, the Consultant should plan to provide outlines of the proposed structure and content of each deliverable to CI as early as possible to elicit feedback and guidance. Timelines for providing these outlines should be indicated in the inception report (Deliverable 1.0).

The proposed deliverable due dates are included in the table below. Earlier delivery where possible is preferred and can be indicated in the proposal timeline and/or inception report.

The delivery of the products or deliverables will be made according to the following schedule:

	Deliverable(s)	**Delivery Timeframe**	**Payment schedule**
1	Inception report	Within one month after signature of the contractual agreement	20% of the total amount
2a	Feasibility Study, outputs 1.1 to 1.6	Month 4 of consultancy	10% of the total amount

2b	Feasibility Study, outputs 1.7 to 1.12	Month 7 of consultancy	10% of the total amount
3	Environmental, social and gender studies and related plans	Month 8 of consultancy	10% of the total amount
4	Project Design and Indicators	Month 10 consultancy	20% of total amount
6	Revised content from above deliverables pending GCF feedback	Month 20 of consultancy	30% of the total amount

The reports and final documents of each deliverable should be delivered in English and in a digital format, and should contain all original working files (Word, Excel, PDF, JPG, etc.).

It is important to recall that each deliverable should be recorded as a milestone and should be presented as a draft for review and approval by the CI project and proposal writing team; the consulting team must respond to requests for revisions within 5 working days.

In addition, it should be noted that for the payment of the deliverables indicated, the work products must be approved by the CI-GCF Agency in its role as an Accredited Entity to the GCF.

6. METHODOLOGY OF THE CONSULTANCY

The Funding Proposal will be developed through the deliverables and activities described in this ToRs, and through work on implementation arrangements led by CI, funded separately.

The Consultancy Team will coordinate with CI Colombia, the Colombia government, project partners, and other stakeholders in the proposal development, and will incorporate feedback from the stakeholder engagement process, CI technical experts, the CI-GCF Agency (acting as the Project's Accredited Entity), and the GCF.

In addition to the development of deliverables, the consultant will address reviews and feedback to respond to CI, EE partners, and GCF input and make changes as requested.

7. PROPOSALS CONTENTS

Technical Proposal: The technical proposal shall include a clear conceptual and methodological framework adequate for the work to be undertaken and the products to be developed. It shall also include a workplan with activities, sub-activities, Schedule, and delivery dates. Intermediate milestones are desirable. It is recommended to use the format included in Annex 5.1 of the Request for Proposals (RFP). The overall proposal should include:

- Corporate Capabilities, Experience, Past Performance (1-4 pages). Please include descriptions of similar projects or assignments and at least three client references, especially those funded by public or multilateral donors, including the Global Environment Fund and/or the GCF.

- Letters of recommendation and other evidence of success rate (full funding proposals approved by the GCF) and satisfaction of the clients (Accredited Entities and Executing Entities) is highly desirable.

- Qualifications of Key Personnel (2-5 pages). This section should include the position title, level of effort (in days), clearly defined roles and responsibilities, and summary of skills of key personnel. CVs for key personnel should also be included as an annex to the technical proposal and will not count against the page limit

Technical Approach, Methodology, and Detailed Work Plan (1-15 pages). The Technical Proposal should describe in detail the technical approach, methodologies, and tools proposed for the project. The technical proposal should demonstrate a clear understanding of the work to be undertaken and the responsibilities of all parties involved. The detailed workplan should include all deliverables and expected timeframes.

Financial Proposal: Offerors shall use the cost proposal template (Annex 5.2 of RFP). The proponent shall present an economic proposal in US Dolars, it should be accordance with the methodological proposal and work plan and the deliverables described in this ToR. The proposal shall include all taxes applicable.

- The budget should also include sufficient Consultant time for responding to feedback from the AE and the GCF in the period following the submission of the Funding Proposal package to the GCF. Note that based on CI's prior experience with GCF project submission, the Offeror should allow for this feedback to be spread over at least 6 months from the date of submission of the proposal to GCF.

- The project has a separate, limited budget to organize a kick-off workshop, and public consultations linked to deliverable 4. Consultants may propose additional workshops with partners and beneficiaries in their technical and financial proposals that add value to the project design.

- All travel will be subject to local COVID-19 requirements and a CI travel release & waiver.

8. CONTRACT VENUE

The contract venue will be the City of Bogotá, D.C., Colombia.

9. CONTRACT SUPERVISION

The supervisor of the contract will be the Technical Director of Conservation International Colombia/or the Project Leader.

10. CODE OF ETHICS

All Offerors are expected to exercise the highest standards of conduct in preparing, submitting and if selected, eventually carrying out the specified work in accordance with CI's Code of Ethics and the Green Climate Fund's Policy on Prohibited Practices, available at https://www.greenclimate.fund/document/policy-prohibited-practices.

Conservation International's reputation derives from our commitment to our values: integrity, respect, courage, optimism, passion, and teamwork. CI's Code of Ethics (the "Code") provides guidance to CI employees, service providers, experts, interns, and volunteers in living CI's core values, and outlines minimum standards for ethical conduct which all parties must adhere to. Any violation of the Code of Ethics, as well as concerns regarding

the integrity of the procurement process and documents, should be reported to CI via its Ethics Hotline at www.ci.ethicspoint.com.

11. ANNEXES

- Annex 1: Key Deliverables Table
- Annex 2: Consultant Roles & Qualifications (minimum)
- Annex 3: GCF Concept Note "Building a Water-Resilient Bogota-Region Landscape Project"
- Annex 4: GCF PPF Application "Building a Water-Resilient Bogota-Region Landscape Project"

ANNEX 1: KEY DELIVERABLES TABLE

Activity	Deliverables	Content Areas
A1. Feasibility Study	Inception Report	• Timeline • Staffing plan • Templates for deliverables • Com1munication approach • Strategy to assure close coordination with CI for all consultations and engagement with stakeholder and project partners • Participation in kick-off meeting with CI & partners
	Feasibility Study (GCF Annex 2)	• Bogota-Region profile • Climate Change Vulnerability Assessment • Risk identification & assessment • Climate baseline analysis and report • Biodiversity baseline assessment focused on clearly land, water, biodiversity, and other natural resources characterization • Climate and Biodiversity impact indicators • Options analysis of alternatives not considered for the project. • Analysis of National and Subnational Polices and Regulatory Frameworks for water resilience • Feasibility assessment and design of proposed interventions – Components 1,2,3,4 •
	Financial and Economic Analysis (GCF Annex 3)	• Collect data needed for the financial and economic analyses. • Develop financial and economic analyses in Excel form. • Write a narrative of the financial and economic analyses

A2. ESMF Assessment & Safeguard Plans	ESIA and ESMP (GCF Annex 6)	• Desk review & primary data collection • Limited ESIA to address mitigation measures for ESS standards 2, 4, 6, and 8 and perhaps for standards 3 and 9. • Gender responsive baseline data • Develop the Community Health, Safety & Security Plan • Identify and budget activities needed to ensure that FI's safeguards processes adhere to the CI/GCF ESMF requirements. • Analysis of Alternative • Develop & socialize an accountability & grievance mechanism • Develop an Indigenous People and cultural heritage plan
	Stakeholder Consultations Summary (during FP development) Stakeholder Assessment & Engagement Plan (GCF Annex 7)	• Supervise and revise the stakeholder engagement process and plan • Gender and equity consideration included • Definition if ESS 4 related to must be activated in the urban intervention area. • Document with the compile evidence of consultations and create a summary of all consultations conducted • Stakeholder Engagement Plan • Community Engagement Plan, ensuring meaningful rural and urban community engagement during implementation of GCF-financed project.
	Gender Assessment & Action Plan (GCF Annex 8)	• Collect data needed for the gender assessment. • Identify gender-sensitive performance indicators with sex-disaggregated targets, timelines, and responsibilities. • Identify actions to address gender mainstreaming into the project and include these in the Action plan and overall project workplan
A3. Project design & indicators	Theory of Change & Log frame	• Refine ToC and develop log frame. • Project indicators • Description of expected results
	Detailed Workplan and a summary implementation plan (GCF Annex 5)	• Develop approach for implementation. • Develop a detailed, workplan with budgets, including timelines and key milestones. Sufficient detail is required to develop the project budget. • Provide a summary Implementation plan in the GCF format based on the workplan
	GHG Emissions Baseline Assessment	• Describe the climate change context and GHG emission profile for the Bogotá-Region and each project site.

		• Explain the link between land use and GHG emissions and/or sequestration rates for each high Andean ecosystem • GHG emissions reduction calculation
	M&E plan (GCF Annex 11)	• Revised targets, methodology & calculations • Recommend periodic targets per indicator. • Data collection approach per indicator
	Implementation arrangements and co-financing	• implementation arrangements and flow • cofinancing at the Activity level per partner • Directive Committee and a Technical Committee manual • Coordination documents with related projects in the region
	Adaptation beneficiary methodologies and calculations	• Adaptation beneficiary methodologies calculations for both direct and indirect beneficiaries
	Operations and Maintenance Plan	• Identify maintenance requirements and budget for Project procured durable goods.
	Exit Strategy	• Narrative on the overall sustainability and exit strategies of the Project to describe how the Project interventions will continue beyond the Project implementation period
	Funding Proposal and project budget	• Ensemble of design documents for the Project • Design and development of the project budget based on GCF template • Comprehensive information and analysis to justify the cost associated with the project
	Procurement plan inputs (GCF Annex 10)	• Identify and recommend consultant and equipment needs, including cost estimates. • Develop draft ToRs for proposed consultants
	Legal opinion (GCF Annex 9)	• Engage local law firms to issue an opinion on the legal viability of the project. • Develop narrative statements on key findings, including recommendations

ANNEX 2: CONSULTANT ROLES & QUALIFICATIONS (minimum)

Role	Profession	Experience	Skills
Team Leader	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in hydrology, or related environmental science.	At least 15 years of professional experience in developing and/or implementing projects funded by the GCF, GEF, IFC, or other multilateral donors. Experience in designing, implementing and monitoring stakeholder engagement plans that include governments, companies, local communities and Indigenous peoples, preferably related to climate-change mitigation and adaptation in South America, preferably Colombia. Preferred experience in South America working on climate change mitigation and adaptation projects, sustainable financing or environmental sustainability issues.	Excellent stakeholder engagement skills Excellent written and verbal communication skills in English and Spanish. Demonstrated analytical ability and drafting major reports.
Environmental & Social Safeguard Specialist	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in biology, ecology, environmental engineering or related science.	At least 10 years of professional experience in environmental and social safeguards management in climate-change projects, preferably with funding from a multilateral donor. Demonstrated experience in working with local communities, Indigenous peoples and vulnerable groups in South America, and	Demonstrated analytical ability and drafting major reports. Excellent written and verbal communication skills in English and Spanish.

		producing and implementing the relevant plans for GCF projects. Demonstrated experience in developing safeguards documents for projects and programs financed by GCF, GEF, or other similar funds and MDBs such as ADB, World Bank, IFC, etc Demonstrated experience in working in agriculture sector. Knowledgeable in GCF's Revised Environmental and Social Policy, Indigenous Peoples Policy, and Information Disclosure Policy."- Preferred experience in Latin America and Colombia working on mitigation & adaptation, climate change, or environmental sustainability issues.	
Gender Specialist	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in anthropology or related social science.	At least 10 years of professional experience in conducting gender analyses and developing gender action plans (indicators, baselines) and gender strategies, preferably in the context of multilateral donor safeguards. Demonstrated experience in working with local communities and vulnerable groups.	Demonstrated experience in working with local communities and vulnerable groups. Demonstrated analytical ability and drafting major reports.

		Demonstrated experience in developing gender assessments and action plans for projects and programs financed by GCF, GEF, or other similar funds and MDBs such as ADB, World Bank, IFC, etc. Knowledgeable in GCF's Updated Gender Policy. Preferred experience working in South America or Colombia on climate change adaptation, and/or environmental sustainability and vulnerable communities' issues.	Excellent written and verbal communication skills in English and Spanish.
M&E Specialist	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in hydrology, civil or environmental engineer or related science with a strong background in participatory methods.	At least 10 years of professional experience in designing large-scale sustainable production and natural resources management projects including logframes, workplans, monitoring and evaluation plans, data analysis and participatory methods. Demonstrated experience in developing projects and other deliverables listed above for projects funded by GCF, GEF, or other similar donors.	Demonstrated analytical ability, project design, and report writing. Ability to travel and demonstrated experience in undertaking independent field work in remote areas. Excellent written and verbal communication skills in English and Spanish.

		Demonstrated experience in working with government entities on climate change response and planning. Preferred experience working on climate change, and/or environmental sustainability and vulnerable communities' issues.	
Water Specialist	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in hydrology, civil or environmental engineer or related science	At least 10 years of professional experience in Integrated Water Resources Management topics and hydrological modelling. Demonstrated experience in developing projects and other deliverables listed above for projects funded by GCF, GEF, or other similar donors. Demonstrated experience in working with government and academic entities on water resources management.	Demonstrated ability on hydrological modelling and decision-making tools. Good written and verbal communication skills in English and excellent Spanish knowledge. Preferred experience in high Andean ecosystems contexts.
Environmental Economics / Financial Specialist	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in economics, finance or related science	A minimum of ten (10) years relevant professional experience in financial modeling and economic studies related to natural resource management and sustainable production.	Excellent written and verbal communication skills in English and Spanish.

		Proven knowledge of economic model, assessments and experience working in smallholder agricultural economies. Proven knowledge of watershed protection economic instruments and financial incentives in Latin América. Proven experience designing and building successful sustainable finance instruments and mechanisms,, in particular Payment for Ecosystem services in the latin American context, environmental fees and water tariffs. Proven experiences structuring and designing trust funds, endowment funds, among others.	
Ecosystem based adaptation (EBA) Specialist	Postgraduate or other advanced university degree (at least M. Sc. or equivalent) in biology, ecology, environmental engineering or related science with a strong background in high Andean ecosystems and participatory methods.	At least ten (10) years of professional experience in data analysis and participatory restoration and conservation strategies. Demonstrated experience in developing projects related to GCF, GEF, or other similar funds.	Demonstrated ability of analytical and report drafting work. Good written and verbal communication skills in English and excellent Spanish knowledge. Preferred experience in high Andean ecosystems working with vulnerable communities, climate

		Demonstrated experience in working with government entities on climate change response and planning. Extensive conceptual and practical knowledge of natural resources management in high Andean ecosystems context. Knowledgeable and experienced in IFC's Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.	change, or environmental sustainability issues.
Water Governance Specialist	Postgraduate or other advanced university degree (at least M. Sc. or equivalent) in economics, political science or related social science.	At least ten (10) years of professional experience in water governance at multi scale levels, with experience in Latin America and Colombia contexts. Demonstrated experience in developing projects related to GCF, GEF, or other similar funds. Demonstrated experience in working with multi stakeholders and multi sectors platforms.	Demonstrated ability on negotiation skills. Good written and verbal communication skills in English and excellent Spanish knowledge. Required experience in the high Andean ecosystems of Colombia
Climate Change Adaptation Specialist	Postgraduate or other advanced university degree (at least M. Sc. or	At least five (5) years of professional experience in climate change adaptation plans and or studies.	Demonstrated analytical and report drafting skills.

	equivalent) in climate change, or related science.	Extensive conceptual and practical experience of climate change adaptation strategies in high Andean ecosystems context. Experience with climate change vulnerability and adaptation studies with intercultural approaches (including high Andean rural communities).	Excellent written and verbal communication skills in English and Spanish. Preferred experience in Colombia, Ecuador or Peru, climate change, or environmental sustainability issues.
Biodiversity Specialist	Advanced degree in biology or related sciences	At least eight (8) years of professional experience conducting biodiversity/critical habitat assessments.	Previous experience collaboration with CI Colombia in the Bogota Region is desirable Preferred but not required good written and verbal communication skills in English
Conflict Management Specialist	Bachelor's degree in Human Resources, Psychology, or related field.	Certification in conflict resolution or mediation preferred. Minimum of 3 years of experience in conflict resolution.	Excellent communication and interpersonal skills. Strong analytical and problem-solving abilities. Ability to remain neutral and objective. Ability to handle sensitive and confidential information.

			Proficiency in conflict resolution techniques. Strong written and verbal communication skills.
Conservation and Restoration of High Andean Ecosystems Local Specialist	Professional degree in Biology, Ecology, Microbiology or related fields, or Forestry Engineering and related fields.	At least eight (8) years of professional experience on conservation and/or ecological restoration projects in the high Andes of Colombia, working with high mountain rural communities. Proven experience working in critical habitats, protected areas, RAMSAR sites and other ecologically sensitive areas.	Previous experience collaboration with CI Colombia in the Bogota Region is desirable Preferred but not required good written and verbal communication skills in English
Sustainable High Andean Livelihoods Local Specialist	Postgraduate or other advanced university degree (at least M. Sc. or equivalent) in agriculture, veterinarian or related rural studies with a strong background in high Andean ecosystems and participatory methods.	At least eight (8) years of professional experience in in formulation, management, and monitoring of projects related to agricultural and sustainable production systems, rural land use planning, rural extension, productive reconversion, and sustainable tourism Experience in developing projects related to GCF, GEF, or other similar funds. Experience in high Andean ecosystem. working with rural communities, environmental	Previous experience collaboration with CI Colombia in the Bogota Region is desirable Preferred but not required good written and verbal communication skills in English

		authorities, agricultural economic sectors. Experience. Experience developing plans and strategies to promote sustainable economic activities, such as tourism and agroecological products. Experience in strengthening business/administrative capacities of rural producers and commercialization strategies	
SUDS-Urban Wetlands Local Specialist	Professional degree in Civil or Environmental Engineering and related fields.	At least eight (8) years of professional experience on sustainable urban drainage or urban adaptation projects. Experience in urban wetland management and working in high-conflict environments.	Preferred experience in Bogotá´s wetland system. Preferred but not required good written and verbal communication skills in English and Spanish
Environmental & Social Safeguard Local Specialist	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in biology, ecology, environmental engineering or sociology, or related science.	Extensive experience assessing ESS safeguards, developing and implementing ESMF, conducting participatory stakeholder consultations, in climate-change projects preferably with funding from a multilateral donor. Demonstrated experience in working with local communities, Indigenous peoples and vulnerable groups in the Colombian context and in the natural resources and agriculture sector.	Previous experience collaboration with CI Colombia in the Bogota Region is desirable Preferred but not required good written and verbal communication skills in English

Gender Local Specialist	Postgraduate or other advanced university degree (at least M.Sc. or equivalent) in anthropology or related social science.	At least 10 years of professional experience in conducting gender analyses and developing gender action plans (indicators, baselines) and gender strategies in the Colombian context. Demonstrated experience in working with local communities and vulnerable groups.	Previous experience collaboration with CI Colombia in the Bogota Region is desirable Demonstrated analytical ability and drafting major reports. Excellent written and verbal communication skills in English and Spanish.

ANNEX 3: GCF CONCEPT NOTE "BUILDING A WATER-RESILIENT BOGOTA-REGION LANDSCAPE PROJECT"

Concept Note

Project/Programme Title:	Building a Water-Resilient Bogotá-Region Landscape
Country(ies):	Colombia
National Designated Authority(ies) (NDA):	National Planning Department (NDP)
Accredited Entity(ies) (AE):	Conservation International Foundation
Date of first submission/ version number:	2023-11-03 V.1
Date of current submission/ version number	2024-10-11 V.4

GREEN CLIMATE FUND

Notes

- The maximum number of pages should **not exceed 12 pages**, excluding annexes. Proposals exceeding the prescribed length will not be assessed within the indicative service standard time of 30 days.
- As per the Information Disclosure Policy, the concept note, and additional documents provided to the Secretariat can be disclosed unless marked by the Accredited Entity(ies) (or NDAs) as confidential.
- The relevant National Designated Authority(ies) will be informed by the Secretariat of the concept note upon receipt.
- NDA can also submit the concept note directly with or without an identified accredited entity at this stage. In this case, they can leave blank the section related to the accredited entity. The Secretariat will inform the accredited entity(ies) nominated by the NDA, if any.
- Accredited Entities and/or NDAs are encouraged to submit a Concept Note before making a request for project preparation support from the Project Preparation Facility (PPF).
- Further information on GCF concept note preparation can be found on GCF website Funding Projects Fine Print.

LIST OF ACRONYMS AND ABBREVIATIONS

AE	Accredited Entity
ACODAL	Colombian Association of Sanitary and Environmental Engineering
AMA	Accreditation Master Agreement
ANDI	National Association of Industrialists
ARR	Afforestation, Reforestation, and Revegetation
BAU	Business as usual
CAR	Regional Autonomous Corporation of Cundinamarca
CI	Conservation International
CN	Concept Note
CONPES	National Council for Economic and Social Policy
CRA	Sanitation Regulation Commission
DANE	National Administrative Department of Statistics
DNP	National Planning Department
EAAB	Bogotá Aqueduct and Sewerage Company
EBA	Ecosystem-Based Adaptation
EE	Executing Entity
EMP	Environmental Management Plans
ENSO	El Niño-Southern Oscillation
FIAB	Environmental Investments in the Bogotá River Basin Fund
GCF	Green Climate Fund
GDP	Gross domestic product
GEF	Global Environment Facility
IDB	Interamerican Development Bank
IDEAM	Institute of Hydrology, Meteorology and Environmental Studies
IDIGER	District Institute of Risk Management and Climate Change.
INVEST	Integrated Valuation of Ecosystem Services and Tradeoffs
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
MinAmbiente	Ministry of Environment and Sustainable Development
MVCT	Ministry of Housing, City and Territory Development
NBS	Nature-Based Solutions
NDA	National Designated Authorities
NDC	Nationally Determined Contribution
PAC	Climate Action Plan
PES	Payment for Ecosystem Services
PIGCCS	Comprehensive Sectoral Climate Change Management Plan of MVCT
PNACC	Climate Change Adaptation Plan
PNGIRH	National Policy for the Comprehensive Management of Water Resources
PNGIBSE	National policy for the comprehensive management of biodiversity and its ecosystem services
POMCA	Management Plans for Hydrographic Basins
RAMSAR	Ramsar Convention on Wetlands
RAP-E	Administrative and Special Planning Region

RCP	Representative Concentration Pathway
RNSC	Civil Society natural reserves
SDA	District Secretary of Environment
SUDS	Sustainable urban drainage system
USAID	US Agency for International Development
UNDP	United Nations Development Program
TCNCC	Third National Communication on Climate Change
TOC	Theory of change
VASB	Water Supply and Basic Sanitation Sector
WRI	World Resources Institute

A. Project/Programme Summary (max. 1 page)			
A.1. Project or program	☒ Project ☐ Programme	A.2. Public or private sector	☒ Public sector ☐ Private sector
A.3. Is the CN submitted in response to an RFP?	Yes ☐ No ☐ If yes, specify the RFP: _____	A.4. Confidentiality[1]	☐ Confidential ☒ Not confidential
A.5. Indicate the result areas for the project/programme	Mitigation: Reduced emissions from: ☐ Energy access and power generation ☐ Low emission transport ☐ Buildings, cities and industries and appliances ☐ Forestry and land use Adaptation: Increased resilience of: ☒ Most vulnerable people and communities – 50% ☒ Health and well-being, and food and water security – 40% ☐ Infrastructure and built environment ☒ Ecosystem and ecosystem services – 10%		
A.6. Estimated mitigation impact (tCO2eq over lifespan)		A.7. Estimated adaptation impact (number of direct beneficiaries and % of population)	Direct beneficiaries: • 467,964 • 4.9% of Bogotá-Region population Indirect beneficiaries: • 9,055,663 • 95.1% of Bogotá-Region population • 19.7% of the Colombia's population
A.8. Indicative total project cost (GCF + co-finance)	USD 92.0 million	A.9. Indicative GCF funding requested	USD 73.0 million
A.10. Mark the type of financial instrument requested for the GCF funding	☒ Grant ☐ Reimbursable grant ☐ Guarantees ☒ Equity ☐ Subordinated loan ☐ Senior Loan ☐ Other: specify_____		
A.11. Estimated duration of project/ programme:	a) disbursement period: 6 years b) repayment period, if applicable:	A.12. Estimated project/ Programme lifespan	25 years
A.13. Is funding from the Project Preparation Facility requested?[2]	Yes ☒ No ☐ Other support received ☐ If so, by whom:	A.14. ESS category[3]	☐ A or I-1 ☒ B or I-2 ☐ C or I-3
A.15. Is the CN aligned with your accreditation standard?	Yes ☒ No ☐	A.16. Has the CN been shared with the NDA?	Yes ☒ No ☐
A.17. AMA signed (if submitted by AE)	Yes ☒ No ☐ If no, specify the status of AMA negotiations and expected date of signing:	A.18. Is the CN included in the Entity Work Programme?	Yes ☒ No ☐
A.19. Project/Programme rationale, objectives and approach of programme/project (max 100 words)	The project area, spanning over 600ha, encompasses the city of Bogotá and 21 neighbor municipalities. The region is home to 19.7% of Colombia's population and contributes 26.9% to the country's GDP. Such high concentration of population and industrial productivity located along 1.000 km of mountainous winding roads is explained largely by the historical availability of clean freshwater. For centuries, this has been one of the main competitive advantages of this remote landscape. However, urban and rural populations		

[1] Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy (Decision B.12/35) and the Review of the Initial Proposal Approval Process (Decision B.17/18).
[2] See here for access to project preparation support request template and guidelines
[3] Refer to the Fund's environmental and social safeguards (Decision B.07/02)

	are facing climate impacts such as less reliable water supply from changing precipitation increased risk of flooding and wildfires due to rising temperatures particularly in high Andean ecosystems such as paramos. Since January 2024, Bogota and neighboring municipalities have been enduring the first-time water rationing programme due to low water storage levels in the water supply system. Urban flooding in Bogota, once frequent until a flood protection dam was built, is becoming a threat again as recent extreme rainfall events challenged the capacity of the dam. These impacts are threatening the wellbeing of 20% of the country´s population, almost one third of Colombia's GDP and, ultimately, the financial stability of the country. The Bogotá-Region project will serve as a catalyst for transforming the water sector in Colombia's central region at a critical moment in the nation's history in which people, the economy and industry are threatened by the decrease in water availability and increasing water-related risks. The project aims at making a paradigm shift in water security by re-thinking and re-defining economic and financial solutions that will enable long-term sustainable EBA investments in the territory. This initiative will use GCF funding to build and test financial opportunities, science-informed systems and governance structures to implement, scale up and sustain science-based, locally rooted adaptation interventions and well-managed integration of grey-green infrastructure in the Bogotá region, overcoming barriers to financing water security and ecosystem protection. Thus, leading to an increased adaptive capacity and strengthened resilience in urban and rural populations in the Bogotá Region. The project aims to catalyze climate innovation in IWRM by a) mainstreaming ecosystem-based adaptation (EBA) measures and risk based decision-making into the water sector, such as effective conservation, restoration and management of high mountain ecosystems (172,499 ha), urban forests and wetlands; b) improving the adaptive capacity of highly vulnerable rural communities (467,964 direct beneficiaries) by supporting climate-resilient livelihoods (10,500 ha); c) building and strengthening local and regional IWRM and risk management governance and establishing financial mechanisms to ensure long-term sustainability, and d) building a science-based decision-making platform to forecast climate-related hazards and monitor EBA effectiveness to enhance water security and mitigate flood and drought risk. This Project has been prioritized by the Colombian Government and it is included in Colombia's GCF Country Program. Local Governments and authorities of Bogota and Cundinamarca, and regional and local stakeholders such as the CAR, CRA and ACODAL have backed up the project and participated in its conceptualization. The ANDI will lead private sector involvement and co-finance to the financial mechanisms developed through the project. Furthermore, CI is partnering with Fondo Acción, a private Colombian Fund and a GCF DAE, who will act as an EE during the project implementation. CI has been working continuously for over 15 years in the Bogotá Region landscape, generating results, building knowledge, lessons learnt, and stakeholders trust, which are the basis for the envisioned project. The project supports Colombia's climate and development goals and scales up two successful pilot exercises from two concept-proof GEF projects lead by CI. This project will contribute to the Updated Strategic Plan's targets in 6 strategic priorities: Ecosystems, Food, Infrastructure (using nature-based solutions), Locally led Adaptation, Innovation and Market Creation, and Green Finance.

B. Project/Programme Information (max. 8 pages)

B.1. Context and baseline (max. 2 pages)

REGIONAL CONTEXT

1. The Bogotá-Region Landscape is in the eastern region of the Andean Mountain chain and encompasses a 606,000-ha landscape distributed as this: urban and industrial areas (6.2%), intensive productive areas (30.4%), sustainable-productive areas (6.1%), natural and semi-natural forests and paramos (36.4%), ecosystem connectivity areas (3.5%) and key buffer areas with a potential for ecosystem restoration (17.5%) (Figure 1). The Bogotá-Region Landscape houses 19.7% of Colombian inhabitants[4] (8.7 million in Bogotá and 772,000 in the 21 surrounding municipalities). Furthermore, 41% of the national industry is concentrated in this area (including five free trade zones), contributing 26.9% to the national GDP (Annex 1). Livestock farming (39.3% of the productive

[4] DANE, 2018

land) and agriculture (23,6% large-scale potato and 6% cultivation of maize, beans, and some fruits) are the rural population's primary income sources.

2. The Bogotá-Region Landscape has three main types of high mountain ecosystems: cloud forests, wetlands, and paramos. About paramos, the landscape has four main complexes (Chingaza, Sumapaz, Guerrero, and Guacheneque) (Figure 1), which play a significant role in providing vital ecosystem services[5], acting as natural water reservoirs, capturing approximately 40% of horizontal rainfall[6], and storing precipitation in the form of peatlands and wetlands. This water storage capacity is crucial for regulating water flow and maintaining a steady supply of freshwater downstream, contributing to the provision of clean drinking water, irrigation for agriculture, and support for aquatic ecosystems. Additionally, the unique vegetation structure of paramos acts as a natural barrier against soil erosion, reducing the risk of landslides and maintaining soil fertility. Paramos also play a critical role in carbon storage and climate mitigation, with a potential of 46 to 238 tons/ha of storage of organic carbon in the soil, depending on the biophysical conditions[7]. In high mountain areas, the alternating between large-scale potato production and milk production often results in natural paramo vegetation removal.

Climate Change vulnerabilities and impacts in the Bogotá-Region Landscape.

3. Colombia is recognized as one of the most water-rich countries in the world and, simultaneously, one of the most vulnerable nations to climate change, ranking 28th in the 2021 Global Climate Risk Index.[8] Climate change scenarios for the Bogotá-Region Landscape indicate an overall increase in temperature. According to Colombia's Third National Communication on Climate Change (TCNCC)[9] and an effort to downscale climate change scenarios to the Bogotá-Region Landscape scale[10], temperatures are projected to increase by 1-2º C for 2011-2040, between 2-3 ºC for 2040-2070 and 2-5 ºC for 2070-2100 (See Figure 2a and Annex 2). Increasing mean monthly temperatures can reduce 39 to 52% of the current paramo extent in Chingaza National Park unsuitable for these ecosystems during the dry season[11]. Similar tendencies are expected in other paramos across the whole region, which will impact the water supply in Bogotá that comes from regional ecosystems. Rising temperatures can also lead to more frequent and intense heat waves, mainly in Bogotá City and the primary urban centers of the region, which can increase water demand for irrigation and domestic use and impact human health, infrastructure, and agriculture.[12]

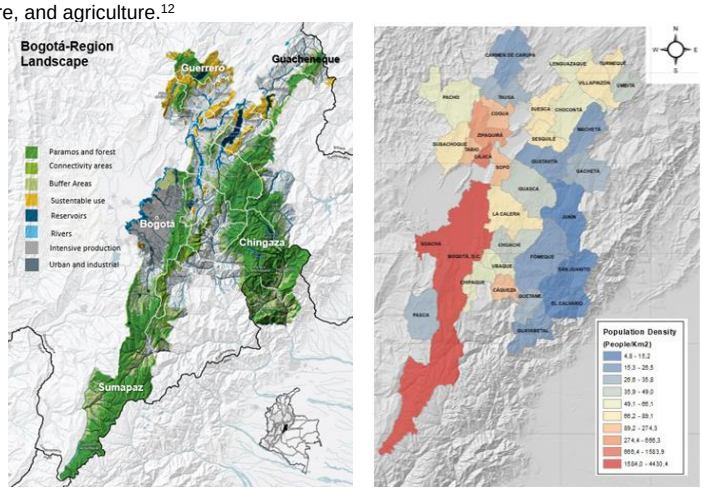


Figure 1. (a) Location of the Bogotá – Region Landscape (b) Population density

4. Regarding rainfall, the climate change scenarios show significant regional variability. Although in the Bogotá-Region Landscape, a wet climate is dominant, drought periods will increase. Currently, drought-related conditions are approximately 2.2 times more frequent than in previous years. In the East and some areas of the Chingaza paramo, a decrease between 10% and 20% in rainfall is expected. This trend of decreasing precipitation is related to the interplay between the paramo ecosystems of Chingaza and the moisture transported through "flying rivers"

[5] Sarmiento & León, 2015
[6] Cárdenas, 2016
[7] IDEAM, 2022
[8] Eckstein et al., 2021
[9] IDEAM et al, 2015
[10] Armenta and Dorado, 2015
[11] Cresso et al., 2020
[12] IDEAM, 2012.

originating in the Amazon, which have undergone alterations due to high deforestation rates. Declines in rainfall will have serious consequences for wetlands and water springs or rivers and streams that supply rural aqueducts and reservoirs, particularly during the dry season, which can lead to water scarcity, social conflicts, and impacts on the agriculture, energy, and industrial sectors[13].

5. Notwithstanding the above, in other parts of the Bogotá-Region Landscape, precipitation will increase by up to 40%, for example, in the upper basin of the Bogotá River and by 10% in the northern zone of Sumapaz when compared to the reference period of 1976-2005 (See Figure 2b). The projected increase in precipitation will trigger devastating disasters related to more frequent and intense flooding and landslides in the Bogotá-Region Landscape, but could also become an alternative to water supply, if ecosystems can manage the excess rainfall without collapsing.

Impacts of climate change on current and future water security

6. A comprehensive study conducted by Conservation International (CI) in 2020 examined the complex interactions between temperature and precipitation change, land use and natural cover changes to assess water availability in the region[14]. The analysis of water yield changes (l/s/km2) under the RCP 6.0 scenario for the period 2011-2040 concluded that most areas will have increased precipitation, except for the Sumapaz river basin with an anticipated 6% decrease, and the lower Guatiquía and Guayuriba river basins (the main water source of the Chingaza water System) which are expected to face a significant decrease of up to 40% (See the bright red area in Figures 2b and 4a)., These reductions could become more critical if land-use changes continue to intensify[15], including paramo reduction due to climate change. In contrast, the upper basin of the Bogotá River is projected to experience an increase in surface water availability ranging from 20% to 40%. In the urban context, the Tunjuelo River basin, a former source of urban flooding until a flood control dam was built, is anticipated to experience a medium-term increase of 22% in water yield (see Annex 3 for locations). These projections, however, are subject to various uncertainties and the effectiveness of adaptation measures over time.

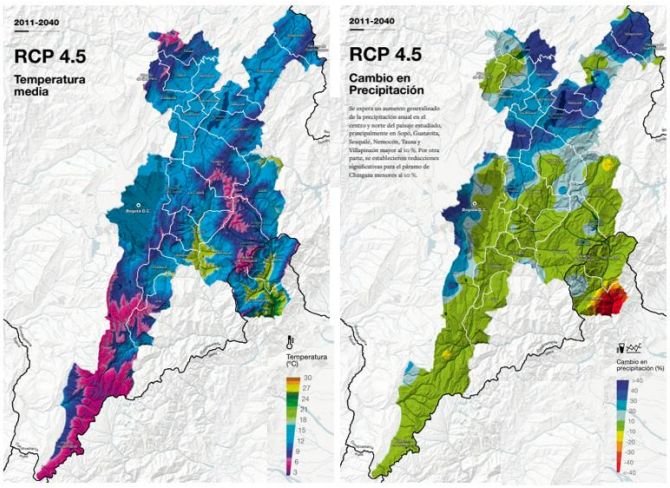


Figure 2. a). Projected temperature variation under the RCP 4.5 scenario. b). Percentage change in projected precipitation under the RCP 4.5 scenario for the period 2011-2040 (Annex 2).

7. As the climate changes, climate-related disasters are likely to continue, exacerbating existing vulnerabilities in Colombia. According to the Bogotá Watershed Management Plan[16], vulnerability to water scarcity is a significant concern in the Bogotá River basin, with 74% of the sub-basins exhibiting very high or high vulnerability.

8. The water system in the Bogotá-Region Landscape spans five interconnected watersheds that encompass an extensive area of 606,000 ha. While eighteen municipalities have their own water supply systems that rely on local water sources, A single utility, the Bogotá water utility company (EAAB), supplies water to Bogotá and four municipalities (95.9% of the population in the Bogotá-Region). EAAB receives water from three independent

[13] Armenta, 2015
[14] Restrepo, 2020
[15] Restrepo, 2020
[16] CAR, 2019.

systems: the Chingaza system that provides 70% of the water, the North system, associated to the Bogota River, that provides 25% of the water, and the South system, associated to Sumapaz and Tunjuelo river, that supplies 5% of the water. As presented above, climate change scenarios anticipate substantial precipitation reduction in the main water basins that feed the Chingaza System, putting 20% of the population of Colombia at risk of water shortage. In fact, throughout all 2024, the population of Bogota had to endure water rationing for the first time due to low levels of water storage in the Chingaza System. For a comprehensive understanding of the region's water supply infrastructure, refer to Annex 1, which provides a detailed description of the systems and their functioning.

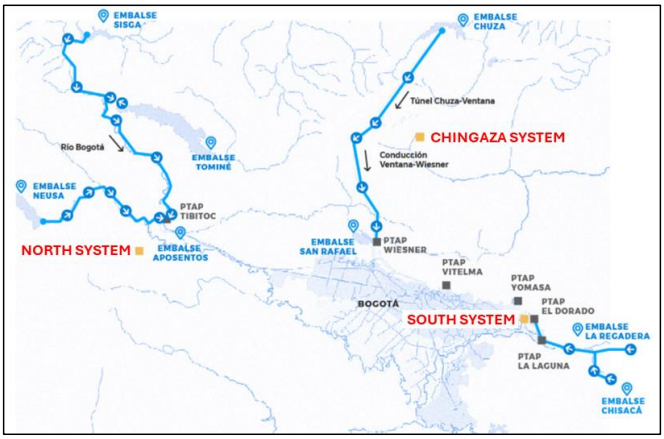


Figure 3. Water supply systems of the Bogota water utility (EAAB)

9. Climate change also has a significant impact on the water security of the most vulnerable rural communities not connected to the main water system. The rural population (4.1%) relies on 348 small rural aqueducts, as well as direct access to surface water from nearby water stream. Rural water supply systems share similar adaptation needs with urban systems but face additional challenges due to their dependency on single and small water sources making them more vulnerable to climate change. Water scarcity, deteriorating water quality and increased variability in water resources challenge the capacity of rural aqueducts to meet the growing demands of these communities. The insufficient access to safe and reliable water sources not only affects the household activities but also hampers agricultural productivity and the overall well-being of rural livelihoods.

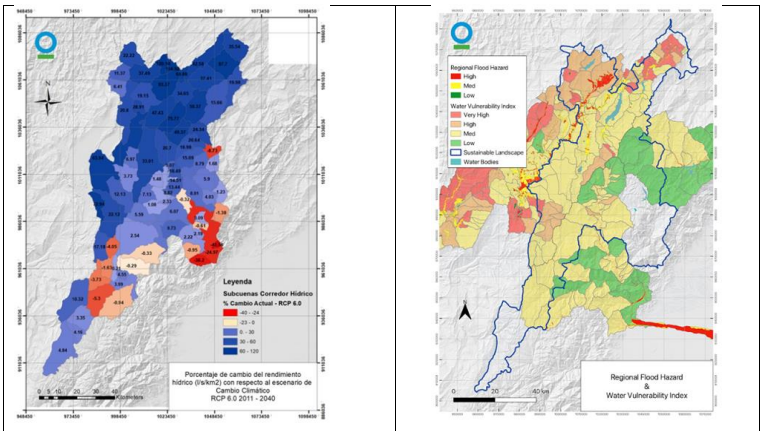


Figure 4. (a) Percentage change in water yield in the RCP 6.0 scenario for the period 2011-2040 Impacts of climate change on biodiversity (b) Hazard exposure

10. In order to properly articulate the climate-water nexus, the focus of the project will be on two climatic hazards: drought and floods. Colombia is one of the countries with the highest vulnerability to drought, according to models that integrate social, economic, and infrastructural factors proposed by the United Nations International Strategy

for Disaster Risk Reduction. Concerning flood risk, Colombia, is one of the countries expected to experience a significant increase in flood hazard due to climate change, coupled with high vulnerability (IPCC, 2022, WG2 Chapter 4). Substantial investments and adaptation measures are crucial in many regions of the country, including the Bogotá-Region. Colombia's third national communication on climate change, vulnerability and risk indicate that most of the Bogotá-Region landscape faces high and very high-risk levels for water security and biodiversity. There is also an increase in the number of reported flood events over the last century, and an increase in mean temperature compared to the baseline of 1985-1990 (IDEAM, 2017).

11. Climate change has also been identified as a key driver of ecosystem and biodiversity loss in the paramo ecosystems of Colombia.[17] These unique and highly sensitive high-altitude ecosystems are experiencing significant changes in temperature, precipitation patterns, and cloud cover due to climate change. These alterations directly impact the hydrological cycle, soil moisture, and the availability of water resources critical for paramo species. As a result, shifts in species distributions, loss of habitat, human-wildlife conflicts, and increased vulnerability to invasive species and diseases are observed. The paramo ecosystems and high Andean forests also have a high degree of exposure to wildfires in the dry season and high temperature conditions, especially in the upper watershed of the Bogotá River, and the Eastern Hills of Bogotá City. The loss of natural ecosystems due to wildfires directly affects the capacity of the watershed to provide water regulation and quality services. This can have significant consequences. The loss and degradation of these high Andean ecosystems linked to the water cycle has therefore contributed to the decline in water regulation, desiccation of wetlands, loss of surface water and groundwater recharge areas.

12. Studies indicate a gradual decrease of paramo areas, particularly in the Guerrero zone[18] (See Figure 1). Analysis over time reveals a significant loss of ecosystems between the 1940's and 1950's, resulting in up to 50% decline in high Andean forests in some municipalities. Additionally, between the 1960's and 1970's, there was a 45% conversion of paramo into potato cultivation. The expansion of agricultural frontiers, driven by both climatic and non-climatic challenge, has led to the fragmentation of ecosystems, resulting in the loss of ecological functionality, and poses risks to biodiversity and the provision of ecosystem services. The depletion of high Andean ecosystems and soil degradation directly impact water retention, storage and availability leading to decreased water quality, increased surface runoff and reduced groundwater recharge – which are further exacerbated by climate change.[19]

Impacts of climate change on rural livelihoods and urban areas

13. In the high Andean ecosystems of the Bogotá-Region Landscape, rural communities heavily rely on natural resources and ecosystem services to sustain their livelihoods, including agriculture, livestock, and other natural resource-based activities (For details refer to Annex 4). High vulnerability and low resilience of rural communities to climate change are closely tied to their heavy reliance on natural resources, small area properties (between 1 – 5 ha), limited capacity to adapt financially and institutionally, prevalent poverty rates and absence of social and economic support mechanisms. Changing climatic conditions disrupt traditional farming practices and rural cultural heritage, threaten traditional knowledge systems, limit opportunities for sustainable economic development, reduce crop yields and negatively affect livestock productivity, ultimately compromising food security and income generation for rural households. Extreme weather events, such as droughts and floods, exacerbate risks through crop losses and infrastructure damage. As a result of the above, most of the municipalities within the Bogotá-Region Landscape report high vulnerability to climate change (Figure 4a) according to the results of the GEF Project co-led by CI in 2020.[20]

14. The Bogotá-Region Landscape population is concentrated in lower basin areas, including the city of Bogotá and 21 surrounding municipalities. In contrast, the upper basin areas are sparsely populated and rich in protected areas and vital ecosystems. Rural communities, most vulnerable to climate change, reside in the mid-basin regions, heavily reliant on agriculture and livestock production, particularly milk and potatoes, with droughts causing losses in production and high rainfall causing supply surplus and consequently low market prices. Lower market prices often push rural families to expand land holdings, driving them towards upper basin regions with fertile land. This intricate interplay between climate change, rural production systems, and land use dynamics underscores the pivotal role of ecosystem-based adaptation strategies and alternatives sources of income not dependent on extensive agriculture. These strategies are crucial not only for enhancing water security but also for livelihoods security, and for flood and drought mitigation within the region.

[17] Cresso et al, 2020.
[18] IAvH, 2017.
[19] Restrepo, 2020.
[20] Bejarano et al. 2022

15. Rural communities in the Bogotá-Region Landscape are also particularly vulnerable to the pressures of changing land use, including the high demand for housing, second homes and rural recreation from the urban population in Bogotá. Between 2021 and 2022, the number of tourism service providers in Bogotá has more than doubled, indicating a significant increase in demand that extends to the surrounding area.[21,22] This increases pressure on the forested areas and risk of gentrification, but also presents an opportunity for new sources of income and diversification of livelihoods. The hurdle is the lack of mechanisms to integrate local communities into the tourism value chains, especially in territories with unique environmental and ecological values.[23] Integrating local communities in this promising and expanding value chain is an adaptation opportunity to strengthen livelihoods while decreasing their dependency on natural resources impacted by climate change.

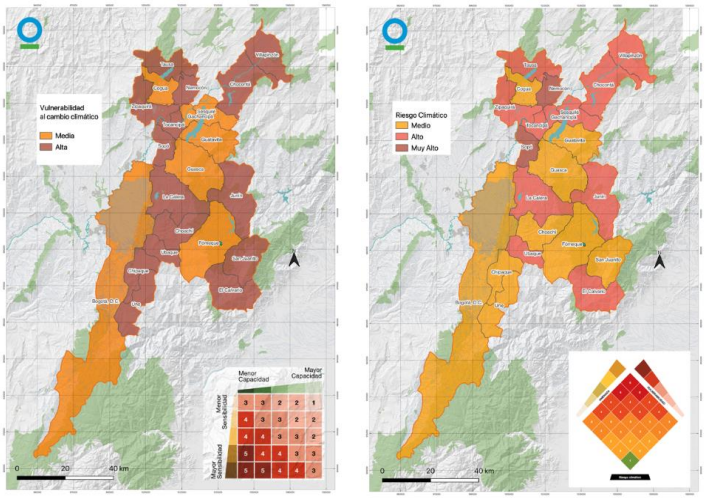


Figure 5. a). Climate change vulnerability index. b). Climate risk Bogotá – Region Landscape.

16. The Bogotá Climate Action Plan, identified as urban climate-related hazards threats such as floods, landslides, wildfires, avalanches, and heat islands[24]. These phenomena have a higher incidence in the Eastern Hills and the southern zone of the city. The middle and lower basin of the Tunjuelo River is particularly vulnerable and with a high concentration of population[25], with certain areas exceeding a density of 40,000 inhabitants per square kilometer, placing Bogotá among the top 40 most densely populated cities in the world[26].

17. The economic impact of floods in the city of Bogotá between 2002 and 2015 amounted to $20,185,078 US dollars according to District Institute for Risk Management and Climate Change of Bogotá[27], with the Tunjuelo River urban area being one of the most vulnerable. Flood risk scenarios for the city of Bogota conclude that Tunjuelo River flood risk covers an area of approximately 352.4 hectares of urban built-up areas with 250,825 people (see Annex 3 on estimation of beneficiaries).

Relation between climate change, water security and land use change

18. In 2020, CI conducted a study to assess the impacts of different land use covers on water yield and carbon content in the Bogotá-Region Landscape.[28] The results show paramo cover, high Andean Forest, and silvopastoral systems to have the highest correlation between water yield and carbon content (Figure 5). Based on this, the study highlights that conservation and restoration of high Andean ecosystems and sustainable production practices are effective ecosystem-based approaches to address climate change and enhance water resilience in the Bogotá-Region Landscape.

[21] CCB, 2021.
[22] MINCIT, 2023.
[23] MINCIT, 2020.
[24] SDA, 2020
[25] SDA, 2020
[26] DANE, 2018
[27] IDIGER, 2015
[28] The study was conducted as part of the “Adaptation to Climate Change in High Andean Mountain GEF Project” by CI and Javeriana University.

19. Furthermore, the water benefits associated with changing natural land cover in the Bogota-Region landscape watersheds have been assessed through the development of sophisticated hydrological modelling to estimate the impact of restoration projects and good agricultural practices. The model, developed by a USAID-funded project in 2022, demonstrates a direct relationship between the percentage of EBA intervened areas in the watershed and the increase in water availability, due to higher evapotranspiration from natural land covers contributing to greater feedback into the hydrological cycle. The average conclusion for 38 sub-basins indicates that when 70% of a basin's area is EBA intervened, the flow rate per hectare increases by 0.015 liters per second, providing improved water security for vulnerable communities and rural aqueducts (For details refer to Annex 5)[29]. The models also demonstrated a direct relationship between the percentage of intervened area in a basin and an increase in the basin's capacity to retain and slowly release water during low and high precipitation seasons, reducing floods and droughts hazards. The analysis concluded that EBA intervening 18% of the Bogota-Region basin's area its water regulation index would (capacity to retain and slowly release water during dry and wet seasons) increase by 0.1, which is sufficient to change the category of the index from Medium to High retention.

Climate risks, mitigation, and adaptation needs

20. Droughts and floods have been identified as the primary climate change risks in the region, with water availability for supply systems being the main vulnerability. Efforts to build resilience through increased water efficiency and reduced non-revenue water have been successful in the Landscape. Bogotá, for example, has achieved a per capita average water consumption of 76 liters per day and a non-revenue water index of 38%. The Water and Sewerage Company of Bogotá (EAAB) consistently includes investments for reducing water losses in its master plan, while the city maintains an ongoing campaign to reduce per capita water consumption. However, efforts to address and strengthen watershed water supply remain limited.

21. An effective approach to building resilience in the region for both water supply and flood control is to increase and recover the capacity of water production and regulation in watershed ecosystems through ecosystem-based adaptation (EBA). This method will strengthen green infrastructure to restore the ability of landscapes and communities to absorb shocks, improve water regulation, supply, and quality for existing grey infrastructure, and address flood risk at local and regional levels.

22. Studies conducted by Conservation International (CI) in the Bogotá-Region Landscape have demonstrated that restoration of high Andean ecosystems reduces surface runoff[30] and increases soil quick-flow, enhancing the watershed's flood buffering capacity[31]. This restoration also reduces the risk of flash flooding and suggests a reduction in soil erosion and improved water quality[32]. Local communities' knowledge of suitable tree species for soil and water conservation makes collective tree-planting an effective option to increase the watershed's buffering capacity.

23. Maintaining ecosystem integrity provides numerous direct and indirect benefits, enabling the ecosystem to withstand stresses and disturbances such as floods, drought, and disease. This increased capacity enhances the environment's climate resilience potential. By adopting EBA strategies, the region can address both water supply and flood control challenges while simultaneously improving overall ecosystem health and resilience[33]

24. Effective EBA measures options for the Bogota-Region landscape include those assessed in 2021 under the Adaptation to Climate Change in High Andean Mountain GEF Project. The effectiveness of a portfolio of nature-based solutions (NBS) implemented in the GEF Project was assessed. All of them contribute to recover the functions and services provided by the intervened ecosystems, and to increase carbon sinks or reduce deforestation (See Annex 7). The first NBS is the restoration of degraded land in high mountain areas, which includes passive natural regeneration, active restoration in degraded land, and active recovery through enrichment. The second NBS is the rehabilitation of sustainable production systems, which improves agricultural production through the association of crops and pasture with forest species, including agroforestry systems and silvopastoral systems.[34]

25. Additionally, the GEF Project undertook a study to assess the potential of implementing EBA measures such as conservation, restoration, and sustainable management in the Bogota-Region landscape to contribute to water-

[29] Castillo, E., 2022
[30] Castillo 2022
[31] Since local communities have useful knowledge of selecting tree species that are suitable for soil and water conservation collective tree-planting becomes one of the options to increase the watershed's buffering capacity.
[32] https://doi.org/10.1016/j.ecoser.2015.07.002
[33] UNESCO (2015) Transboundary water governance and climate change adaptation: International law, policy guidelines and best practice application https://unesdoc.unesco.org/ark:/48223/pf0000235678
[34] Blanco, J. 20221.

resilience. The study recommended that out of the 606,000 hectares comprising the Bogotá-Region Landscape (See Figure 1); i) 220,366 hectares should be strictly conserved; ii) 127,000 hectares should be under a low impact or restoration approach; iii) 36,577 hectares are suitable for sustainable production systems; and iv) the remaining 222,000 hectares were either urban settlements or intensive agricultural areas (Table 1, see Annex 1 for detail information).

Table 1. Land use potential for a water-resilient sustainable landscape (See Annex 1)

Land Use	Percentage (%)	Hectares (ha)
Paramos and forest + Connectivity area	44,8	271.787
Buffer Area	12,5	75.612
Sustainable use	6,0	36.577
Urban wetlands and forest	0,2	1.427
Natural and rural area (potential intervention)	63,6	385.403
Intensive production	30,4	184.452
Urban and industrial	6,0	36.145
High intervine area (no suitable for interventions)	36,4	220.597
Bogotá - Region Landscape (Total area)	**100**	**606.000**

26. These results complement the USAI-Funded analysis previously mentioned which concluded that EBA intervening 100.000ha of the Bogota-Region basin's area would increase its water regulation index (capacity to retain and slowly release water during dry and wet seasons) by 0.1, sufficient to change the category of the Region from Medium to High retention.

27. Finally, a more recent joint effort between the World Resource Institute (WRI), EAAB and CI, with a published report in 2023 (See annex 6), showed that investing in sustainable agriculture and ecological restoration in the upper basin of Bogotá River could yield significant cost savings for Bogotá's public water utility through sediment and nutrient control. Using WRI's Green-Gray Assessment methodology and the Integrated Valuation of Ecosystem Services and Trade-offs (InVEST) sediment and nutrient models, this report found that targeted investments on 2,460 hectares representing 2% of the basin would require US$5.26 million and generate undiscounted benefits of US$44.6 million over 30 years. Benefits result from avoided water treatment costs in energy, chemical products, and depreciation. These results support the financial viability of green infrastructure to complement traditional grey infrastructure for water management and security in the Bogotá-Region Landscape. These results are a milestone for water management in the country and are being used locally to catalyze institutional collaborations between key stakeholders to seize opportunities for green infrastructure investments, identify local strategies for implementation and explore financing sources and opportunities in a growing climate funding context.

28. Sustainability, replication and expansion of EBA interventions is required to consolidate adaptation and resilience in the region. This requires robust financing sources, instruments and mechanisms, as well as operational mechanisms to deploy resources and implement interventions on the ground.

29. Systematic monitoring of key variables in the water cycle and hydrologic modelling in the Bogotá-Region is fundamental for deepening our understanding of the effects of ecosystem-based adaptation (EBA) on water regulation and availability. This monitoring is also crucial for supporting scientifically informed decision-making. While the conclusions of the previously cited studies align with current knowledge and provide strong support for field interventions, ongoing monitoring and modelling of key variables in the Landscape will allow for a deeper understanding of the systemic processes. This, in turn, will enable more accurate forecast modelling and, consequently, better decision-making. Additionally, a comprehensive monitoring and modelling system will help assess the impact of the Project's field interventions, providing valuable data on the effectiveness of EBA strategies in the region.

30. Strengthened regional governance is essential to align the interests and resources of government agencies at national, subnational, and local levels. Coordinated efforts will lead to faster and more cost-effective results in managing ecosystems and watersheds. Currently, each government agency produces its own strategy for managing the ecosystems and watersheds within its territory. This approach sometimes results in duplication of efforts and occasionally leads to contradictory actions. More importantly, it fails to establish shared regional priorities that all agencies can contribute to and benefit from. While regional governance bodies such as RAPE (Regional Administrative and Planning Special) and the Regional Interinstitutional Water Committee (Mesa Interinstitucional del Agua) exist, a decision regarding the most appropriate governance structure is crucial. This decision should consider factors such as legitimacy, reception by authorities, and the ability to make binding decisions. Establishing such a governance framework will significantly enhance water resilience in the region.

31. A crucial element in enhancing regional water resilience is the identification and development of sustainable, climate-resilient economic alternatives for rural communities currently dependent on unsustainable productive activities. While EBA often presents a win-win solution, benefiting both rural communities reliant on ecosystem services and urban populations that receive drinking water from these ecosystems, this is not always the case. When existing productive activities are barely profitable or generate significant environmental impacts that cannot be mitigated, sustainable and climate-resilient economic alternatives as part of EBA interventions become essential.
32. Conventional production systems in the region, such as potato farming and dairy production, are highly vulnerable to climate change. Moreover, livestock farming has transformed critical ecosystems like wetlands, paramos (high-altitude Andean ecosystems), and riparian zones into pastures. These land changes, coupled with contamination from livestock waste and wastewater, poses a significant threat to ecosystem integrity, water conservation, and water quality.Potato cultivation is particularly prevalent in the region, with approximately 21% of Colombia's potato production occurring in the Bogotá-Region Landscape, often encroaching on paramo areas. Climate change models suggest that shifts in precipitation patterns could lead to lower yields, while increased temperatures may result in more pests and diseases. These impacts could force dependent families to expand their agricultural frontiers, further intensifying the impact of potato production in vulnerable areas such as paramos.

ROOT CAUSES AND IDENTIFIED BARRIERS

33. The Bogotá–Region Landscape project is designed to strengthen water security and mitigate water-climate related hazards by advocating for nature-based solutions as a cost-effective strategy for climate change adaptation. Water security represents a critical nexus of both climatic and non-climatic challenges, demanding a supportive political framework, innovative and integrated approaches to water management, restorative and regenerative measures for economic development, and a steadfast commitment to proactive planning and investment for climate change resilience and financial mechanisms that to capture the economic value the water security and resilience services provided by ecosystems.

34. **Land use related:** Land degradation and transformation of strategic ecosystems to expand intensive agricultural activities (such as potato and milk production) and urban sprawl, primarily in the peri-urban areas of the city of Bogotá are barriers to recover the regulation capacity of the watersheds while low income and lack of economic alternatives to the rural population is a root cause. Climate change can exacerbate the degradation and transformation of ecosystems since high mountain ecosystems are particularly vulnerable to changes in temperature and precipitation. Changes in temperature and precipitation, also reduce the productivity of potato and milk production systems inducing rural families to transform ecosystems seeking more land for agricultural activities. The main barriers to tackle land degradation and transformation of high Andean ecosystem are: (i) low integral and effective protected areas management, under private and public governance at both urban and rural levels, due to insufficient technical and financial resources to promote sustainable climate resilient long-term conservation models; (ii) constrained actions of national, regional, and local environmental authorities on land use planning, conservation areas management and expansion and high Andean ecosystem restoration projects with a water-resilient approach, which can be attributed to a lack of adequate climate information, technical knowledge, and insufficient financial resources for effective management of strategic ecosystems for climate change adaptation; and (iii) weak engagement of multi stakeholder agendas, public and private to prioritize investments to stop degradation risk and enhance restoration and rehabilitation of key ecosystems.

35. **Local capacity to adapt to climate change:** There is limited capacity of rural livelihoods, potato and milk production systems, to adapt to climate change. This is primarily due to changing climate patterns that can disrupt traditional agricultural practices, pushing communities towards more intensive but unsustainable methods to maintain productivity. The implementation of unsustainable production systems involving intensive soil tillage, high levels of agrochemical use, and the replacement of natural vegetation for livestock, leads to a decrease in ecological connectivity and the provision and regulation of water services and displacing traditional and more sustainable agricultural practices, which are not profitable in the short term and put families' food security at risk. Climate change-related impacts, such as extreme weather events, exacerbate low local capacity, can strain already limited financial resources, making it harder to invest in adaptive practices and can challenge existing policies and governance structures, making it difficult to establish adaptive measures and collaborate effectively between authorities and local communities in the face of shifting environmental conditions. The main barriers to increasing the adaptive capacity of rural communities are (i) limited smallholder access to climate and technical knowledge of the most cost-effective and impactful adaptive production and water efficient methods and the close relationship between environmental quality, social well-being, and increased agricultural productivity to achieve greater resilience; (ii) limited access to financial resources to implement a climate-resilient, low-impact agriculture practice in the high Andean mountains; (iii) lack of supportive policies, economic and market incentives to conserve forests and enhance restoration activities as adaptive measures while increasing families' income with climate-resilient productive practices; (and (iv) weak relationships between environmental authorities and local communities, which have not fostered trust or established stable collaborative partnerships. Climate change

contributes to the exacerbation of socio-environmental conflicts, hindering the effective progress of high-mountain ecosystem management.

36. **Socioeconomic Inequalities:** Disparities in access to water and sanitation services among different socioeconomic groups perpetuate water insecurity. Rural communities face greater challenges in accessing clean water and adequate sanitation facilities, due to the low capacity of water infrastructure facilities (such as drinking water treatment plants and irrigation districts) and exacerbating inequalities, leaving vulnerable populations more dependent on land use and water resources management and susceptible to water-related risks. Climate change intensifies social inequalities as it directly impacts vulnerable communities through extreme weather events, altered agricultural patterns, and resource scarcity, amplifying disparities in health, livelihoods, and access to essential resources. The limitations faced by high-mountain rural communities to enhance economic growth are related to the commercialization of their products. The main barriers to reduce socio-economic inequalities are: (i) increased dependence on a limited number of market-oriented products, primarily focused on potatoes and milk, or crops such as beans in the case of San Juanito municipality; (ii) high costs of creating enabling conditions for fair trading and high dependency on intermediaries; (iii) credit and other financial resources restrictions and incomplete insurance coverage; (iv) weak or non-existent planning for the development of commercial activities related to products generated on their farms; (v) limited and weak organizational processes for commercialization; (vi) limited development of product transformation exercises to add value and promote differentiated production; (vii) insufficient incentives and resources for the adoption of environmentally appropriate technologies adapted to changing climate conditions; (viii) high production costs and price fluctuations for products generated on farms, which also affect the low profitability of agricultural activities; and (ix) lack of economic alternatives to reduce dependence in highly intensive agriculture and livestock production.

37. **Cultural and social:** Climate change is intrinsically linked with cultural and social dynamics as it alters ecosystems, disrupts traditional livelihoods, and heightens resource competition, reshaping rural practices, social structures, and community resilience in response to climate and environmental changes. A weakened territorial governance affects the potential for local communities to implement adaptation measures and their long-term sustainability. Several barriers contribute to this situation: (i). traditional communities in the highlands have limited access to and knowledge of how to use climate information; (ii) lack of local integrated water management approach, particular socio-environmental agreements for sustainable water management and adaptation to climate change. Weak organizational capacity, and conflicts over access, use, management, and control of natural resources, among other factors, limits the ability to reach agreements among communities and hinders collective action to address environmental issues in the project area; (iii) low levels of organization and associativity capacities of rural communities, especially Communal Action Boards, potato and milk producers' cooperatives and water supply service associations. Some have experienced significant losses in landownership connections, which limits their ability to influence or participate in public decisions that affect them, losing opportunities to reduce climate change vulnerability; (iv) loss of traditional relationships of use and valuation of the land, which implies loss of culture and traditional sustainable systems and a higher need for productive land; and (v) lack of social appreciation for rural livelihoods, leading to an increasing trend of rural abandonment as individuals seek better opportunities for well-being in cities. This creates space for new actors to arrive in the project area and implements high-impact agricultural and livestock models that displace traditional management practices and contribute to land degradation and water related conflicts amplified by climate change.

38. **Gender:** Women in rural communities are highly vulnerable to the impacts of climate change. They play a crucial role in agricultural activities and environmental stewardship, but climate change events directly affect agricultural productivity and food security. Climate change significantly influences gender dynamics by disproportionately affecting women. Women often assume increased household workload due to climate-related impacts, such as water scarcity and food insecurity, which can reinforce gender inequalities and limit women's opportunities for education and economic empowerment. Several barriers contribute to this situation: (i) rural women lack access to climate-resilient technologies, financial resources, and information, hindering their ability to effectively adapt and cope with these changes; (ii) they are disproportionately impacted by poverty, 4 out of 10 rural women were living in multidimensional poverty, with a significant portion (38.1%) falling between the ages of 50 and 64 (iii) rural women have higher engagement in unpaid work, such as animal husbandry for household consumption and caretaking responsibilities ; and (iv) women in these regions face multiple challenges due to gender disparities, cultural norms, and limited access to resources and decision-making processes. For example, men have greater participation in commercially oriented activities such as potato production and dual-purpose livestock, while women are more involved in less commercial activities like small-scale livestock rearing. Consequently, their participation in income-generating activities, education, and personal and professional development opportunities is constrained.

39. **Regional Governance and Institutions:** Climate change presents challenges for regional governance and institutions in the Bogotá-Region Landscape by straining existing infrastructure, resources, and disaster response systems. The need for coordinated efforts to address climate-related issues, such as water resource management and disaster resilience, can place a burden and a challenge on regional governance structures. Additionally,

climate-induced resource conflicts may necessitate adjustments in institutional policies and capacity. The main barriers to regional water governance are: (i) lack of IWRM approach in the Bogotá–Region Landscape; (ii) lack of policies and institutions with a regional vision that aim to coordinate efforts to promote climate change adaptation, enhance water security and reduce water-climate related hazards in the Bogotá – Region Landscape; (iii) lack of a comprehensive EBA plan that clearly outlines the necessary actions for developing green infrastructure in rural and urban areas to mitigate the impacts of climate change on water security and water-climate risk; (iv) policy decision makers at national, regional, and local levels have limited evidence-based knowledge and access to high resolution and policy relevant information of the expected impact of climate change in water security and climate-related risk leading to uncoordinated and ineffective land use planning and reduces the relevance of climate change adaptation in their agendas; and (v) technical limitations from environmental authorities, urban and rural water supply systems, and communities in ensuring proper information on the impacts of climate change and the necessary adaptation measures, as well as monitoring the effectiveness of adaptation measures and variations in local climate. These limitations hinder timely climate change action and accurate decision-making and contribute to a loss of legitimacy and management capacity.

40. **Economic and financial capacity:** Climate change poses economic and financial challenges by increasing the costs of adaptation and recovery from climate-related disasters. It can lead to reduced agricultural productivity, affecting livelihoods and income, while also straining public resources for disaster management and infrastructure repairs. This dual financial burden can hinder the region's economic growth and development. The region is currently confronted with economic constraints and financial limitations that impede the implementation of climate adaptation projects. This is primarily due to a knowledge gap concerning successful and cost-effective evidence-based adaptation strategies, including nature-based solutions. Historically, the region has predominantly relied on grey infrastructure, such as reservoirs, water treatment plants, and river channeling, to mitigate flood and drought risks. However, the planning and implementation of these investments have often overlooked integrated water resource management and climate change considerations, neglecting EBA and the potential impacts of land degradation on performance and operational and maintenance costs.

41. Consequently, decision-makers have not fully explored the potential of EBA as a cost-effective strategy for integrated water resource management in the Bogotá-Region Landscape, as well as for safeguarding the existing grey infrastructure network. This lack of consideration is reflected in the limited financial resources allocated for implementing nature-based solutions as a climate adaptation strategy to enhance water security. The main barriers to tackling financial capacity are: (i) lack of time and funds for policy and decision makers to be familiar with climate change, environmental and water management, water related hazards and benefits from EBA; (ii) limited and uncoordinated investments implemented by the public -private sector to foster EBA, that includes urban forest, wetlands restauration, agricultural best management practices, protection of water resources and flood plain restoration (iii) lack of comprehensive economic and financial instruments to mainstream EBA and guarantee sufficient financial resources to fund the scale and long -term sustainability of actions required to guarantee water security and stimulate economic growth while enhancing climate resilience; (iv) challenge to unlock financial resources by attracting private sector investments, beyond their direct supply chain; (v) the lack of inclusion of climate change considerations in business sustainability plans; and (vi) a lack of awareness among entrepreneurs and consumers regarding the social and environmental relationships at the watershed level.

ALIGNMENT WITH NATIONAL PRIORITIES, REGULATORY AND LEGAL FRAMEWORKS

42. This project is well aligned to the country's national priorities and needs, as indicated in their Nationally Determined Contribution (NDC), National Long-Term Strategy (E2050), National Adaptation Plan (NAP/PNACC), National Development Plan (NDP) and policy planning documents. In addition, the project represents a significant contribution to the investment areas of resilient and low-carbon rural development, improved management, and sustainable use of natural resources. As a result, the project has been included in the portfolio of the Green Climate Fund (GCF) Country Program by the National Designated Authority (NDA).

43. Despite Colombia not being a major emitter of greenhouse gases (GHG), only emitting ~0.4% of global GHG emissions, the revised NDC, submitted in 2020 sets a target of reducing GHG emissions by 51% below business-as-usual rates in 2030 and is closely aligned with the country's objective of achieving carbon neutrality by 2050. Approximately 71% of Colombia's GHG emissions result from agriculture, forestry, and other land use sector. The revised NDC pledges to undertake extensive landscape reforestation and restoration projects, which coincide with initiatives to conserve paramo grassland ecosystems. The project is therefore in alignment with the revised NDC's adaptation and resilience areas (biodiversity and ecosystem, food, health, settlement and infrastructure, and water) and will contribute to achieving several goals and measures outlined in the NDC. These include: (i) protecting four out of 37 paramo ecosystem complexes, (ii) implementing climate change adaptation actions in the potato and dairy livestock subsectors as a contribution to the structuring of Comprehensive Climate Change Management Plans in the Agriculture and Rural Development Sector, (iii) promoting agroclimatic dissemination to producers by fostering agro-silvopastoral systems, (iv) capturing 790,679 tCO2eq, and (v) protecting the one out of 11 urban wetland system recognized as RAMSAR sites.

44. The project will support the revised NAP, across the three main strategies:
    - Knowledge: (a) Strengthening the management of climate and hydrological knowledge, as well as understanding the potential impacts of their variations in the context of climate change; (b) Education, training, communication, and public awareness on climate change; and (c) Institutional capacity building for climate change adaptation.
    - Planning: Development of resilient investment projects.
    - Transformation of the project area: (a) Management of climate change impacts on biodiversity and the provision of ecosystem services; (b) Climate-adaptive agricultural production and food security; and (c) Green growth of human habitats through resilient urban systems.

45. This project is well aligned with the core pillars of the National Development Plan (2022-2026), primarily focusing on the first transformational axis related to territorial planning centered around water and environmental justice. The project will contribute across the three main sections as follows: (i) Environmental justice and inclusive governance by providing basin-scale information for territorial planning and the development of environmental determinants. (ii) Water, biodiversity, and people at the center of territorial planning by providing support through information to strengthen multi-level governance of the basin; and (iii) Support to enhance the capacity of local governments and communities for territorial planning and decision-making with a focus on climate change adaptation, water security and flood and drought risk.

46. In addition, the project is aligned with the Comprehensive Sectoral Climate Change Management Plan of the Ministry of Housing, City and Territory Development (MVCT), which prioritizes climate change adaptation actions to fulfill the commitments of the water and basic sanitation sector in the NDC. These actions are grouped, among others, under the following strategic lines: (i) Risk management for adaptation, which includes a measure related to sustainable infrastructure such as the development of Sustainable Urban Drainage Systems (SUDS), and (ii) Management of water supply basins, with the measure of protection and conservation of water supply basins affected by hydro-meteorological phenomena.

47. The project is also consistent with the objectives set forth in the National Policy for Integrated Water Resources Management (PNGIRH, Decree 2372 of 2010). This policy aims to ensure the sustainability of water resources through efficient and effective management, coordinated with land-use planning, and the regulation of water supply and conservation. It recognizes the importance of water as a key factor for economic development and social well-being. The project also aligns with the National Policy for Integrated Management of Biodiversity and its Ecosystem Services (PNGIBSE, Decree 1640 of 2012) which promotes the integrated management of biodiversity conservation and ecosystem services to maintain the resilience of ecological systems at various scales. The policy emphasizes the need to consider different scenarios of change and encourages collaborative efforts between the State, the productive sector, and civil society. The project is focused on areas of importance for the supply of water for human consumption and therefore is aligned with the Comprehensive Sectoral Climate Change Management Plan (PIGCCS) of the Ministry of Environment and Ministry of Housing, City and Territory Development (MVCT), specifically with the adaptation component of the Water Supply and Basic Sanitation Sector (VASB) as outlined in Resolution 0431 of 2020.

48. The project is also in alignment with the regulatory framework for paramo management, as outlined in Law 1930 of 2018, which acknowledges the high sensitivity of paramo ecosystems and the historical relationship between these ecosystems and the activities of rural communities. By working closely with these communities, the project will contribute to the stabilization of areas affected by agricultural expansion; and will implement comprehensive processes that encompass conservation, restoration, sustainable use, knowledge exchange and territorial governance. These efforts will enhance the resilience of both the paramo ecosystems that ensure regional water security and the traditional rural communities that depend on them.

49. Moreover, the project will contribute to several public policies: (i) CONPES 3934 through the development of restoration activities in the paramo area and the implementation of adaptive agricultural processes in high-altitude areas; (ii) CONPES 4021 concerning the stabilization of the agricultural frontier; (iii) CONPES 4023 with productive reconversion processes towards the sustainability of dairy cattle farming, reactivating the local economy; and (iv) the recent CONPES 4050 with the formulation of management plans and capacity strengthening of environmental authorities to increase the effectiveness of protected area management and paramo complex conservation.

50. At the local level, the project aligns with the Development Plans of Cundinamarca and Bogotá, the *Bogotá Reverdece* Territorial Planning Plan 2022-2035 (Decree 555 of 2021, which aims to protect natural and cultural heritage, strengthen the main ecological structure and enhance the territory's capacity to withstand variability and climate change), the District Disaster Risk and Climate Change Management Plan of 2018, the Bogotá Climate Action Plan 2020-2050, as well as the Sumapaz Pact signed in February 2020 by the leaders of the Central

Region (Bogotá, Boyacá, Cundinamarca, Huila, Meta, and Tolima) to mitigate and adapt to climate change and ensure water security through the conservation and recovery of paramo and high-Andean forest ecosystems. The project's objectives are also aligned with the Territorial Planning Plans of the 20 municipalities in the region.

Country ownership

51. According to the National Planning Department (DNP), the project is aligned with the goals and objectives of the NDC, as discussed above, and recognizes the enormous impact and paradigm shift that this initiative will generate in terms of adaptation.
52. Colombia's national, regional and local authorities as well as government entities and private partners have provided letters of support for their participation in the GCF project (Annex 8). This Concept Note (CN) has been shared with the NDA for feedback and comment and outreach and engagement are ongoing.

COMPLEMENTARY PROJECTS IN THE REGION

53. **Life and Biodiversity Fund - Ministry of Environment and Sustainable Development** -The project "Land Management Around Water and Climate Adaptation in the Chingaza – Sumapaz – Guerrero – Guacheneque Landscape," led by the Regional Administrative and Planning Special Unit (RAP-E) and co-executed by Conservation International Colombia, has a budget of 21.5 million USD dollars and has to be implemented in two years, until December 2026. This project focuses on the páramo ecoregion, covering 22 municipalities in Cundinamarca and Meta. Its primary objective is to restore the natural cover of transformed areas in high mountain ecosystems critical for water security in Chingaza - Sumapaz - Guerrero – Guacheneque Area. It aims to coordinate water-centred land use planning instruments and promote the conservation and restoration of nature, thereby fostering environmental justice and climate action.

54. **Global Environmental Facility (GEF)** – i) The current GCF proposal builds upon the lessons learned from two projects, funded by the Global Environment Facility (GEF). The first one is the Integrated National Adaptation Pilot: High Mountain Ecosystems, Colombia's Caribbean Insular Areas and Human Health (INAP) (GEF ID: 2019-CO), and the second project called "Adaptation to climate impacts on water regulation and supply in the Chingaza-Sumapaz-Guerrero area" and implemented by the Inter-American Development Bank (IDB) (GEF ID: 4610-CO) and lead by the Ministry of Environment and Sustainable Development in collaboration with Conservation International between 2015 and 2021.

55. The "*Adaptation to climate impacts on water regulation and supply*" project was focused on (i) generating scientific knowledge to assess the impact of climate change and water resources vulnerability at the scale of the Bogotá-Region Landscape, (ii) designing and implementing adaptation measures were designed and implemented using nature-based solutions on 550 hectares: 300 ha on the restoration of high Andean ecosystems and 250 ha on sustainable production. The objective was to develop pilot projects aimed at reducing the vulnerability of water resources and enhancing the resilience of rural communities and high-mountain ecosystems to potential impacts of climate change. The project received a satisfactory evaluation from both the Inter-American Development Bank and the Bank's independent project evaluator, highlighting its technical consistency, operational effectiveness and efficiency, recognition, and engagement from public, private, and community stakeholders, as well as the impacts and long-term sustainability of climate change adaptation actions in the Bogotá-Region Landscape (Annex 9).

56. The current GCF proposal focuses on scaling up the successful pilot exercises from these concept-proof GEF projects to build water security and reduce flood and drought risk in the Bogotá-Region Landscape. The water-resilience GCF project will scale the restoration efforts to 5000 ha and the sustainable production activities portfolio to 10.500 ha in the most climate-vulnerable communities of the Bogotá -Region Landscape.

57. Currently Colombia is implementing a GEF project with an impact on 16 out of 37 paramo complexes in the country. The "Paramos para la Vida" project draws on the experience of the Ministry of Environment and Sustainable Development (MinAmbiente), the Humboldt Institute, and the United Nations Development Programme (UNDP) in Colombia for the sustainable management of this strategic ecosystem for the country. The project promotes socio-ecological systems that foster the conservation of biodiversity and its ecosystem services, agrobiodiversity, and proper management of socio-environmental conflicts in paramo complexes in Boyacá, Cauca, Cundinamarca, Nariño, Santander, and Tolima. The project started in 2022 and has a duration of 5 years. The GEF project's interventions include the four paramo complexes that comprise this proposal; they work in a pilot scale and with and investment of less than a million dollars. With the current proposal, there is the opportunity to collaborate and include lessons learned in the design of the project and to promote sustainability of the Paramos para la Vida project interventions.

58. **Fund for Environmental Investments in the Bogotá River Basin (FIAB)** - Led by the Cundinamarca Regional Autonomous Corporations (CAR), FIAB is a financial entity that aims to support and promote environmental

projects and initiatives within the Bogotá River Basin in Colombia. Its main objective is to improve the quality of the water resources and the overall environmental condition of the basin. FIAB plays a crucial role in financing and implementing projects related to water treatment, pollution control, reforestation, and conservation of natural resources in the Bogotá River Basin. The fund provides financial resources and technical assistance to public and private entities involved in environmental protection and sustainable development activities. There are ongoing conversations to design a collaboration between FIAB and the project to restore the upper watershed of the Bogotá River. The GCF project serves a complementary role to the initiatives led by the FIAB. While the GCF proposal primarily targets the enhancement of freshwater ecosystems in the upper Bogotá River watershed, encompassing aspects of quantity, quality, and regulation, the FIAB's focus is directed towards flood risk mitigation in the Bogotá River floodplains, with a predominant emphasis on grey infrastructure solutions. An additional advantage of this complementarity lies in the GCF project's promotion of a green infrastructure perspective. These projects are fundamentally interlinked, collectively advancing climate change adaptation within the region and mutually reinforcing the integrated management of water resources within the Bogotá River watershed.

59. **Bogotá's Secretary of Environment (SDA)** - Within the framework of the District Development Plan of Bogotá "A New Social and Environmental Contract for the Bogotá of the 21st Century 2020-2024," the SDA defined investment project 7780 "Contributions of Environmental Vision to the Construction of the Rural District Territory in Bogotá." This project highlights the need to develop actions aimed at conserving areas of strategic environmental importance for the water resources of the district. With this purpose in mind, the SDA, and the UNDP established a strategic alliance to design and implement the Payment for Ecosystem Services (PES) Program in areas of strategic environmental importance for local water regulation located in the rural area of Bogotá (Usme and Sumapaz). The SDA is an active partner for this proposal and will be co-leading the Urban Adaptation Activities and public sector engagement in the financial mechanisms of the Adaptation Accelerator.

60. **National Business Association of Colombia (ANDI)** – The Biodiversity and Development Alliance for the Bogotá Savanna, led by ANDI, has been working towards its objective since 2018. The aim is to facilitate the collaboration of institutions and private companies operating in the Bogotá Savanna, to collectively address corporate biodiversity management and water regulation challenges. This entails combining technical, logistical, financial, and innovative resources to implement coordinated actions focused on the protection, conservation, restoration, ecosystem connectivity, and sustainable development of the region. The approach taken is participatory and considers the diverse needs and characteristics of stakeholders involved. ANDI is an active partner for this proposal and will be co-leading the private sector engagement in the Adaptation Accelerator (Component 3).

61. **Alliance for water funds – Agua Somos Fund** - comprises a technical and financial alliance working for the conservation of paramos, forests, and rivers that generate water resources for Bogotá and 33 neighbor municipalities, ensuring the well-being of local and urban communities. It was established to facilitate joint action between the public and private sectors and its purpose is to implement conservation actions aimed at guaranteeing the maintenance and provision of water-related environmental services provided by the watersheds supplying the city of Bogotá and its neighbor municipalities. Currently the fund is implementing two PES schemes in the Guerrero and Chingaza paramo complex. The PES is funded by the Government of the Department of Cundinamarca and SDA with the support of Fundación Bavaria, a beverage company. During the Funding Proposal phase, the aim is to establish operational partnerships to achieve the scale of interventions required for adapting the Bogotá-Region Landscape to climate change.

62. Specific objectives include the integral conservation of strategic ecosystems, strengthening territorial governance and community socio-environmental management, and enhancing community capacity to address climate change impacts. The targets are to protect 13,467 hectares of ecosystems, train 10,672 people in informal biodiversity education, and restore 9,000 hectares of high mountain vegetation cover (7,200 hectares in strict restoration and 1,800 hectares in productive reconversion). The project's success will be measured by the increase in areas under recovery in the Chingaza – Sumapaz – Guerrero corridor.

63. **Complementary GCF actions in Colombia - The Heritage Colombia (HECO) project,** funded by the GCF, aims to introduce a paradigm shift towards a more sustainable management of the country's ecosystems by employing a public-private partnership model that will secure financing in perpetuity for the sustainable management of key ecosystems and large-scale landscapes across the country. One of these landscapes is what has been called Orinoco transitions and seeks to strengthen the Chingaza National Natural Park and the Guatiquia and Guayuriba river basin, areas that are part of the Bogotá-Region Landscape.

64. The current CN therefore seeks to complement the actions of the GCF in Colombia in this landscape, by strengthening local water security (strengthening local aqueducts) and reducing the risk of flooding. Additionally, the current proposal aims to decrease the pressures on the construction of a second reservoir within the Chingaza Natural Park, project within in EAAB pipeline to guarantee water supply to Bogotá. By improving efficiency and

enhancing sustainable water management of the other two water supply systems of Bogotá, which are prioritized within the Bogotá–Region Landscape.

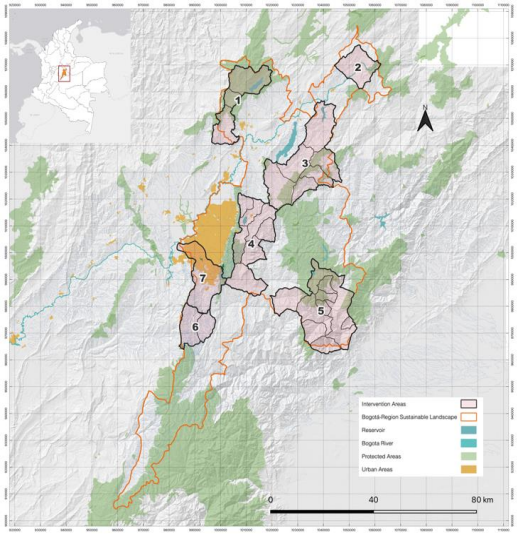
65. This CN addresses the impacts of climate change on the Bogotá-Region Landscape and highlights the urgent need to enhance water security by addressing two key water-climate related challenges: (i) changes in water availability that strain the system's capacity to meet diverse sectoral demands, and (ii) water-related disasters such as floods.

66. With temperature and precipitation changes, degradation of high mountain ecosystems, and increasing water demand from urban and industrial growth, the current water supply systems face significant challenges in ensuring future water availability and flood control. The project aims to enhance climate change adaptation by reducing the vulnerability of local communities, improving water security for urban and rural users, reducing flood and drought risks, and transitioning to an IWRM approach. The project also addresses the forestry and land use mitigation result area, as well as three additional adaptation result areas: (i) addressing the needs of most vulnerable people and communities, (ii) protecting ecosystem and ecosystem services; and (iii) promoting agriculture and food security.

B.2. Project/Programme description (max. 3 pages)

DEFINING PROJECT SITES

67. Utilizing a combination of public and private partners, and Conservation International (CI) data, a multicriteria analysis has been conducted to determine the most cost-effective intervention areas for the project. The analysis has identified seven intervention areas and 31 micro-watersheds, encompassing 15 out of 21 municipalities, including the upper basin of the Tunjuelo River and the peri-urban area of Bogotá (See Figure 6 and Annex 10, for detailed information). These sub-basins were selected based on five main criteria: (i) they are strategically important for regional water provision; (ii) they are highly exposed to projected changes in precipitation and temperature by 2040; (iii) they exhibit expanding agricultural frontiers and are subject to significant drivers of land degradation; (iv) they show high hydro-meteorological and hydro-climatic threat, particularly in the case of urban Bogotá; and (v) they offer the greatest opportunities for implementing EBA including climate-resilient agricultural practices.



No.	Intervention Areas	Municipality	Sub-Basins
1	Upper Basin Frio river y Upper Basin Neusa river	Zipaquira	Río Frio
		Tabio	Quebrada El Hornillo
		Subachoque	Quebrada Honda
		Tausa	Río Neusa
		Cogua	
2	Upper Basin Bogota river	Villapinzón	Río Bogotá
		Chocontá	
3	Chingaza North	Chocontá	Río San Francisco
		Sesquilé	Río Aves
		Guatavita	Río Monquentiva
		Gachetá	Río Tunjo
		Guasca	Río Zaque
			Río Chipatá
			Río Chiguanos
			Río Siecha
4	Connectivity	La Calera	Quebrada Guisquizá
		Choachí	Quebrada Potrero Grande
		Ubaque	Río Palmar
		Chipaque	
		La Calera	Quebrada Aguas Claras
			Quebrada La Socha
		Bogotá D.C.	Río Teusacá
5	Eastern Implementation Area	San Juanito	Quebrada Negra
			Río Guajaro
		El Calvario	Quebrada Moreno
			Río Guatiquía
			Quebrada San Antonio
			Río Santa Bárbara
			Quebrada Colorada
		Villavicencio	Quebrada Honda
		Fómeque	Quebrada Blanca
6	Upper Basin Tunjuelo	Bogotá D.C.	Río Chisaca
			Río Curubital
7	Middle basin and lower basin Tunjuelo river	Bogotá D.C.	Río Tunjuelo (Middle and lower basins)

Figure 6. Project sites: seven working areas and 31 micro-watersheds

PROJECT DESCRIPTION

68. The goal of the Bogotá-Region Landscape project is to increase climate resilience of the regional and local water supply system and reduce flood and drought risk for Bogotá and 21 surrounding municipalities. This will be achieved by mitigating the risk of degradation in high Andean ecosystems across 31 micro-watersheds through

an Integrated Water Resources Management (IWRM) model, intervention strategy, and mainstreamed Ecosystem-Based Adaptation (EBA) strategies. The project will also promote climate-resilient agricultural practices and enhance water governance.

69. Financial mechanisms will be developed and strengthened to unlock a continuous flow of resources during the project and after its closure, ensuring sustainability, scaling, and replication. The project will directly implement ecosystem-based adaptation measures in 172,499 ha, covering 44.7% of the total natural and rural area of the Bogotá-Region Landscape. Activities related to water governance schemes and climate-resilient land planning within the seven intervention areas will strengthen the sustainable management of an additional 20.6% of the Bogotá-Region Landscape.

70. GCF funding will directly benefit 467,964 people through resilient water resource management, indirectly benefit 9,055,663 people, and reduce flood risk for 250,000 people. The methodology for calculating adaptation beneficiaries in the rural area is supported by information in Annexes 4 and 10, with additional details to be presented in a supplementary annex during the funding proposal stage.The project will directly implement ecosystem-based adaptation measures in 172,499 ha, 44.7% of the total natural and rural area of the Bogotá-Region Landscape (Table 2).

Table 2. Land use potential for a water-resilient sustainable landscape (See Annex 1 and 10)

Land Use	Hectares (ha) Bogotá-Region Landscape	Hectares (ha) Direct interventation	Percentage (%) of total area
Paramos and forest + Connectivity area	271.787	156.800	57,7
Buffer Area	75.612	5.000	6,6
Sustainable use	36.577	10.500	28,7
Urban wetlands and forest	1.427	199	13,9
Bogotá - Region Landscape - potential intervention a	385.403	172.499	44,8

71. Aligned with the GCF's paradigm-shifting pathways for water security, the climate-resilient Bogotá-Region Landscape project prioritizes IWRM to address water and climate-related hazards, including disaster risk reduction, enhance the resilience of regional and local water supply systems and preserve water resources. The project will serve as a catalyst to attract the wide variety of authorities in the Landscape and foster coordinated development and management of water, land, and related resources.

72. Success in attracting all authorities in the Landscape to adopt IWRM planning will overcome the historical fragmentation of water management, which has led to isolated interventions and the division between urban and rural areas. Decision making in terms of priorities and investments will be supported by a scientifically based decision-making support system. This holistic and coordinated approach will address the challenges and risks associated with water management in the Bogotá-Region Landscape, leading to efficient, effective and complementary use of resources of all agencies in the region, benefiting both urban and rural communities.

73. The project also aims at mainstreaming EBA for IWRM by implementing measures such as best management practices in agriculture, protection and restoration of water resources and floodplains, urban forests and constructed wetlands in key sites that maximize investment benefit. These interventions are designed to maximize investment benefits and serve as pilots, generating lessons for future scaling up and replication. Additionally, the project will enhance adaptive capacity and strengthen resilience in urban communities by implementing well-managed integration of grey-green infrastructure. This approach includes restoring urban wetlands as a flood protection measure in the Bogotá urban area. The project theory of change (TOC) is presented in Figure 7.

74. Financial instruments and mechanisms for scaling up and replicating long-term sustainability are also key elements of the proposal. Solutions include incorporating an environmental investment component into water tariffs, designing Payment for Ecosystem Services (PES) schemes to unlock resources from local and environmental authorities, and creating mechanisms to access private resources through the environmental management plans of companies subject to environmental licensing or voluntary programs such as Water Positive.

75. The goal statement of the Project is the following:

IF EBA is mainstreamed into an integrated water resources management (IWRM) strategy for the Bogotá Region Landscape, financial resources are unlocked and water governance is strengthened and supported by science-

based decision-making tools **THEN** watersheds progressive and sustainable improvement of water capture, regulation and quality will increase water security, flood protection and climate resilience **BECAUSE** cost-effectiveness of EBA investments for water security will be demonstrated, scaled-up and replicated.

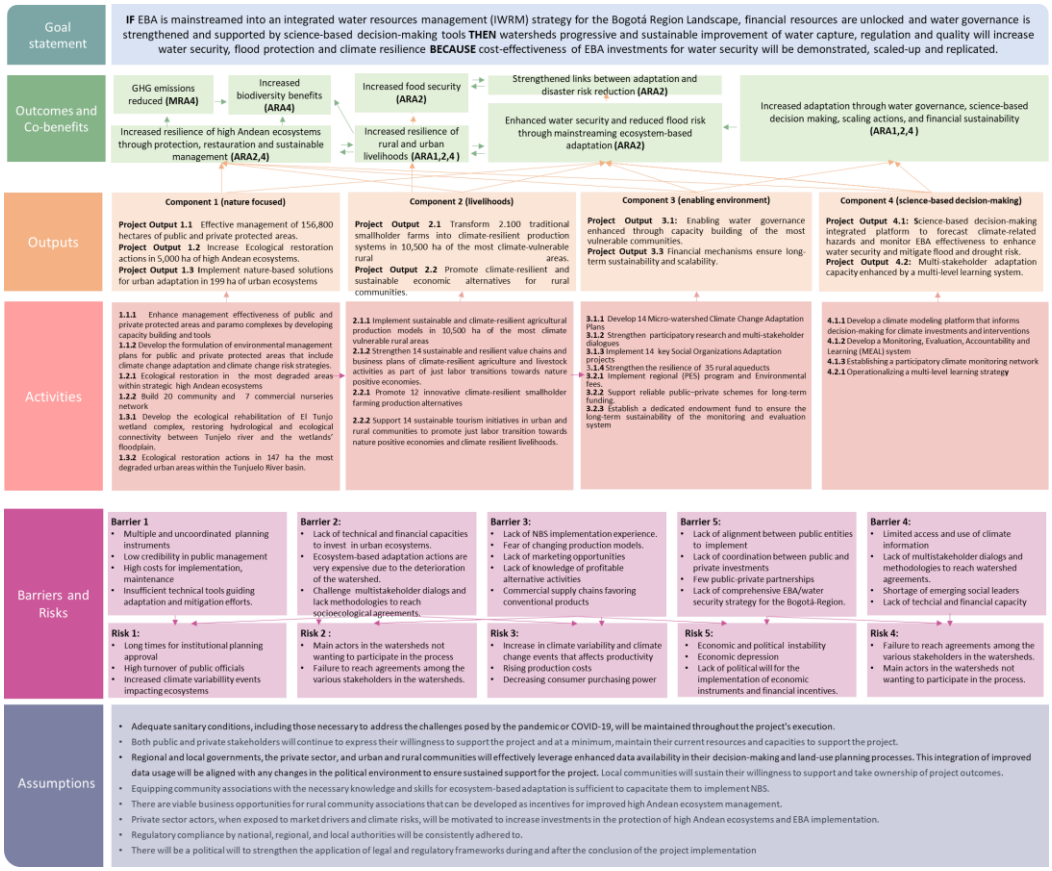


Figure 7. Project theory of change (TOC)

76. This project will contribute effectively to the Updated Strategic Plan's targets about the strategic priorities as follows:

GCF's Strategic Priority for USP-2	Description	Project Objectives and Activities
Ecosystems	120 to 190 million hectares of terrestrial and marine areas conserved, restored or brought under sustainable management	172,499 hectares
	1. Sustainable management (total)	10,500 hectares
	2.Conserved/protected (subtotal)	156,800 hectares
	3.Restored/natural regen/agroforestry (subtotal)	5,000 hectares
Food	190 to 280 million beneficiaries adopting low-emission climate-resilient agricultural and fisheries	Implement sustainable and climate-resilient agricultural production models to increase the productivity and wellbeing of 2,100 households.

Infrastructure	45 to 60 developing countries develop climate resilient infrastructure, including ecosystem-based approaches	Restoration through nature-based solutions of 7 highly degraded urban wetlands (199 hectares).
Locally-led Adaptation	40 to 70 approved proposals for adaptation projects, including for locally led adaptation action	The project is focused on adaptation: • Direct beneficiaries: 467,964 (4.9% of Bogotá-Region population). • Indirect beneficiaries: 9,055,663 (95.1% of Bogotá-Region population, and 19.7% of the Colombia's population). The operational model and implementation strategy of all project components are based on strengthening the technical and administrative capacities of the most vulnerable rural communities: women's associations, youth collectives, product associations, local aqueduct boards, and community action boards.
Innovation and Market Creation	900 to 1,500 local private sector early stage ventures and MSMEs provided with broad-based seed and early-stage capital for innovative climate solutions, business models and technologies	• Promote 12 innovative climate-resilient smallholder farming production alternatives. • Support 14 sustainable tourism initiatives in urban and rural communities.
Greening Finance	90 to 180 national and regional financial institutions supported to access GCF resources, and other green financing sources, particularly for MSMEs	• Implement economic instruments and financial incentives, including a regional Payment for Ecosystem Services (PES) scheme. • Implement the inclusion of environmental investment component in the water tariff, as designed by the Water and Sanitation Regulation Commission (Resolution CRA 907 of 2019). • Foster private-sector investments. • Establish a dedicated endowment fund to ensure long-term sustainability to build water security and reduce flood and drought risk in the Bogotá -Region Landscape.

Component 1. Enhanced regional and local water security and reduced flood and drought risk through mainstreaming ecosystem-based adaptation over 161,999 hectares in areas highly vulnerable to climate change.

Output 1.1. Effective and climate-resilient management of public and private protected areas

77. Under Output 1.1, the project seeks to enhance the management effectiveness of 156,800 hectares of public and private protected areas (42% of the total natural and rural area), which will guarantee the freshwater ecosystem services for Bogotá's local water supply systems enhancing water security for over 9.5 million people. Developing robust management tools for publicly and privately governed protected areas and addressing the vulnerabilities of paramo complexes in the context of climate change is of paramount importance. This entails the integration of climate change adaptation and risk reduction strategies into existing environmental management plans (EMPs) for publicly and privately governed protected areas. In doing so, the project will enhance the technical capacities of environmental authorities, community leaders, and civil society at large on adaptation and climate-resilient activities within protected areas and paramo complexes. EMPs are planning tools that integrate EBA and climate change risk management that are used by public entities to provide guidance for investments in public (and private) protected areas.

78. These key actors play indispensable roles in the comprehensive administration and stewardship of public and private protected areas, which strategically intersect the seven intervention areas and 31 prioritized micro-watersheds. The project's overarching goal is to empower these stakeholders with enhanced technical expertise in the realm of climate adaptation and resilience activities, particularly concerning the management of protected areas and paramo complexes. This capacity-building initiative underscores CI's unwavering commitment to promoting sustainable environmental practices and safeguarding the ecological and hydrological integrity of the region, aligning seamlessly with the mission and objectives of the GCF.

Activity 1.1.1. Enhance management effectiveness of public and private protected areas and paramo complexes by developing capacity building and tools, to improve ecosystem integrity, and hydrological and ecological connectivity towards a sustainable and resilient landscape.

79. Under Activity 1.1.1, the project endeavors to significantly enhance the management effectiveness of 139,726 hectares (Table 3) of publicly and privately governed protected areas, by updating EMPs for 9 public protected areas and 13 private reserves that effectively incorporate climate change data and a gender-sensitive and participatory approach.

Table 3. Protected areas in effective and climate-resilient management capacity-building efforts (Annex 10).

Protecetd Area	Hectares (ha) within intervention areas
PNN - Sumapaz	44.678
RFPR - Cuenca Alta del Río Bogotá	46.831
DRMI - Páramo de Guargua y Laguna Verde	14.393
RFPR -Páramo de Guargua y Laguna Verde	13.733
RFPN - Rio Blanco y Negro	12.669
PNR - Quebrada Honda	2.578
DRMI - Páramo Guerrero	1.918
RFPR - Laguna de Pantano Redondo y el Nacimiento Río Susaguá	1.347
RFPR -Upper Zaque River Basin	1.250
13 Civil Sociaty Natural Reserve	329
Total	**139.726**

80. To mainstream EBA in EMPS that will not be developed under the project, the team designed Activity 1.1.1, where the main purpose is to enhance the management effectiveness of public and private protected areas and paramo complexes by developing capacity building and tools, to improve ecosystem integrity, adaptation capacity and hydrological and ecological connectivity towards a sustainable and resilient landscape.

81. The strategy to mainstream EBA in other EMPs have 4 main steps:

- **Capacity Building and Training:** Build the capacity of relevant stakeholders, including protected area managers, local communities, private landowners, and government agencies, to implement and monitor EBA measures effectively. Provide training on ecosystem-based approaches, climate change adaptation, and natural resource management. The team has designed a capacity-building program for technical operational skills, which consists of four thematic cycles: Protected Areas and Restoration, Control and Surveillance, Climate Change Management, and Monitoring. These cycles span a year, with each cycle lasting two months, including fieldwork and theoretical sessions, the theoretical sessions will be held on an online platform. The focus is on experiential learning, directly applying knowledge in the protected area. Feedback sessions are held at the end of each cycle for reinforcement and improvement.
- **Monitoring and Evaluation:** Establish a monitoring and evaluation framework to track the implementation and effectiveness of EBA measures in protected areas of the Bogotá- Region. Collect data on key indicators such as ecosystem health, biodiversity, water quality, and community resilience. Use feedback from monitoring to adapt and refine EBA strategies as needed.
- **Knowledge Sharing and Learning:** Foster knowledge sharing and learning among protected area managers through workshops, capacity-building sessions, field visits, and online platforms. Facilitate peer-to-peer exchange of experiences, lessons learned, and best practices in EBA mainstreaming.
- **Policy Support and Financial Mechanisms:** Advocate for supportive policies, regulations, and financial incentives at the regional and national levels to mainstream EBA into environmental management plans of public and private protected areas. Engage policymakers, legislators, and other decision-makers to promote the integration of EBA principles into relevant policies and strategies. Find co-financing from public and private entities to implement activities 1.1.1 and 1.1.2 in additional protected areas and update existing EMPs.

Activity 1.1.2. Develop the formulation of Environmental Management Plans for public and private protected areas that include climate change adaptation and climate change risk strategies.

82. Under Activity 1.1.2, the project will develop the formulation of Environmental Management Plans for four public, regionally significant areas that currently do not have this kind of instrument that includes climate change adaptation and climate change risk strategies. Finally, technical support will be provided for the official registration process of 30 new RNSCs (759 ha) that require management plans to be recognized as protected areas by the National Natural Parks of Colombia, the competent authority in this manner.

Table 4. Protected areas with new environmental management plans (Annex 10).

Protecetd Area	Hectares (ha) within intervention areas
PNR - Vista Hermosa de Monquentiva	8.464
RFPR - Bogotá River Source	1.352
RFPR - Paramo Grande	4.953
RFPR-Cuchilla de El Choque	1.546
30 Civil Sociaty Natural Reserve	759
Total	**17.074**

83. Mainstreaming ecosystem-based adaptation (EBA) into the Environmental Management Plans (EMP) of protected areas in the Bogotá - Region, which includes protected areas under both public and private governance, requires a tailored approach that addresses the specific characteristics, challenges, and opportunities of the region. Here is a brief methodology to achieve this, and will be described in detail in the FP stage in the Technical Sheet of Activity 1.1.2:

    - **Identify Priority Areas:** Determine which protected areas are critical to enhance water resilience in the Bogotá-Region and are most vulnerable to climate change impacts. Consider factors such as biodiversity richness, ecosystem services provided, exposure to climate hazards (e.g., extreme weather events, droughts), and socio-economic vulnerabilities of surrounding communities.
    - **Baseline Assessment:** Conduct a comprehensive assessment of the status of protected areas in the Bogotá - Region. This assessment should include an evaluation of conservation objectives, ecosystems, biodiversity, land use patterns, and existing adaptation measures. Identify gaps and priority areas for EBA interventions.
    - **Stakeholder Mapping Engagement:** Identify and engage key stakeholders involved in the management of protected areas in the Bogotá-Region, including government agencies, local communities, private landowners, NGOs, academia, and businesses, throughout the process to ensure that their perspectives, knowledge, and needs are integrated into the planning process. This includes workshops, focus group discussions, interviews, and participatory mapping exercises.
    - **Ecosystem Services Valuation:** Assess the ecosystem services provided by protected areas, including water regulation, carbon sequestration, soil conservation, and biodiversity conservation. Quantify the economic value of these services and their contribution to local livelihoods, economies, and climate resilience.
    - **Climate Change Vulnerability Assessment:** Analyze the vulnerability of protected areas in the Bogotá-Region to climate change impacts. Evaluate potential changes in temperature, precipitation patterns, extreme weather events, and other climate variables and how they impact ecosystem services. Identify high-risk areas and prioritize them for EBA interventions.
    - **Planning strategies:** An analysis is conducted that integrates key variables of the baseline assessment and ecosystem service valuation based on conservation objectives and supported by GIS. A zoning proposal is generated according to the management category possibilities of the protected area indicated by regulations.
    - **Identification of EBA Measures:** Identify and evaluate potential EBA measures that can enhance the resilience of protected areas in the Bogotá- Region. These options may include restoring degraded ecosystems, implementing sustainable land management practices, creating green infrastructure, promoting agroforestry and sustainable agriculture, and enhancing natural habitat connectivity.
    - **Cost-Benefit Analysis and financial mechanisms:** Conduct a cost-benefit analysis of different EBA options to assess their feasibility and potential impacts. Consider both financial costs and benefits, as well as social and environmental co-benefits. Prioritize options that offer multiple benefits and have high potential for long-term financial sustainability.
    - **Integration into Environmental Management Plans:** Integrate selected EBA options into the EMPs of protected areas, both under public and private governance. Ensuring that EBA measures are aligned with existing conservation objectives, management strategies, and regulatory frameworks. Develop clear action plans, timelines, monitoring and responsibilities for implementation as well as identify the linked financial mechanisms that are available for investing in protected areas that are described in Component 3.

Output 1.2. Increased ecological restoration and rehabilitation of high Andean ecosystems in 5,000 ha within the most climate-vulnerable areas of the Bogotá – Region Landscape.

84. The project aims to ensure the restoration, recovery, and rehabilitation of 5,000 ha of the most degraded areas within strategically identified ecosystems for water provision and regulation with the involvement of the local communities and rural aqueducts. To be more specific, these activities will be implemented within the supplying basins of the prioritized rural aqueducts (a total of 35, see activity 3.1.4), which are integral components of the water supply system for Bogotá. Ecological restoration, recovery, and rehabilitation of high Andean ecosystems offers numerous benefits, such as improved water availability and quality of water resources, flow regulation, and increased resilience to changes in precipitation and temperature. It also contributes to ecosystem integrity and connectivity, carbon sequestration, and biodiversity protection. The identification of cost-effective restoration areas is crucial for transitioning towards a successful IWRM strategy.

Activity 1.2.1. Ecological restoration, recovery, and rehabilitation actions in the most degraded areas within strategic ecosystems enhance the provision, regulation, and quality of water resources, with the involvement of the local communities and rural aqueducts.

85. Activity 1.2.1 primarily focuses on restoring, recovery and rehabilitation efforts on 5,000 ha of strategically selected publicly owned areas, particularly in protected areas, buffer zones surrounding paramo complexes, and supply basins to rural aqueducts, to alleviate pressure from agricultural and urban expansion. Implementation of restoration activities poses significant challenges, including high costs and social complexities associated with undertaking restoration projects on private lands, where landowners often prioritize productive activities. To determine the areas for restoration potential, the project based its prioritization analysis on a study conducted by the *Adaptation to climate change in high Andean Mountain GEF project*, which considered factors such as water ecosystem services, water supply regulation, and ecological integrity, as well as the diversity of flora and fauna species (refer to the Annex 1 for detailed information). Additional fieldwork will be conducted to refine this indicator as part of funding proposal development, ensuring a robust and evidence-based approach to project implementation. CI will provide small cash subgrants to local women associations and youth collectives to support these restoration activities.

Activity 1.2.2. Build a community and commercial nurseries network for the propagation and supply of native species material for ecological restoration promoting the recovery of degraded areas in high mountain ecosystems.

86. In addition, under Activity 1.2.2, the project will establish a network of community and commercial nurseries for the propagation and supply of native species for ecological restoration and the recovery of degraded areas in high mountain ecosystems. Specifically, the activity includes the technical strengthening of seven (one per intervention area) existing local nurseries (with community, research, or commercial goals) to increase the production capacity to at least 80,000 seedlings for restoration, as well as improve technical, administrative, and financial capacities of community associations. The project will also establish at least 20 low-cost family nurseries in smallholders' lands, leveraging expertise in restoration practices. Under technical guidance, these nurseries will propagate native species, improve growth processes, and provide plant material for restoration activities.

87. During the project's implementation, these nurseries, led by the grassroots communities in each intervention area, will sell the plant material to the project to meet the restoration goal. Once the project is completed and the grassroots communities have been strengthened, it is expected that these nurseries will continue producing the material to support the implementation of sustainability and project- scaling mechanisms. This activity will also facilitate the integration of scientific and traditional knowledge to identify urban and rural species with greater resilience to climate change in highly vulnerable climate and water priority ecosystems. This includes creating spaces for the exchange of local and traditional knowledge alongside scientific expertise; such collaborative initiatives enable a more holistic understanding that encompasses not only the identification of specific species but also the comprehension of essential ecological processes. Through these exchange forums, intricate relationships, such as those between plants and pollinators, can be better explored, leading to a more comprehensive ecological insight for EBA activities.

88. The strengthening of the nurseries network will generate additional socioeconomic benefits, as it promotes a new culture of engagement with rural communities and enables bioeconomy strategies that generate income and involve adults (both men and women), youth and children in climate resilient activities. The activity is crucial to the project's overall goal, as it will provide the raw material to restore degraded land and enhanced climate-resilient ecosystems.

89. The long-term environmental, social, and financial sustainability of the activities described in Output 1.2 will be ensured through the locally led implementation model designed to execute restoration and rehabilitation work. Drawing from lessons learned from previous restoration and rehabilitation projects in the Bogotá-Region, particularly from the outcomes of the GEF Climate Change Adaptation project, environmental and social sustainability of the restoration and rehabilitation work, will be guaranteed by involving grassroots associations such as community action boards, rural aqueduct boards, women's associations, producer associations, and youth collectives, in the implementation and execution specific subgrants to achieve the restoration and rehabilitation goals. This implementation model is based on strengthening the technical and administrative capacities of grassroots associations to implement restoration and rehabilitation subgrants, accompanied by ongoing technical support from the project team during the first two years after the restoration and rehabilitation work. To ensure the financial sustainability of the restoration and rehabilitation outcomes, privately owned properties intervened in this output will be linked to the proposed Regional Payments for Ecosystem Services scheme outlined in Component 3.

Output 1.3. Implement nature-based solutions for urban adaptation and disaster risk reduction by restoring 199 ha of degraded urban ecosystems within the Tunjuelo river watershed: wetlands, forests, and water bodies, enhancing ecosystem connectivity between the high mountain areas and the Bogotá River (Annex 3).

Activity 1.3.1. Develop the ecological rehabilitation of El Tunjo wetland complex by restoring hydrological and ecological connectivity between Tunjuelo river and the wetlands' floodplain, improving the quality and regulation of urban runoff water to reduce flood risk for the surrounding communities.

90. Activity 1.3.1 focuses on mitigating the increased risk of flooding in the urban portion of the Tunjuelo River caused by the rise in precipitation and extreme events due to climate change. By restoring the hydrological and ecological connectivity between the Tunjuelo river and the wetlands' floodplain, this will improve the quality and regulation of urban runoff water and reduce flood risk for the surrounding communities. The project will restore the seven wetlands within the El Tunjo wetland complex in four phases. Phase one consists of recovering the wetland bodies affected by debris and waste landfilling. Phase two reconnects the Tunjuelo River with its wetlands, restoring hydraulic and ecosystem connectivity. Phase three comprises rehabilitation of the aquatic and terrestrial vegetation within the ecosystem. Finally, phase four involves the implementation of Sustainable Urban Drainage Systems (SUDS) in the public parks adjacent to the wetland, improving water regulation, water quality, and the well-being of the inhabitants by providing better conditions in the public space. This activity aligns with the project's climate target by restoring 52 ha of urban wetlands which will reduce the direct flood risk to 250,000 people. Even though the intervention area is moderate in terms of the number of hectares to be restored, the activity supposes a critical paradigm shift to Latin American cities, as it enhances knowledge of EBA and its suitability to managing water-related hazards in densely populated areas. (For activity details, please refer to Annex 3).

Activity 1.3.2. Ecological restoration, recovery, and rehabilitation actions in the most degraded urban areas within the Tunjuelo river basin, including the Border Parks.

91. Activity 1.3.2 focuses on the Border Parks located within the influence areas of the eastern hills of Bogotá (Annex 3). These parks directly contribute to ecosystem connectivity and disaster risk reduction exacerbated by climate change in the middle basin of the Tunjuelo River system. The Border Parks that are within the southeastern hill areas and connect with Bogotá's main ecological structure cover a total of 526 hectares (Table 2, urban wetlands and forest) and are situated within the adaptation zone defined in Bogotá's Territorial Planning Plan. The project will impact 147 ha of forest (28 % of the total area prioritized by Bogota's environmental authority) that are located within the Tunjuelo river watershed. This intervention will reduce direct impacts of climate change (landslides, fires, and avalanches), which will benefit 54,285 people. The Border Parks are defined as "open spaces located on the edges of the city that function as transitional and connecting spaces between urban environments and rural areas, as well as other components of the main ecological structure of the city. These spaces can be either continuous or noncontinuous, and their purpose is to facilitate a spatial transition and connection between urban fabrics at the edge and rural dynamics. They are intended to contribute to the maintenance of the ecological integrity of the adjacent ecosystems."[35] Within them, the project will implement conservation zones and restoration efforts to support landslides management and silvicultural and agroecological management. In these Border Parks, several streams are threatened by high- and medium-level flash floods exacerbated under climate change scenarios. The implementation of Activity 1.3.2 will also help reduce the threat of flash floods by improving water regulation and ecosystem conditions in the eastern Tunjuelo river watershed.

92. In general, interventions in biodiversity conservation, ecosystem restoration with silvicultural management, landscape recovery with native species, and the implementation of agroecological systems will help address expected climate change impacts—including increased precipitation and temperature—by reducing the risk of disasters such as landslides and forest fires. Additionally, the environmental recovery of the forest within the urban area of Bogotá contributes to ecosystem connectivity with the rest of the sustainable landscape in the Bogotá-Region Landscape through the restoration of ecological corridors. Furthermore, by restoring the forest, the project will also improve the connection between the residents of surrounding neighborhoods and nature, improving citizen health. In the southern part of the city, project interventions in the Border Parks will also support initiatives in the Tunjuelo river upper watershed, an area call Media Luna del Sur (see Annex 3 for details), that will help reduce uncontrolled urban growth in this part of the city, and create a conservation front, and improve ecosystem connectivity. These actions correspond to necessary climate change adaptation measures to reduce flood and drought risk downstream and make Bogotá a climate-resilient city.

Component 2. Foster sustainable livelihoods of the most vulnerable communities through a just labor transition for water-resilient rural and urban areas.

93. Component 2 of the project focuses on addressing the pressing climate-related challenges faced by rural and urban communities in the Bogota-Region Landscape and the impact in land degradation and reduction in its capability to capture and regulate water. These communities confront severe water- and climate-related risks (see B1 and Annex 4 for details) that directly jeopardize their livelihoods. To overcome these challenges, Component 2 has a comprehensive approach that integrates ecosystem-based adaptation measures, sustainable agricultural practices, and just labor transitions to enhance water resilience, promote sustainable farming, and ensure fair employment conditions for long-term sustainability and scalability. It places a strong emphasis on empowering local communities, exchanging traditional and scientific knowledge, and establishing the pathway to resilient, just,

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and prosperous rural communities in the Bogota-Region Landscape and the protection and recovery of the water environmental services provided by its ecosystems.

94. The Component activities include improving water security through halting land degradation and the loss of critical ecosystems caused by the expansion of agricultural and livestock activities and promoting climate-resilient agriculture practices to improve crop yields and minimize environmental impacts. Moreover, it is dedicated to facilitating equitable labor transitions, ensuring that rural workers have access to fair and sustainable employment opportunities. This necessitates the design and implementation of ecosystem-based adaptation measures through interinstitutional and participatory coordination with the local population. The diversification of livelihoods and support for alternative income sources are pivotal elements of the project that will reduce the vulnerability of these rural and urban communities to the adverse effects of climate change, all while enhancing their economic prospects and overall well-being.

Output 2.1. Traditional smallholder farming transformed into sustainable and climate-resilient production systems to increase productivity and wellbeing of 2,100 families in 10,500 ha of the most climate vulnerable rural areas.

Activity 2.1.1 Implement sustainable and climate-resilient agricultural production models in 10,500 ha of the most climate vulnerable rural areas.

95. For Activity 2.1.1, the primary aim of is to bolster the adaptive capacity of rural livelihoods and ecosystems within the climate-vulnerable Bogotá–Region Landscape. To be more specific, these activities will be implemented within the supplying basins of the prioritized rural aqueducts (a total of 35, see activity 3.1.4), which are integral components of the water supply system for Bogotá. It is designed to encourage the emergence of more resilient, productive, and innovative solutions through a collaborative framework that emphasizes the deployment of ecosystem-based adaptation measures. In doing so, the project will engage all segments of the rural population in a comprehensive effort to ensure water security, facilitate social development, and enhance economic well-being. To achieve these ambitious goals, the project is underpinned by three core strategies:
    (i) **Implementing sustainable and climate-resilient agricultural production models:** This cornerstone strategy centers on the establishment of sustainable agricultural and livestock production systems characterized by regenerative practices. They include ecological restoration, judicious water management, and the adoption of agricultural best practices (including soil management, the reduction of synthetic chemical inputs, waste minimization, and energy conservation). Furthermore, the integration of climate and climate change data into decision-making processes is fundamental to developing production models that can withstand the impacts of climate change. Importantly, this strategy establishes a strong link between climate change adaptation and addressing water supply challenges exacerbated by climate change.
    (ii) **Facilitating stakeholder engagement and building climate change adaptation agreements with vulnerable communities:** This strategy focuses on fostering stakeholder engagement and establishing climate change adaptation agreements with communities located in highly vulnerable areas. The objective is to actively involve these communities in the planning and execution of sustainable agricultural production and promote water-resilient food systems. Through approximately 2,100 climate change adaptation agreements, the project will ensure the seamless integration of climate change adaptation measures into family, community, and socioeconomic planning, with a pronounced focus on territorial and adaptive considerations. These activities empower local communities, promote gender equity, enhance their well-being, build their adaptive capacity, promote sustainable agricultural practices, and contribute to the overall resilience of the Bogotá-Region Landscape in alignment with the project's goals.
    (iii) **Participatory farm planning for water and land management:** The third strategic element centers on facilitating participatory planning processes that govern the equitable access and reasonable utilization of water and land resources for agricultural purposes based on climate projections and climate change scenarios. The overarching goal is to incentivize the voluntary allocation of smallholders' land for ecological restoration and rehabilitation, thereby advancing adaptation efforts and reducing disaster risks at various scales, beginning with individual production farms and scaling to sub-watersheds and watersheds. Local climate adaptation actions can aggregate into water resilience for the Bogotá-Region Landscape.

96. This activity will be implemented in two phases:
(i) The first phase focuses on the participatory restoration of degraded areas located on private lands, with the primary objectives of enhancing landscape connectivity, safeguarding water resources, and mitigating the impacts of climate variability and climate change on production systems. This includes measures such as designating critical water regulation zones, conserving, and protecting native vegetation, and passively restoring degraded areas. The overarching goal is to implement restoration activities covering at least one hectare per farm, within the private lands of the rural families benefiting from the project. To ensure the highest level of ownership and promote long-term sustainability, these restoration activities will be implemented

through a collaborative approach, involving technical leadership from the project team and active participation from the beneficiary families and community organizations.

(ii) The second phase focuses on climate-resilient production systems, encompassing various strategies such as the adoption of agroecological approaches, the implementation of water harvesting techniques in greenhouse farming, and the adoption of silvopastoral systems. These actions aim to improve food production, conserve water resources, and enhance overall climate resilience. These efforts not only contribute to the restoration of degraded soils and improved ecological connectivity within the landscape but also diversify production systems, thereby reducing vulnerabilities associated with traditional practices solely focused on potato cultivation or dairy and meat production, and climate change. These activities align with the project's climate targets and aim to ensure the sustainable management of 10,500 hectares of land, ultimately relieving the pressures on high Andean ecosystems caused by agriculture and livestock activities. CI will also provide local producer associations with small cash and in-kind grants to support farm-level climate-resilient agriculture activities.

97. The collective endeavor underlines a comprehensive commitment to climate change adaptation and ecosystem restoration, with an emphasis on community engagement and sustainability Climate Adaptation Agreements form a vital component of the strategy, serving as a tool to incentivize nature conservation and restoration. These agreements are characterized by their community--centered socio-economic and adaptation outcomes, monitoring protocols for ecological and climate targets and trends, and compliance with shared watershed adaptation commitments and strengthen resilience rural aqueducts activities (Output 3.1). Importantly, they provide a transparent, systematic, and detailed approach to negotiating conservation and climate adaptation obligations with the community. In return, incentive packages, such as the transformation towards sustainable and water–resilient production systems, are developed collaboratively with the community to support sustainable livelihoods. To ensure long-term sustainability beyond the project period, all supported farms are owned by the community or individual households, with capacity building provided throughout the project's duration.

98. The establishment of water resilience in the Bogotá Region relies on three foundational elements: firstly, identifying areas where nature-based solutions offer the most cost-effective means to mitigate climate risks and adapt to evolving hydrological patterns. Secondly, fostering the necessary conditions to cultivate local water governance at the municipal level, and regional governance within the broader Bogotá-Region supply system, thereby ensuring water security for all inhabitants. Thirdly, developing robust financial mechanisms to sustainably fund the maintenance and expansion of nature-based solutions, alongside supporting ongoing governance processes.

99. In alignment with this strategy, intervention areas of the project have been strategically prioritized based on three key criteria: vulnerability to climate change, association with reservoir systems supplying the Bogotá-Region Aqueduct, and significance as watershed sources for rural and municipal water supply systems. Accordingly, actions outlined in Component 1 (Outputs 1.1 and 1.2), Component 2 (Outputs 2.1 and 2.2), and Component 3 (Output 3.1) will be executed within the most climatically vulnerable watersheds that serve as vital sources for rural and municipal water supplies, particularly those interlinked with Bogotá's local water supply systems.

100. Leading the participatory planning process, Activity 3.1.1 aims to develop comprehensive Climate Change Adaptation Plans tailored to the prioritized watersheds. This initiative seeks to harmonize planning instruments around water management, integrating conservation areas (Activity 1.1.1), restoration efforts (Activity 1.1.2), and sustainable production systems (Activity 2.1.1) into a unified framework, thereby safeguarding local water resilience. As additional prioritized watersheds are incorporated, this approach will ensure the enhancement of regional water resilience across the Bogotá Region.

Activity 2.1.2 Productivity and profitability of climate-resilient agriculture and livestock activities improved through strengthening sustainable and resilient value chains and business plans as part of just labor transitions towards nature-positive economies in high-mountain ecosystems.

101. The primary goal of Activity 2.1.2 is to bolster the productivity and economic viability of rural communities while concurrently promoting climate change resilience, environmental conservation, and water resource management. This initiative focuses on enhancing the organization and capacity of producer families and community groups and increasing the value of existing agricultural products cultivated through agroecological and regenerative livestock practices. Additionally, it aims to strengthen local and regional marketing channels to showcase existing agribusinesses that incorporate climate change adaptation measures by supporting and promoting existing dedicated marketing channel for climate-resilient agriculture in each intervention area. In doing so, the project will foster sustainable economic growth within vulnerable rural communities and a just labor transition towards nature positive economies in rural regions, ensuring the long-term viability of resilient production systems and preventing the abandonment of EBA strategies, and the degradation of high Andean ecosystems through agricultural extension.

102. This activity encompasses two key strategies:
   (i) Value Addition to Agricultural Products: By enhancing the market appeal of existing products derived from agroecological and regenerative livestock systems, the project will enhance distinct value chains within local and regional markets. This strategy supports equitable economic transformation for rural labor forces and safeguards critical ecosystems essential for regional water supply.
   (ii) Comprehensive Business Plans: Detailed business plans for differentiated and functional agricultural products will be developed and implemented, that integrate climate adaptation measures. These plans will assess economic dynamics, technical feasibility, and competitiveness, enabling the formulation of strategies such as promoting low-water-demand crops, implementing regenerative farming and livestock practices, obtaining green certifications, strengthening cooperatives, and streamlining supply chains.

103. Key aspects of Activity 2.1.2 involve:
   (i) Market Analysis and Product Selection: identifying potential buyers and markets for differentiated agricultural products through comprehensive market analysis, ensuring informed product selection and market expansion.
   (ii) Sustainable Production Practices: standardizing production processes by incorporating good agricultural practices and management, adopting agroecological principles and adhering to quality and labeling standards.
   (iii) Competitive Strategies: developing strategies to set identified products apart in target markets, including innovation in product preparation, value addition, and strategic partnerships.
   (iv) Branding and Identity Building: designing branding that leverages the unique attributes of high Andean ecosystems and emphasizes local and regional strengths, appealing to conservation-minded consumers.
   (v) Promoting Collaboration: encouraging collaboration among producer groups and organizations to collectively enhance marketing efforts, fostering solidarity and territorial identity crucial for regional climate adaptation.

104. Two key strategies are employed to enhance marketing channels:
   (i) Strengthening Existing Distribution Networks: improving accessibility and visibility of climate-resilient agricultural products within established distribution channels.
   (ii) Communication and Promotion: leveraging appropriate communication channels to inform potential customers about product attributes and benefits, conducting advertising campaigns, creating producer catalogs, participating in local and regional markets, and establishing connections with innovation hubs for added value and market opportunities.

105. The objective of the GCF financing is to develop and implement two comprehensive value chains and business plans that integrate climate change adaptation measures within each intervention area, ultimately contributing to resilient and sustainable economic growth in rural regions. This financing is crucial because vulnerable rural families have no other possible sources of funding to implement climate change adaptation actions, and public resources are insufficient to promote such activities among small producers. Furthermore, rural families have no access to microcredit. As evidenced in several public pilot projects on the subject (for more details, see Annex 4), the financial sector does not align with the actual needs of small agricultural producers, given the specific conditions of each production system in terms of investment, timing, profitability, and risks. Co-financing from various sources and partnerships with local governments and regional organizations will further strengthen the project's impact, while robust financial and monitoring and evaluation mechanisms (Component 3 and 4) will ensure its long-term success.

Output 2.2. Economic dependency of rural communities is reduced through the promotion of climate change resilient and sustainable economic alternatives.

106. One of the primary objectives of Output 2.2 is to reduce the economic dependence of rural communities on conventional production systems, such as potatoes and dairy, which are highly vulnerable to climate change and lead to the loss and degradation of ecosystems crucial for the region's water security. Under this output, the project will focus on developing and strengthening productive alternatives that are resilient to climate variation, deeply rooted in rural culture and are more resource-efficient–utilizing less land area and optimizing water resources.

Activity 2.2.1 Promote 12 innovative climate-resilient smallholder farming production alternatives to reduce ecosystem degradation and diversify sustainable Production Portfolio in high-mountain regions.

107. Activity 2.2.1 involves collaboration among various stakeholders to identify and support innovative production options. These could include the cultivation of blueberries, ground cherries, currants, and aromatic and medicinal plants, as well as Andean crops like cubios, arracachas, quinoa, and amaranth, among others. This activity is seen as an incubator for new climate-resilient ventures, offering development opportunities that will significantly enhance the livelihoods and well-being of rural communities in the high-mountain region, and will create a

paradigm shift of low impact and sustainable agriculture production in the Bogotá-Region Landscape that is both economically viable and climate resilient. The goal is to establish two innovative climate-resilient production alternatives per intervention area, to promote economic diversification and enhanced livelihoods for rural communities.

Activity 2.2.2 Support 14 sustainable tourism initiatives in urban and rural communities to promote just labor transition towards nature positive economies and climate resilient livelihoods.

108. Activity 2.2.2 focuses on identifying and consolidating existing sustainable tourism projects that protect and promote the natural and cultural heritage of the Bogotá-Region Landscape. By harnessing the wealth of biodiversity in the area, this activity aims to create income opportunities for rural communities while enhancing their climate resilience and reducing land use conflicts between agricultural production and strategic ecosystems for freshwater services. Within the seven intervention areas (which include rural, urban, and peri-urban areas), the project will support sustainable tourism initiatives that protect and promote the natural and cultural heritage of the Bogotá-Region Landscape. The project will address social conflicts associated with restoration efforts and create enabling conditions for both urban and rural communities to benefit from the implementation of EBA, enhance community engagement, and provide economic opportunities for both the urban and rural populations. By doing so, the project will foster a sense of ownership and stewardship among the communities, leveraging the potential of EBA for sustainable flood and drought risk reduction and climate resilience.

109. The project aims to support two sustainable tourism projects per intervention area (14 in total) as well as protect regional biodiversity and cultural traditions to reduce land degradation and enhance EBA for water security and reduce flood and drought risk.

Component 3. Accelerate climate change adaptation through promotion of enabling conditions for water governance, scaling, and sustainability.

110. Component 3 aims to expedite local water governance, coordinate efforts for regional climate change adaptation and overcome financial capacity barriers for long-term sustainability and scalability.

Output 3.1 Foster regional and local water governance, by advancing an IWRM model, and empowering the most vulnerable communities through capacity building.

111. Combining local adaptation measures can yield significant regional impacts. Therefore, Output 3.1 focuses on enabling water governance towards the implementation of an IWRM model at the micro-watershed level in the Bogota-Region Landscape. These specific micro-watersheds were chosen due to their heightened vulnerability to climate change and their critical role in ensuring local and regional water security (Annex 10).

112. The core challenge identified is the lack of comprehensive water-resilient climate change adaptation plans at the micro-watershed level necessary for developing ecosystem-based adaptation in both rural and urban areas to address climate change impacts on water security and flood and drought risk. To overcome this challenge, Output 3.1 aims to enhance territorial governance systems and community socio-environmental management. This involves promoting stakeholder participation, optimizing climate change knowledge, managing water conflicts, and fostering social and gender inclusion in water resource decision-making. The project outlines four interconnected and interdependent activities to promote water governance and implement the IWRM model, including micro-watershed adaptation planning, stakeholder coordination, strengthening grassroots associations, and fortifying community-based water supply systems. These activities aim to create a foundation for long-term, sustainable water governance in the region. They are briefly described below.

Activity 3.1.1 Climate change adaptation plans to improve local water governance by promoting IWRM to improve water security and reduce floods.

113. Under Activity 3.1.1, the project will develop climate change adaptation plans at the micro-watershed level (micro-watershed adaptation plans) to bridge the gap between national needs outlined in the NDCs and the specific hydro-climatic risks faced at the local level. These plans will be developed through the following sub-activities:

114. Collaboratively develop micro-watershed adaptation plans with a landscape-based approach by facilitating participatory planning processes with the most vulnerable local communities; the aim is to clearly outline Three key points to have a water-resilient landscape: regulate water access and usage, and land use for productive purposes; and establishing plans for ecological restoration, recovery, and rehabilitation. These efforts will drive adaptation and disaster risk reduction initiatives at both the watershed and micro-watershed scales. The project will develop these EBA plans for 14 micro-watersheds that have identified key factors influencing vulnerability at the watershed level, integrating existing secondary information with the invaluable knowledge held by local communities. This activity aims to integrate this information into priority intervention areas within each micro-

watershed, prioritizing conservation, restoration, and sustainable use actions that deserve attention. The establishment of micro-watershed adaptation plans holds immense potential for consolidating clear investment strategies across all micro-watersheds, encouraging participation and financial contributions from both public and private entities.

115. Empower and support community organizations, such as women's associations, community action boards, producer associations, water utilities boards, among others, to participate actively in the local decision-making process of water governance. These organizations will be actively engaged in the development and implementation of micro-watershed climate change adaptation plans to improve local water security and disaster risk management. By involving these organizations, we can tap into their local knowledge and expertise to identify and implement solutions addressing water security challenges in the face of extreme climate events. Through a participatory approach, community members will actively contribute to the planning and decision-making processes, ensuring that their needs and concerns are considered. This activity focuses on building the management capacities of rural organizations to enhance their resilience to climate change, enabling them to actively participate in climate change adaptation efforts.

116. To generate and implement socio-environmental and Climate Change Adaptation agreements for the conservation and sustainable use of natural resources under a micro-watershed climate change adaptation plan, it is essential to create a social space for defining commitments among community members participating in the project. These commitments revolve around establishing rules for access, management, use, and conservation of local resources; aiming to satisfy domestic and cultural needs while promoting the sustainable development of productive activities. This, in turn, contributes to the well-being of rural families in the high mountains. The socio-environmental and Climate Change Adaptation agreements are expected to facilitate the initiation of actions for climate change adaptation, as well as mitigation, prevention, and control of threats to remaining ecosystems and production systems. This will help ensure the provision and regulation of water resources. The social function of the actions taken at the property, watershed, village, and regional levels becomes significant in these commitments, as they seek to improve the well-being of communities and, consequently, the conservation of natural resources at a regional level. The agreements should include management mechanisms related to seeking support for the planned actions, including technical assistance, organizational strengthening, and financing, and should be supported by institutional actors with jurisdiction in the territory.

117. This proposal is designed to partially implement at least 14 out of 31 micro-watershed adaptation plans with GCF funding, given that components 1 and 2 are designed to be implemented in these 14 prioritized micro-watersheds, aligning, and thus integrating all 3 project components. The climate change adaptation plans for each micro-watershed will be vital in implementing the National Policy for Integrated Water Resource Management and the directive to implement the Environmental Management Plans for Micro-watersheds (PMAM). These plans offer promising sources of funding to ensure sustainability, given that these 14 micro-watersheds serve as the primary water supply for municipal water systems and contribute to the Bogotá water supply system. Furthermore, the project aims to catalyze fundraising for the implementation of climate change adaptation plans in the additional micro watersheds, through a bold collaboration between the public and private sector and the implementation of Output 3.2.

Activity 3.1.2 Generate coordination and ownership regarding water security among institutions, communities, and social actors in the project area by strengthening knowledge about climate change, through participatory research and facilitating multi-stakeholder dialogues.

118. Activity 3.1.2. aims to generate coordination and ownership regarding water security among institutions, communities, and social actors in the project area by strengthening knowledge about climate change through participatory research and facilitating multi-stakeholder dialogues. Furthermore, this activity aims to generate citizen science and intergenerational knowledge for managing processes that enhance inclusive participation and address conflicts related to water access and use under climate change scenarios. This activity is designed under the premise that to design and implement the climate change adaptation plans, social-network restoration is required.

119. The activity includes the development of a series of 14 intergenerational dialogues to reclaim traditional rural knowledge associated with the conservation and sustainable use of high mountain ecosystems. The objective is to build the Climate Change Adaptation Plans upon the most vulnerable rural community’s legacy and the lessons learned from the actions done by different generations for high Andean ecosystems preservation and for shaping future decisions, particularly in the new conditions determined by climate change. Through a series of field trips, workshops, and conversations between older adults and young people, the project will identify knowledge that is part of the cultural tradition concerning the management of high mountain ecosystems. The aim is to recover knowledge related to agricultural activities, environmental protection, and water use, and introduce them as the operational foundation of the Climate Change Adaptation Plans at the micro-watershed level.

120. The project also recognizes the importance of knowledge exchange and reflection in building community resilience. By facilitating at least 12 knowledge exchange visits among highland producers, we aim to create opportunities for farmers to share experiences, insights, and best practices related to climate change adaptation. These field visits will foster collective learning, enable the comparison of information at different levels, and contribute to the construction of knowledge through collective reflection. By connecting farmers from different regions and promoting the exchange of ideas, we can enhance resilience and promote the adoption of climate-resilient practices to enhance water security and reduce flood and drought risk. These exchange processes will form the foundation for building technical capacities for informed decision-making among grassroots associations (women, producers, youth collectives), community action boards, community-based water supply systems, and other key actors within the micro-watershed. The objective is to construct a robust water governance process. These processes will enhance the long-term social implementation and sustainability of Climate Change Adaptation Plans at the micro-watershed level.

121. Social dialogue between high mountain farmers and urban residents is a crucial aspect of fostering understanding, cooperation, and collaboration between these two distinct communities. By facilitating at least two dialogues per intervention area, the project will provide a platform for open and constructive communication, enabling both groups to exchange knowledge, share experiences, and work together towards common goals. In this context, high mountain farmers can convey their traditional agricultural practices, knowledge of the local environment, and the challenges they face due to climate change and resource management. On the other hand, urban residents can contribute their perspectives on urban sustainability, consumer choices, and the importance of supporting rural communities for ecological and food security reasons. Through this social dialogue, both groups can find common ground, identify shared interests, and develop strategies for sustainable coexistence and mutual benefit. This can lead to more inclusive and effective solutions for addressing climate change, conserving natural resources, and promoting resilient, sustainable communities in the high mountains and urban areas alike.

122. The dialogue between rural and urban residents is rooted in the very essence of the water security paradigm shift and the necessity of managing water resources comprehensively, from the source to the end user. These urban-rural dialogues aim to (i) strengthen and foster the productive processes of Component 2 and (ii) facilitate paradigm shifts in public policy mechanisms presented in Output 3.2, which generate long-term financial sustainability, by demonstrating the interconnections between actions carried out in the high mountain areas by rural communities and the supply system of the Bogotá-Region Landscape.

Activity 3.1.3 Design and implement project portfolios for climate change adaptation that enhance the capacity of key social organizations, primarily women and youth, driving local socio-economic development and improving water governance.

123. Activity 3.1.3 focuses on designing and implementing 14 water governance plans (based on the micro-watershed adaptation plans developed under Activity 3.1.1) that strengthen the adaptive capacity of social organizations crucial for local socio-economic development in the Bogotá-Region Landscape. These organizations, such as rural water aqueducts, women's associations, rural youth groups, and artisans' collectives, play a vital role in community livelihoods and resilience. The projects will aim to enhance the adaptive capacity of the social organizations by focusing on initiatives that build resilience, improve water and natural resource management practices, and empower these organizations to effectively respond to climate change. By supporting these organizations, we aim to promote sustainable development and ensure that vulnerable communities have the necessary tools and resources to adapt to climate change.

Activity 3.1.4 Strengthen resilience of rural aqueducts as the pillars of transformation toward territorial water governance.

124. The overarching goal of Activity 3.1.4 is to ensure the long-term sustainability of rural aqueducts in the Bogotá-Region Landscape through EBA, a green-gray infrastructure approach, improved governance and by strengthening the comprehensive capacities of rural communities towards climate-resilient community-based water supply systems, recognizing them as managers of local water resources and the communal and environmental heritage of the Bogotá–Region Landscape. These aqueducts play a strategic role in the quality of life for many farmers, for whom there is no alternative for accessing water.

125. The project aims to create a pilot program focused on a model for rural aqueducts that can adapt to the impacts of climate change. This model will encompass environmental, technical, financial, and regulatory considerations. The pilot program will serve as a technical resource to enhance the legal and regulatory framework for rural aqueducts across the country. This activity will serve as a critical input for the Comprehensive Sectoral Climate Change Management Plan of the Ministry of Housing, City, and Territory (PIGCCS, Resolution 431 of 2020) and the sectoral commitments ratified in the Climate Action Law (Law 2169 of 2021). These commitments prioritize climate change adaptation actions to fulfill the sector's water and basic sanitation commitments in the Nationally Determined Contributions (NDC). These aqueducts currently grapple with numerous management and

operational challenges, which are being further intensified by the escalating climate crisis in the Bogotá-Region Landscape.

126. The project will promote capacity building and governance enhancement by conducting a comprehensive training program consisting of six theoretical-practical modules, addressing crucial aspects of aqueduct management and governance. These modules will be delivered through participatory workshops involving 35 rural aqueducts in the region. These 35 aqueducts and their respective supplying basins have been prioritized due to their strategic importance for local water security. Components 1 and 2, related to the protection and restoration of freshwater ecosystems and the conversion and diversification of productive systems, are designed to be implemented in these 35 supplying basins and carried out by grassroots organizations. The goal is to implement a locally-led adaptation process that responds to the needs of local communities and strengthens community-centered water stewardship processes. This will involve engaging with the aqueduct management boards, community leaders, and other relevant stakeholders to ensure buy-in and support for the project. By doing so, the project will involve different strategies for a diverse group of participants, including board members, technical and administrative teams, and community leaders, fostering a sense of ownership and inclusivity. Furthermore, to consolidate the gains made through the training program, the project will provide technical support to each aqueduct group until the end of the project and will promote the involvement of regional and local authorities to foster long-term sustainability in the processes. This support will include addressing any management concerns, resolving operational challenges, and facilitating climate change adaptation. By offering continuous guidance, the project will foster a culture of improvement and ensure the long-term resilience of the aqueduct systems.

127. The community-based water supply systems are the pillars of transformation toward territorial water-resilient governance. Therefore, the long-term sustainability of activity 3.1.4 will focus on (i) social engagement and strong community decision-making tools and (ii) implementation of Climate Change Adaptation Plans by micro-watershed, supported by integrated water resource management included in local and regional public policy and funded through economic instruments and financial incentives available in the region as encouraged in Output 3.2. CI will provide small cash subgrants to local aqueduct and community action boards for these activities.

Output 3.2 Financial mechanisms to ensure long-term sustainability and scalability of climate change adaptation efforts in the Bogotá-Region Landscape.

128. Through Components 1 and 2, the project will protect and restore strategic ecosystems transform land use, improving ecological connectivity, increasing production, and enhancing the living conditions of vulnerable communities to create a sustainable, water-resilient landscape. These actions are part of the measures identified through participatory and social processes and are integrated into the micro-watershed adaptation plans. The goal of Output 3.2 is to create the financial conditions that enable the processes outlined in the micro-watershed climate change adaptation plans to be sustainable over time and scalable to other micro-watersheds within the Bogota-Region Landscape. By introducing economic mechanisms, grounded in the new national and regional financial public policy, and the opportunities to engage the private sector, the region can offer financial incentives to landowners, communities, and local stakeholders to adopt sustainable land use practices that bolster climate change adaptation through the conservation of water ecosystem services. The activities under Output 3.2 are described below.

Activity 3.2.1 Implement economic instruments and financial incentives, including a regional Payment for Ecosystem Services (PES) program and Environmental fees, to provide financial support to scale and sustain ecosystem-based adaptation and water security efforts.

129. Activity 3.2.1 will focus on the implementation of two recently realized national water-center financial policies that aim to foster economic instruments for watershed protection. The first instrument allows environmental authorities and territorial entities to implement a Payment for Ecosystem Services program to rural households at the Bogota-Region Landscape scale. The second instrument promotes the implementation of the environmental fee, developed by the Drinking Water Regulation and Sanitation Commission, which allows the potential addition of a fee for watershed protection to the domestic and industrial water rates. There is high interest from EAAB and the city of Bogota to activate these instruments but they have been not being designed or implemented anywhere in the country, so they represent an innovative financing opportunity for climate adaptation and water-resilience action in Colombia. These economic instruments and incentives will provide the necessary financial support for scaling and sustaining the Climate Change Adaptation Plans, reducing conflicts over land use, and contributing to the sustainable provision of water ecosystem services in the region.

130. The first instrument that allows environmental authorities and territorial entities to implement a Payment for Ecosystem Services program at the Bogota-Region Landscape-scale is rooted in the national regulatory framework, Article 111 of Law 99 of 1993 mandates that departments, districts, and municipalities allocate a minimum of one percent (1%) of their current unrestricted budget to acquire or maintain strategically significant areas for water resource conservation. In the case of Bogota City alone, this budget line could reach up to US$

50 M per year. These areas supply water to municipal, district, and regional water supply systems. In August 2023, the law was updated (Law 2320,2023), and mandates that these investments must prioritize the implementation of nature-based solutions, climate change adaptation actions, restoration, rehabilitation, and ecological recovery. Alternatively, the 1% investment can be directed towards financing schemes for PES in strategically key areas. Moreover, the new law permits municipalities to leverage territorial associative schemes and other collaborative mechanisms for cooperation and coordination with other municipalities, departments, or competent environmental authorities. Activity 3.2.1 aims to unlock a percentage of this 1% for PSE by designing a PSE instrument that fulfills with the regulation and generates confidence by the local authorities to developing the enabling conditions for its implementation.

131. The resources requested from the GCF for Activity 3.2.1 are intended to support territorial, environmental, and administrative authorities to design and implement a PES scheme. Detailed activities are described as follows:
    (i) Aligning the Climate Change Adaptation Plans at the micro-watershed level with a focus on NbS, climate change adaptation, restoration, rehabilitation, and ecological recovery, as designed in the project, with the legal requirements for investing one percent in areas of strategic importance for water resource conservation. This alignment is achieved through participatory engagement with local communities to ensure the scalability and sustainability of actions in the field. This is an effort to align the 1% investment plans from different authorities.
    (ii) Providing the necessary technical and operational support to implement a regional PES scheme that involves all territorial, environmental, and administrative authorities.
    (iii) Strengthening the administrative capacities of each territorial, environmental, and administrative authority to effectively execute the regional PES scheme.
    (iv) Establishing a joint monitoring mechanism among territorial, environmental, and administrative authorities to track investments and the impacts on water security generated by these investments (This aligns with M&E activities).
    (v) Supporting the design and implementation of a capacity-building program aimed at territorial entities and environmental authorities to ensure compliance with the investment of one percent in areas of strategic importance for water resource conservation. This includes the system for generating reports on resource management and execution in the Territorial Unique Form Information System (A national platform for monitoring public resources). This is a requirement for the national government to track PES investments through 1% funding.
    (vi) Developing operational models for the implementation of regional PES schemes that engage local economies and communities in areas of strategic importance for water resource conservation.
    (vii) Enhancing the legal and regulatory framework to promote territorial associative schemes and other coordination mechanisms for the protection of watershed areas and water sources.

132. The regional PES program will be led by an interinstitutional technical committee comprising territorial, environmental, and administrative authorities within the Bogotá-Region Landscape and will leverage $6.8 million as co-financing of the project that will directly impact 3,000 ha, located within the micro watershed prioritized in the project. This committee will collaboratively define and implement the methodology to operate the PES scheme (cash or in-kind). The project aims to coordinate the efforts of territorial entities and strengthen their operational effectiveness, and efficiency in managing the resources derived from the one percent of current unrestricted income allocated to the protection of supplying watersheds.

133. The second economic instrument that the project will be developing to ensure long-term sustainability is the environmental fee. Activity 3.2.1 will support the implementation of the environmental investment fee approved by the Water Regulatory Authority (Water and Sanitation Regulation Commission-CRA). Through Resolution CRA 907 of 2019 and its predecessor regulations, the CRA established a financial environmental instrument that allows service providers to recover the costs associated with environmental investments. The implementation of this opportunity requires a tailor-made approach for each water utility. This is achieved by modifying the tariff framework for the provision of water supply services within each utility, internalizing the externalities associated with water supply, and mobilizing service providers to finance socially and environmentally responsible investments that contribute to water security. The revenue generated is exclusively dedicated to financing environmental investments that contribute to the protection of watersheds and water resources. The potential investment amounts will vary form case to case since they will have to be clearly justified with an estimation of the return of the investment. Information and scientific modeling will be key to release these resources and will be advance during the development of the full Funding Proposal.

134. In this regard, water service companies have a significant opportunity to play a vital role in safeguarding water resources. The government's proposed model encourages additional environmental investments in support of water security by recognizing these costs in utility bills. However, despite the existence of the resolution, the feasibility of execution has been limited over the past four years due to technical, administrative, and operational challenges associated with the inclusion of NBS projects within public service companies. Activity 3.2.1 aims to

develop, within public service and sewerage companies, the enabling conditions to implement this new environmental fee at the Bogotá-Region Landscape scale.

135. The funds requested from the GCF are primarily aimed at supporting public service and sewerage companies in implementing Resolution 907 through the following key initiatives:
   (i) Building technical and administrative capacities within these public service companies (ESP) at regional and local level. This entails providing technical training for supply, environmental and planning ESP´s teams in NBS projects and ensuring a return on investment within the water supply chain.
   (ii) Assisting with technical and operational adjustments to the tariff framework, enabling the effective implementation of additional environmental investments.
   (iii) Designing a collaborative scheme between small and large water service providers, facilitating the implementation of the resolution at the Bogotá–Region Landscape scale.
   (iv) Establishing a monitoring mechanism to track investments and the impacts on water security generated by the environmental investments (This aligns with M&E).
   (v) Developing operational models for the implementation of NBS actions in 2500 ha that engage local economies and community in areas of strategic importance for water resource conservation.

136. The project aims to align the environmental investments made by public service companies (ESP) with the micro-watersheds climate change adaptation plans identified as highly vulnerable to climate change and will leverage 5.2 million as co-financing of the project This coordination is intended to generate revenue that contributes to the sustainability and scalability of these actions. The additional environmental investments prioritized by the ESPs complement the regional program for PES led by territorial, environmental, and administrative authorities and funded through one percent of the current budget. However, the project seeks to foster collaboration between the institutions and the two economic instruments to create financial incentives at the scale necessary to integrate ecosystem-based adaptation to enhance water security and mitigate flood and drought risks at the Bogotá – Region Landscape.

Activity 3.2.2 Foster private-sector investments by supporting reliable public–private schemes for long-term funding of climate change adaptation and water security efforts.

137. To unlock additional financial resources and enhance the scalability of climate change adaptation and water security efforts, Activity 3.2.2 aims to support and promote the Biodiversity and Sabana Development Alliance (the Alliance), led by an implementing partner, the National Business Association of Colombia (ANDI). The Alliance emerged as a response to the need for a public-private scheme that contributes to the comprehensive management of water resources, biodiversity, and territorial development by bringing together national, regional, and local institutions, communities, and the business sector.

138. The Alliance is composed of five public institutions, two NGOs, and ANDI, which represents more than 600 companies with offices, production facilities, and distribution centers in Bogotá, Cundinamarca, and Boyacá. These companies account for 57% of the region's GDP and represent over 20 economic sectors, including Services (28.6%), Pharmaceutical Industry, Health, and Medical Devices (25.1%), Food and Beverages (12.9%), Chemical Industry, Cleaning, and Cosmetics (12.7%), Construction Chain (10.8%), Manufacturing Industry (4.4%), Machinery, Equipment, and Automotive Parts (4.1%), and Mining and Quarrying (0.4%), as well as 21% of the region's startups.

139. By supporting this Alliance, the project can align and mobilize financial resources from the private sector and leverage their expertise and resources to support the Climate Change Adaptation Plans at the micro-watershed level. These investments will not only enhance water security and biodiversity but also stimulate socio-economic development in the region, creating employment opportunities and promoting sustainable economic growth. The financing from the GCF will be used to:
   (i) Establish the technical secretariat of the public-private scheme to implement agreements between private companies, the public sector, and communities.
   (ii) Design and implement the operational model of the public-private scheme to enable public entities, NGOs, ethnic groups, and environmental authorities to work in a coordinated manner.
   (iii) Align the Climate Change Adaptation Plans at the micro-watershed level with the Alliance's objectives to conserve natural heritage, biological corridors, include innovative programs such as protected area sponsorship, knowledge generation, and other strategies to conserve biodiversity, adapt to climate change, ensure water security, and promote a more competitive, sustainable, and resilient Bogotá-Region Landscape.
   (iv) Strengthen business capacities and create new instruments that enhance the role of biodiversity in business activities and knowledge management.
   (v) Foster inter-institutional, inter-sectoral, and community alliances to pool collective efforts in water resource management and generate coordination frameworks with other regional environmental investment plans and PES programs; and

(vi) Establish a joint monitoring mechanism to track investments and the impacts on water security generated by these investments (This aligns with M&E activities).

140. By leveraging partnerships with key private stakeholders and local industry leaders, the project expects to attract private-sector investments of at least $5.0 million in co-financing over the project duration and will seek to increase that co-financing amount during funding-proposal development. These investments will enable the implementation of the Climate Change Adaptation Plans at the micro-watershed level, focused on improving water security, in approximately 1350 ha, supporting activities under Components 1 and 2, and Output 3.1, and contributing to the socio-economic development of the region.

Activity 3.2.3 Establish a dedicated endowment fund to ensure the long-term sustainability of the monitoring and evaluation system of the impact of the Ecosystem-based Adaptation efforts to build water security and reduce flood and drought risk in the Bogotá -Region Landscape.

141. Based on lessons learned from previous ecosystem-based adaptation projects, to secure the long-term sustainability of the monitoring and evaluation system of the project and the continuous support for climate change adaptation efforts in the region, the project proposes the establishment of a dedicated endowment fund under Activity 3.2.3. Through initial contributions from GCF funds and private-sector sources, the project aims to achieve a target fund of $2 million within the first five years ($1 million in GCF funds $1 million from the private sector). This dedicated fund will generate an annual investment income of approximately $80,000 USD, which will provide a stable and predictable source of funding for monitoring adaptation and water security after the investments of the GCF project and through at least the following 20 years. This will provide reliable and robust scientific data to assess the effectiveness and impact of the EBA investments, make data-driven decisions to optimize resource allocation, and prove EBA as a cost-effective alternative to build water security and reduce flood and drought risk in highly dense regions such as the Bogotá–Region Landscape. The fund will be financed by GCF resources and will receive contributions from the private sector and regional and local authorities.

Component 4. Science-based decision-making and Monitoring, Evaluation, Accountability, Learning (MEAL) systems

142. Participatory monitoring, evaluation and learning systems, as well as generation of climate data to guide decision-making for interventions and investments will support the desired changes in the water security and ecosystems paradigms. This component will establish an a) evidence-based decision-making platform to evaluate water risk scenarios by climate forecasting information and generate data to mainstream EBA as an effective strategy to enhance water security and reduce flood and drought risk and a b) Monitoring, Evaluation, Accountability and Learning (MEAL) system to prove that EBA is a cost-effective water security and flood and drought risk solution.

Output 4.1 Science-based decision-making platform to forecast climate-related hazards model the anticipated impact of EBA interventions and monitor EBA effectiveness to enhance water security and mitigate flood and drought risk established.

Activity 4.1.1 Develop a climate modeling platform that informs decision-making for climate investments and interventions

143. The project aims to create a climate modeling platform for comprehending the implications of climate change and variability, including the El Niño-Southern Oscillation (ENSO), on regional water security and disaster risk. This platform will employ a variety of data-driven computational models tailored for long-range, medium-range, and short-range decision-making. Existing computational models, sourced from local authorities, will be updated, and adjusted for the Bogotá-Region to identify and simulate water risk scenarios. The decision-making platform will specifically focus on forecasting climate-related hazards and conducting scenario-based analytics for climate change and ENSO projections. By utilizing forecast data, it will evaluate risks through modeling climate-related events like floods and droughts, while also assessing the vulnerability of communities to water security. As a valuable tool, it will assist in implementing measures for adapting to climate change. Additionally, the integration of more comprehensive models that encompass risks, financial considerations, and assets will be explored during the funding proposal phase. This integration is intended to streamline climate-related financial disclosure reporting. The undertaking will also play a role in operationalizing water basins in intervention areas, enhancing data collection for future project evaluations.

Activity 4.1.2 Develop a Monitoring, Evaluation, Accountability and Learning (MEAL) system

144. The second tool that will be included in the decision-making platform will be an integrated MEAL for climate change adaptation and water security. This system will effectively monitor the implementation of adaptation measures and assess their impact and efficacy. It will also incorporate monitoring of hydroclimatic and water

quality variables, which are crucial for evaluating the project's overarching goal of increasing water security and reducing flood and drought risk in the Bogotá-Region Landscape. This information will provide valuable insights for territorial and local planning, as well as inform climate adaptation strategies at the farm, micro-watershed, and landscape levels. The MEAL system will also include the monitoring of the project´s co-benefits, which include biodiversity, mitigation, and socioeconomic variables.

145. The integrated MEAL system has three specific objectives. Firstly, it aims to monitor relevant biophysical and socioeconomic variables to gauge improvements in adaptive capacity and water security within the Bogotá-Region Landscape. Second, the system will evaluate the impact of implemented climate change adaptation measures, focusing on the reduction of climate change vulnerability in the water resource sector. Lastly, build robust climate and water science to prove that EBA is a cost-effective water security and flood and drought risk solution.

146. This system adopts a multi-scale spatial approach, examining the interrelationships between various levels, including farms, micro-watersheds, and ecosystems, all within the context of a broader landscape perspective. Moreover, it incorporates a multi-scale temporal approach to capture both daily climate variability and long-term changes in hydroclimatic trends attributable to climate change by directly collecting hydroclimatic information with 7 monitoring stations (one per intervention area). This comprehensive approach allows for the assessment of progress made and the effectiveness of interventions undertaken. Additionally, the system embraces an ecosystem services approach to analyze the interdependencies between high Andean ecosystems (such as paramos, forests, and wetlands), the provision of freshwater ecosystem services, mitigation efforts, and their interaction with climate-resilient productive systems.

Activity 4.1.3 Establishing a participatory climate monitoring network

147. The monitoring system will include a participatory and community-based approach, ensuring that families involved in EBA implementation, directly collect hydroclimatic information, and learn how to make this information accessible and actionable for decision-making processes related to climate adaptation at their farms. To address the water and climate monitoring needs at the local level, specifically within rural communities, the project will establish a participatory climate monitoring network. Beneficiary families participating in Project Components 1 and 2 will undertake daily measurements of variables such as temperature, precipitation, and humidity using simple measurement tools. They will then upload this information via a text-message-based mobile application. The project's core technical team will analyze this data, disseminating it at the micro-watershed level every three months. This information will inform the adjustment of climate-resilient agricultural best practices at the farm level and enhance understanding of hydrological cycles and climatic variability at the micro-watershed level. It will serve both farm-level decision-making and local water governance exercises involving grassroots associations such as community action boards, watershed aqueduct committees, women's associations, producer associations, and youth collectives. This participatory approach fosters community ownership and inclusivity, empowering local stakeholders to actively contribute to climate adaptation efforts and cultivate a climate-resilient Bogotá-Region Landscape.

148. All the data of the MEAL system and the additional primary and secondary information of the project will be part of an online platform held by the regional authorities, to support evidence-based decision-making to mainstream and scale EBA investments, upon the main stakeholders of the Bogotá-Region Landscape and measure its effectiveness to enhance water security and mitigate flood and drought risk.

149. Building on the insights gained from previous initiatives, such as the GEF project, there is a significant challenge in ensuring the long-term sustainability of the monitoring system (both scientific and community-based) and the decision-making platform. In past projects, investments were made in monitoring stations and the monitoring training of rural families. However, due to a lack of resources from local and regional environmental authorities, these efforts have had to be dismantled, and data collection has been limited to the project's lifespan.

150. To ensure the sustainability of the monitoring system and decision-making support platform, Activity 4.1.1 proposes the establishment of a perpetual endowment fund (Activity 3.2.3). This fund will ensure the gathering of data over 20 years and the availability of the best information for decision-making in the region and support the mainstreaming of EBA and IWRM approaches by assessing the impact on water security and flood reduction. The fund will be financed by GCF resources and will receive contributions from the private sector and regional and local authorities.

Output 4.2 Multi-stakeholder adaptation capacity enhanced by a multi-level learning system that incorporates traditional knowledge and gender responsiveness.

Activity 4.2 Operationalizing a multi-level learning strategy

151. the project will foster multi-stakeholder adaptation capacity by a multi-level learning strategy that incorporates traditional knowledge, and gender responsiveness. This will promote the ability to generate effective channels to communicate and raise awareness about climate adaptation among all stakeholders in the Bogotá-Region Landscape. To achieve this, appropriate information strategies will be developed for communities, environmental authorities, and territorial entities, among other actors, to establish common languages and meeting scenarios that promote EBA and water resilience in the landscape. This will help reduce socio-environmental conflicts and foster collaborative governance of territories, providing climate information that facilitates decision-making and consensus-building.

152. The learning strategy will support the development of all project components and will generate communication materials on climate change adaptation and EBA through data collection and analysis, knowledge-sharing platforms, capacity building, and stakeholder engagement to actively engage stakeholders throughout the process to ensure that the technical information meets their specific needs. The aim is to disseminate scientific data on climate change, crucial to increasing the adaptive capacity of rural and urban communities, by employing different learning strategies that promote the use of information among high mountain inhabitants and provide comprehensive and clear updates on the project's progress, democratizing access to climate change information and strengthening trust with the communities and other stakeholders. Furthermore, the learning strategy has a strong emphasis on documenting and disseminating grassroots initiatives that demonstrate and promote community-led efforts in the high mountain regions. These initiatives, originating from the local communities themselves, play a vital role in raising awareness and inspiring action towards climate resilience. The goal is to amplify the voices and success stories of these initiatives, showcasing their impact and fostering a sense of empowerment and engagement among other communities. By highlighting these bottom-up initiatives, we aim to inspire replication and scaling-up of effective climate solutions, ultimately contributing to a more sustainable and resilient future.

153. The learning strategy is the final segment of the monitoring, evaluation, accountability, and learning system (MEAL) for climate change adaptation and water security. This learning system will significantly increase the success of Component 1 implementation by enhancing the capacities of diverse stakeholders, spanning both community members and decision-makers within the public and private sectors. This entails deepening their understanding of pivotal concepts such as ecosystem-based adaptation, natural infrastructure, and nature-based solutions. Operationally, it will entail bolstering the capabilities of grassroots associations entrusted with executing conservation and restoration initiatives within prioritized regions. In urban settings, the learning strategy will provide critical support for the restoration of urban wetlands. Through disseminating hydro-climatic data to the citizens, it aims to foster a sense of ownership and engagement among residents in neighborhoods proximate to these wetlands. Moreover, the learning strategy aims to provide invaluable feedback to restoration endeavors by leveraging data collected in Activity 4.1.1, particularly regarding shifts in temperature and precipitation patterns, thereby enhancing resilience to climate change.

154. Similarly, the learning strategy will play a pivotal role in advancing the objectives of Component 2. This will involve providing targeted guidance and capacity-building initiatives for beneficiaries, particularly about the impacts of climate change on high-mountain sustainable agriculture. Moreover, it will facilitate the effective utilization of hydro-climatic data garnered through participatory monitoring (Activity 4.1.1) to optimize farm productivity. Furthermore, it will support Outcome 2.2 by enhancing the capacity of high-mountain economic alternatives, such as community tourism and diversified agricultural products. This will be achieved through the provision of comprehensive training programs encompassing climate change adaptation, sustainable production practices, and strategies for fostering a bioeconomy approach.

155. The learning strategy's significance extends further into the realm of Component 3, particularly concerning the success of the Adaptation Accelerator. By enhancing the capacities of stakeholders engaged in local and regional governance processes, the strategy will facilitate informed decision-making on critical issues such as climate change impacts, water security, governance methodologies, and the formulation of impactful agreements. Moreover, it will orchestrate training sessions within local water governance committees to promote the strategic utilization of data generated through Activity 4.1.1 for informed decision-making at the micro-watershed level. Additionally, within Output 3.2, the learning strategy is poised to develop an innovative diploma program focusing on financing nature-based solutions tailored for climate change adaptation and water security. This initiative will engage a diverse array of stakeholders, including municipal authorities, water utility companies, and local and regional environmental agencies, among others.

GENDER EQUITY

156. The project will ensure that the implementation of all project components will adhere to a gender-responsive approach. All actions are designed to guarantee that women, as vulnerable individuals within the community, have equal access to and benefit from the climate-resilient Bogotá-Region Landscape project. To ensure this, the

project will establish a comprehensive Safeguards System that will facilitate the development and implementation of a Gender Plan, along with any additional safeguard plans that may be necessary. Special considerations and provisions will be made to promote and facilitate the meaningful engagement and participation of all community members, including all family members, particularly women and young people. The project's commitment to gender responsiveness and transformation will specifically address the challenges and barriers related to gender inequities outlined in section B1.

IMPLEMENTATION ARRANGEMENTS

Accredited Entity

157. CI, through its CI-GCF Agency, will serve as the Accredited Entity (AE) for the Project. The CI-GCF Agency will oversee this project's overall oversight, including technical, financial, and administrative monitoring and supervision (through reporting, audits, and annual site visits) and review and approval of the Executing Entity's (EE) annual workplans and budgets. CI-GCF will also be responsible for providing support, guidance, and backstopping to the EE; monitoring of the achievement of Project results and Outputs; reporting to the GCF; and project closure and evaluation. CI-GCF will conduct these responsibilities, and disburse GCF funds to the EE, in line with CI's Accreditation Master Agreement (AMA) with the GCF. The CI-GCF Agency currently serves as the AE for two GCF projects addressing climate mitigation, adaptation, and sustainable livelihoods.

Executing Entities

158. The project will be executed by two executing entities, Fondo Acción, a GCF DAE, and CI Foundation, acting through its Colombia country office in (referred to in this CN as "CI" or "CI-Colombia"). CI-Colombia is a branch of CI and applies all CI policies and procedures. As EEs, Fondo Acción and CI-Colombia, will enter into a variety of agreements (including sub-grant agreements, services agreements, and Memoranda of Understanding) for this Project. They both will be responsible for Project execution, management of sub-grantees and their activities, reporting to the AE, ensuring optimal alignment of Host Country Government policies to achieve Project outcomes and Fund-level goals, and ensuring compliance with CI and GCF standards and policies and with the terms of the FAA.

159. CI-Colombia, after continuous work within the Bogotá-Region Landscape during 17 years, has deployed more than US$40 million to implement responsible practices, cultural preservation, sustainable alternatives, ecological restoration, participatory planning, protected area management, monitoring, economic incentives, and conservation interventions. The last project implemented within this framework, was the GEF "*Adaptation to climate impacts on water regulation and supply in the Chingaza-Sumapaz-Guerrero area"* project conducted between 2015 and 2021, which has served as a model for designing and implementing climate change adaptation measures in high-mountain areas. These experiences have not only contributed to policy development but also offer valuable insights for scaling up similar initiatives worldwide. The results, the lessons learned and the trust of communities, local and regional governments built by CI over the last 17 years will be fundamental for the detail project design and for implementation.CI-Colombia will also receive targeted technical support from other CI divisions in executing this project.

160. Fondo Acción is a private fund with more than 24 years of experience in the implementation of environmental projects in Colombia and the design and management of environmental financial mechanisms including endowment funds, carbon financing, blended finance and parametric insurance. It has mobilized close to US$ 200M throughout during the last 20 years. It was accredited by the GCF as a Direct Access Entity in 2018 and has implemented four readiness and preparatory support projects funded by the GCF. Its experience working with communities and with financial mechanisms will be extremely valuable during the implementation of Components 1, 2 and 3 of the Project. The specific role of Fondo Acción will be defined during project preparation.

Subgrantees

161. Fondo Acción and CI-Colombia, serving as EEs, will provide GCF funding to subgrantee organizations for the implementation of activities under Components 1 and 2. The selection of subgrantee organizations will follow the EEs' sub-granting procedures, ensuring fair and transparent processes and considering gender equity and Diversity, Equity and Inclusion (DEI) principles. Both EEs will conduct due diligence on these organizations, with final approval granted by the AE. The EE will enter into grant agreements with each subgrantee. The EE will manage and monitor subgrants and will approve the grantee's annual workplans, budgets, and, when applicable, procurement plans and subgrants. The specific subgrantees will be determined during funding proposal development.

162. Local women associations and youth collectives will be engaged to implement ecosystem restoration activities (Activity 1.2.1) in each working area, while local producer associations with farming expertise will receive support for farm-level climate-resilient agriculture activities (Activity 2.1.1) in the region. Local aqueduct and community

actions boards will be actively engaged and receive GCF funding support through Output 3.1. Youth collectives and local women associations will have a cross-cutting participation and will receive small subgrants for their contributions to the project.

Consultants and Service Providers

163. EEs will also use GCF funds to engage consultancy firms and service providers to support implementation of project activities. All contracted entities will be selected using ´the EEs' Procurement Policy, receive technical direction and work in close collaboration with relevant project Implementation Partners; and all service agreements with Service Providers will follow GCF standards and policies and will provide for controls on the use of GCF funds.

Implementation Partners

164. Given the strong ownership of the project at the national, regional, and local levels, many key delivery partners will contribute to the implementation of the project but will not receive GCF resources. These partners include national and local government entities, research institutes, regional corporations, and private-sector entities and will provide technical support, expertise, and guidance; participate in project implementation; and/or provide co-financing. Implementation Partners are briefly described below.

165. Fondo Acción and CI will coordinate implementation of the project with these Implementation Partners and will enter into agreements with them as appropriate to ensure clarity of project roles and responsibilities of each party. Support letters from several Implementation Partners are available in Annex 8.

166. At the national level, the Ministry of Environment and Sustainable Development (MinAmbiente) will ensure the project's alignment with national policies, particularly those related to spatial planning around water, and IWRM goals and paramo legislation. The Ministry of Housing and Territorial Development will align the project with sectoral policies on water public services and the implementation of instruments to promote green-gray infrastructure projects. Additionally, Colombia's National Natural Parks Agency will contribute to the project in matters related to Component 1 and the integration of rural communities into sustainable tourism initiatives in the region. From the private sector, ANDI will lead the private sector engagement in the project, especially through co-financing to support the adaptation accelerator for scaling and sustainability under Component 3.

167. Several research institutes will also contribute significantly to the project. The Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM) will lead the integration of the project's monitoring system with the national high-mountain monitoring strategy supported by the Javeriana University (PUJ). They will provide technical expertise in climate information and climate change projections in the region. The Alexander von Humboldt Biological Resources Research Institute (IavH) will support the restoration processes under Component 1 and contribute to sustainable alternatives for the high-mountain region under Component 2. Lastly, the Colombian Corporation of Agricultural Research (Agrosavia) will accompany and lead research on high-mountain production processes under Component 2.

168. At the regional level, the autonomous regional corporations of Cundinamarca (CAR) and Guavio (Corpoguavio) will provide technical support and guidance for all project activities within their jurisdictions. CAR will also provide co-financing for Output 2.1 activities, and Corpoguavio will provide in-kind staff time for project activities. The 20 prioritized municipalities in the Bogotá-Region Landscape will support the implementation of project activities within their territories with the engagement of local stakeholders. Efforts will be coordinated with the Special Administrative and Planning Region (RAP-E) for water security monitoring.

169. In addition, the Mayor's Office of Bogotá, through the SDA and the EAAB, will play a key role in the implementation of activities in the urban area of the Tunjuelo river. They will also support the design of the adaptation accelerator for project scalability and sustainability. The Mayor's Office will provide in-kind staff time for this work. EAAB will provide co-financing to fund services providers to implement Outputs 1.2 and 1.3 restoration and urban adaptation activities in the Tunjo wetland, and SDA will provide PES payments to project beneficiaries as described in Activity 3.21 above once the PES scheme has been designed as part of the project.

170. The District Institutes of Risk Management and Climate Change (IDIGER), Recreation and Sports (IDRD), and Cultural Heritage (IDPC) will contribute to the implementation of activities in the urban area.

Comentado [VG1]: Necesita actualizarse

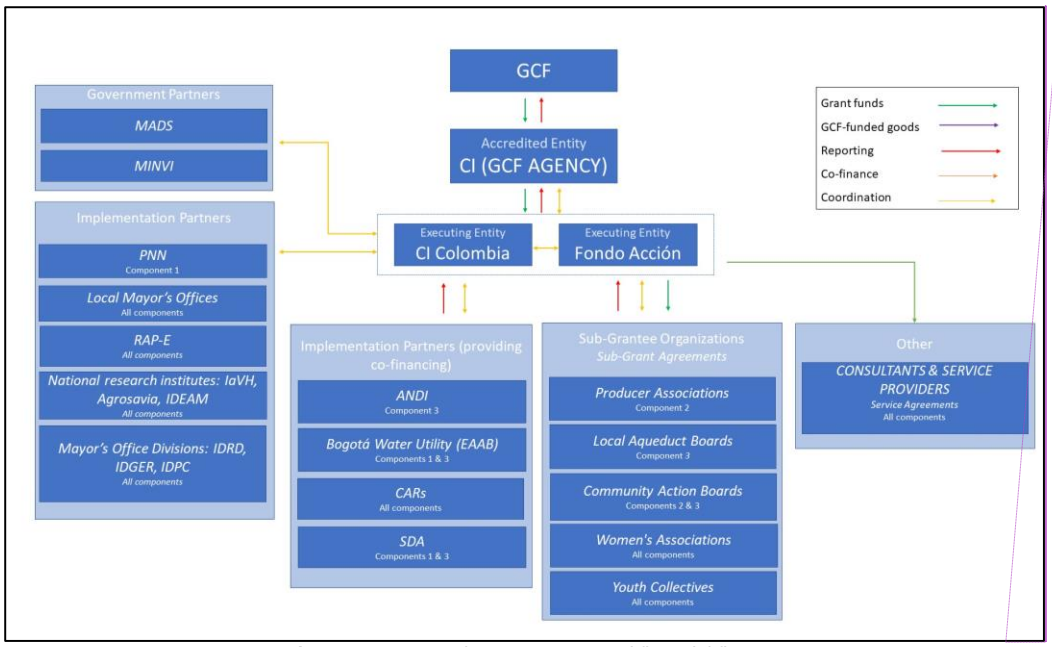

Figure 8 Contractual arrangements and financial flows

171. The project's implementation will be overseen through three decision-making multi-stakeholder structures, which will guide the project implementation at various levels.

172. The primary decision-making structure of the project is the **Steering Committee**, responsible for setting annual financial implementation goals for both GCF resources and co-financing funding. This committee will also coordinate collaboration mechanisms across each project component at the leadership level of each participating institution. Meetings of the steering committee will be held biannually to assess and monitor overall project implementation progress. Initially, the Ministry of Environment will lead the steering committee, alongside high-level representatives from the Ministry of Housing, Natural National Parks of Colombia, Regional Autonomous Environmental Authorities, the Bogotá Mayor's Office, the Bogotá Water Utility, and a representative from the ANDI. This structure ensures county ownership throughout implementation. The Executing Entities will be invited the Steering committee meetings, will oversee the committee's secretariat, facilitating stakeholder coordination and managing the project's agenda.

173. The second decision-making structure is the **Technical Advisory Committee**, responsible for making technical decisions to achieve the successful implementation of defined goals within each project component. This committee, meeting twice a year, will comprise delegates of the Ministry of Environment, the Ministry of Housing, National Parks of Colombia, regional autonomous environmental authorities, the Bogotá Mayor's Office, the Bogotá Water Utility, and a representative from ANDI. Additionally, technical leaders from IDEAM, Agrosavia, and IaVH will participate. To further address specific themes, six technical sub-committees will convene regularly, focusing on areas such as Conservation and Restoration, Urban Wetlands, Livelihoods, Governance, Financial Mechanisms, and Decision-Making Platforms. These sub-committees, led by prominent partners in each area, ensure comprehensive coverage of project objectives. As with the steering committee, the EEs will manage the technical secretariat for these committees.

174. Lastly, seven local technical committees will be established, one for each working area, to make project implementation decisions at the grassroots level and monitor progress toward established goals in each component (1, 2, and 3.1). Comprising the EEs' local technical team, representatives from local municipalities, community leaders, and selected grassroots association leaders, these committees meet at least four times per year. By facilitating local ownership throughout implementation, these committees ensure effective project execution. The EEs will oversee the technical secretariat for these local committees, maintaining consistency and alignment with project objectives.

KEY FINANCIAL AND OPERATIONAL RISKS

175. Below is outlined the analysis of the main operational and financial risks identified, as well as the planned measures for their mitigation:

Risk Factors	Probability (P)/ Impact (I)	Effects	Risk Mitigation Measures
Increase in COVID-19 cases, or other types of pandemics leading to increased health risks during implementation.	P: Moderate I: High	Non-compliance with the implementation of work plans.	All biosecurity measures will be implemented during the development of activities, including ensuring that the project team has completed the full vaccination scheme.
Security risks	P: Moderate I: High	Non-compliance with the implementation of work plans.	Develop a comprehensive security protocol to address security risks, particularly in the urban and peri-urban areas of Bogotá. This protocol should include measures to mitigate potential threats and ensure the safety of project activities and participants. Additionally, establish collaboration and engagement with local law enforcement, such as the police, to support the implementation of these security measures.
The environmental authorities do not allocate personnel to actively participate in the project.	P: Moderate I: Moderate	Limited engagement and participation of all authorities, hindering effective management.	The governance model involves engaging environmental authorities in strategic direction, ensuring their commitment to management and providing ongoing support, thereby fostering trust.
Changes in national, regional, and local governments resulting in uncertainty due to government shifts in priorities and policy changes	P: High I: High	Limited engagement and participation of all authorities, hindering effective management.	The governance model involves engaging environmental authorities consolidating institutional and social alliances for joint management to strengthen project ownership.
Pressure from economic groups to protect their interests in the territory.	P: Probable I: High	Reduction in the participation of local communities.	By consolidating institutional and social alliances for joint management, we aim to strengthen project ownership and prevent misinformation.
The beneficiaries are not interested in restoration actions, but only in productive reconversion.	P: Moderate I: Moderate	Limitations in the development of restoration and achievement of associated goals.	To emphasize the importance of restoration, our approach involves initiating implementation with these measures before proceeding to productive reconversion, which is of greater interest to the communities.
Women may encounter barriers that hinder their participation in project training, decision-making processes, and overall engagement.	P: High I: High	Women lose ability to influence and derive the intended benefits from the project.	Implement training processes with a gender focus to proactively encourage women's participation by understanding and addressing the barriers they face through mitigation measures and promote the active participation and enrollment of women as project beneficiaries, engaging with both women and their spouses to support their involvement.
Gender inequality within households or producer organizations can elevate the risk of gender-based violence.	P: High I: High	Women lose ability to influence and derive the intended benefits from the project.	Create inclusive spaces for women in the establishment of committees and other decision-making instances of the project ensuring their meaningful participation; and monitor the progress of women's increasing leadership and voice in project design and implementation, measuring their empowerment and representation.
Extreme weather events.	P: High I: Moderate	Delays in the implementation of restoration activities and loss of vegetation material.	The restoration planning will consider the conditions of climate variability, supported by historical information and community climate monitoring. In addition, resilient plant materials capable of withstanding drastic changes in temperature and humidity will be used.

B.3. Expected project results aligned with the GCF investment criteria (max. 3 pages)

The Bogotá-Region Landscape project will have the following impacts aligned with the GCF investment criteria:

176. **(i) Impact Potential:** The project's potential impact is closely aligned with the country's geographical and economic context. The Bogotá-Region Landscape serves as the country's economic and political hub, is home to 19.7% of the country´s population, contributes 26.9% to the national GDP and houses 41% of the domestic industry, underpinned by the competitive advantage of having reliable access to gravity fed water. This access is contingent upon the intricate relationship between the high Andean ecosystems and the water supply system of Bogotá. Given the region's susceptibility to extreme water-related hazards, driven by the adverse impacts of climate change, water security in the area is at risk. Thus, the project plays a pivotal role in ensuring not only the economic stability of the region but also of the country amidst changing climatic conditions.

177. Government plans to address water security in the coming decades by expanding water supply through the eastern Chingaza Páramo area were strongly challenged when viewed through a climate change lens. As explained in section B. climate projections indicate that this area will experience a decrease in surface water availability of up to 40% by 2040, along with a 10-20% reduction in rainfall. In contrast, the northwestern upper basin of the Bogotá River and the southern Tunjuelo River basin are expected to see increases in surface water availability (20-40%) and precipitation (up to 40%). Given this context, climate change scenarios have shifted the focus of the conversation toward rethinking and diversify solutions to reshape water security in the Bogotá Region.

178. This project will contribute to increase climate-resilient sustainable development by addressing two big challenges posed by climate change to the city of Bogotá and 21 surrounding municipalities, the risk of disasters related to more frequent and intense flooding and landslides, and the threat of water drought and scarcity in the main water sources of the region. The project will increase the water resilience of a rural and urban population of 9,523,627 people (467,964 direct beneficiaries) representing approximately 19.7% of the country's total population.

179. The project will effectively conserve, restore, and manage 172,499 ha of high-mountain ecosystems, which are crucial for providing water-related ecosystem services in terms of quantity, quality, and regulation. the project aims to enhance the adaptive capacity of 2,100 families residing in highly vulnerable rural communities by supporting climate-resilient livelihoods. In the urban regions, the project will restore 52 ha of urban wetlands and 147 ha of urban forest which will reduce the direct climate-related risk of 250,000 and 40,000 people respectively. Project activities are designed to promoting a well-managed integration of grey-green infrastructure in the Tunjuelo River watershed.

180. This Project places a strong emphasis on building local and regional governance, to align for the first time, the interests of the numerous authorities and local governments in the region by building a regional water security strategy that mainstream EBA interventions.. The project will strengthen institutional and regulatory systems for climate-responsive planning by developing comprehensive water-resilient climate change adaptation plans at the micro-watershed level, supported by a regional and local water governance and stakeholder coordination, strengthened grassroots associations and community-based water supply systems and business models (Component 3). The project is expected to increase the generation and use of climate information in decision-making and strengthening adaptive capacity to climate risks by establishing a science-based decision-making platform to evaluate water risk scenarios by climate forecasting information and generate data to mainstream EBA as an effective strategy to enhance water security and reduce flood and drought risk (Component 4).

181. For financial sustainability and replication, the project will support the inclusion of an environmental investment component in the water tariff to finance EBA, the design and implementation of the PES for the mandatory investment of 1% of local authority's budget and private financing mechanisms with the potential to unlock US$20M during the project and at least US$10M annually afterwards.

182. Finally, the project will have a mitigation impact through the capturing of 790,679 metric tons of CO_2 equivalent as a result of EBA measures. This calculation is based on a pilot intervention covering 1,800 hectares, with the potential to further expansion following comprehensive studies during the funding proposal stage.

183. **(ii) Paradigm shift:** Pressing water shortages in the region affecting people and the economy and climate change projections are leading to an increased recognition and consensus by the Governments and stakeholders in the Bogotá-Region Landscape about the importance of ecosystems and ecosystem services under a changing climate, and the potential solutions that could arise from investing in the protection and restauration of watersheds in the region. However, traditional water investment, competition for resources, local authorities' limitations to invest only within their jurisdictional boundaries, a lack of governance structures and climate data to plan and prioritize actions at a regional scale has led to isolated investments with limited impact.

184. The project's long-term success to shift the paradigm relies on its ability to demonstrate the benefits and potential of EBA interventions at a regional scale (Component 1 and 2) by leverage the conglomerate of public and private actors (Component 3) to implement coordinated and science-informed EBA interventions (Component 4), and by

establish financial solutions that contribute to overcome risks and barriers to finance water security, ecosystem conservation and risk-reduction initiatives beyond the project implementation period (Component 3).

185. EBA interventions in Bogotá's watersheds have strong potential to generate financial benefits. A study conducted by CI-WRI found that EBA investments on 2,460 hectares in the upper basin of the Bogotá River, representing 2% of the basin, would require US$5.26 million and generate undiscounted benefits of US$44.6 million over 30 years (Refer to paragraph 26 and annex 6 for a detailed description of the study). These benefits result from avoided water treatment costs in energy, chemical products, and depreciation. Thus, implementing new financial instruments and mechanisms that test and prove the contribution and impact of green infrastructure will reshape current investments in the water sector.

186. Robust modelling and studies from previous projects, including two CI GEF-led projects have aligned the interest of agencies such as EAAB, CAR, RAPE and Bogota to pursue coordinated action and decision-making based on climate data at a regional scale to invest in the territory. CI will make the best of such alignment and of recent regulatory developments that support climate and environmental investments to design, test and implement different financial alternatives (Component 4). The project aims at implementing new territorial associative PES schemes for rural households by taking advantage of regulation developments that mandates departments, districts, and municipalities to allocate at least 1% to prioritize investments in nature-based solutions, climate change adaptation actions, restoration, rehabilitation, and ecological recovery and PES schemes (Output 3.1). The second economic instrument aims at incorporating an environmental fee into the water tariff, an opportunity to modify the tariff structure and enable water service providers to finance environmental investments that contribute to watershed and water resource protection (Output 3.2).

187. EBA investments will serve as pilots to be scaled up and replicated by the same institutions after project closing. If the proposed financial instruments and mechanisms are carefully designed, tested and assure effectiveness on the ground and regulatory compliance, the project will help unlock financial resources that will continue to flow after project closing at a pace of at least US10M per year.

188. Through GCF financing, this project will demonstrate the feasibility of funding Ecosystem-Based Adaptation (EBA) to improve water security. It will showcase how financial solutions and a common, coordinated IWRM strategy can unlock additional long-term public and private financial resources. This approach will result in a sustained and progressive increase in water-related ecosystem services throughout the region's watersheds. Enhanced water capture, quality, and regulation in these watersheds will contribute to improved water security and reduced flood risk at both local and landscape scales. Simultaneously, local communities where EBA measures and alternative economic activities are implemented will become more adapted to climate change and resilient to its impacts.

189. The project aims to shift the paradigm in and beyond the Bogotá-Region Landscape. As the economic and political heart of Colombia, success in the central-capital region will swiftly detonate replication processes in other regions of the country. Financial solutions, such as the water tariff and PES scheme, if designed and proved operational, will be considered viable for other regions. In addition, there are not many examples of large scale urban EBA, particularly in our region. The project will restore urban wetlands and forest in the Tunjuelo watershed that will transform the city beyond increased climate resilience. This will become a milestone recognized throughout the country as well as internationally, a demonstration site of the benefits of such interventions and a laboratory for replication.

190. **(iii) Sustainable Development:** The project identifies several benefits and co-benefits that contribute to sustainable development and align with the Sustainable Development Goals (SDG) 1 (no poverty), 5 (gender equality), 6 (clean water and sanitation), 12 (responsible production and consumption), 13 (climate action), and 15 (life on land). The project has designed an adaptation accelerator to ensure an enabling environment for local water governance, develop scalable project initiatives, and establish financial mechanisms for long-term sustainability. The principles for sustainable development in the project are based on three pillars with implications at different scales:

191. **(iv) Environmental sustainability:** The project aims to improve landscape connectivity and promote biodiversity co-benefits such as protected habitats for emblematic species such as the spectacled bear and white-tailed deer, among others. Additionally, it involves generating business plans for value chains based on restoration efforts, to reduce the impacts of changes in temperature and precipitation on agricultural productivity, which increase the need for rural families to seek more land for their agricultural activities, thereby transforming the paramo or forest ecosystems into open pastures. Moreover, it aims to reduce pressure on high-mountain ecosystems through climate-resilient agriculture, which decreases vulnerability to climate change and halts land degradation.

192. **(v) Social sustainability:** This pillar aims to increase the adaptive capacity of the most vulnerable rural and urban communities by supporting climate-resilient livelihoods. It includes improving the productivity chains of

agricultural products from the high-mountain regions through adaptation processes and promoting alternative economic activities such as tourism. Furthermore, the project aims to enhance the social positioning and empowerment of vulnerable groups such as women, youth, and children who play a crucial role in adaptation, thereby fostering greater territorial ownership. By implementing a gender and family-focused approach, the project will support sustainability through consolidating social structures and fostering community-driven processes that enhance adaptation capacity. Community climate monitoring will be developed to support productive decision-making at the individual farm level, and participants will be connected to marketing and commercialization networks.

193. **(vi) Economic sustainability:** Multiple levels of financial sustainability will be achieved. At the regional level, a financial structure will be designed and managed, based on public instruments with high revenue potential, integrated into regional public policies, and supported by a private sector engagement strategy, to fund new interventions and incentivize the long-term maintenance of adaptation measures, providing multiple benefits for water users and local communities contributing to conservation efforts. At the local level, the establishment of value chains for differentiated high-mountain products will stabilize or enhance local economies and family incomes. This strengthens rural economies, enabling communities to respond better to drastic changes in precipitation and temperature.

194. **(vii) Gender Sustainability**: The gender sustainability strategy is rooted in the principle of inclusivity and empowerment. The project will prioritize the meaningful engagement of women in all aspects of the project, from decision-making and planning to implementation and monitoring. Through targeted capacity-building programs, the project aims to equip women with the knowledge and skills needed for active participation in climate-resilient activities such as restoration and climate-resilient agricultural processes, ensuring their contributions to sustainable adaptation and mitigation efforts. Through the implementation phase, the project will promote equal access to resources, economic opportunities, and benefits, thereby reducing gender disparities in the project's impact. By fostering gender equality and women's economic empowerment, we envision a more sustainable, resilient, and socially equitable response to climate change that aligns with the GCF's core principles and objectives.

195. **(viii) Needs of Recipients**: The Bogotá Region Landscape, represents 20% of Colombia's population and the 30% of the national GDP, depend on water security not only for subsisting but economic competitiveness. Abundant, clean and gravity fed water has been for centuries one of the main competitive advantages of the Bogotá -Region that compensates the disadvantage of its remote location, so water scarcity can trigger migration of both population and industries threatening not only the region, but the stability of the country. The region depends on paramo ecosystems for water supply and these ecosystems are highly vulnerable to temperature increase because they do not adapt to higher temperatures and because the increase in forest fire risk. In addition, climate change models predict a reduction in precipitation in the Chingaza System which is currently the main source of water for the region (Please refer to Section B).

196. Building resilience through increased water efficiency and reduced non-revenue water has been addressed successfully in the Bogotá Region Landscape, with investments in infrastructure and public awareness campaigns. Bogotá now boasts a per capita average water consumption of 76 litres per day and a non-revenue water index of 38%, both figures substantially lower than most large cities in the region. However, efforts to address water supply, specifically to improve water-related ecosystem services, remain limited. This limitation is partly due to municipalities' restrictions on investing outside their boundaries, while most key ecosystems fall within poor municipalities with limited resources for investment. Simultaneously, the water sector has traditionally relied on expanding infrastructure to respond to water scarcity, often showing scepticism towards the benefits of environmental investments.

197. At the local level, rural communities in high-mountain areas face limited access to financial resources, hindering their ability to adapt to climate change, which directly threatens their livelihoods. There is a significant funding gap for climate-resilient agriculture strategies among rural families with landholdings ranging from three to five hectares. This situation perpetuates traditional agricultural practices such as potato and dairy production in the watershed areas, despite market prices not providing sufficient income to meet households' needs. To address this, it is crucial to establish productive value chains that foster value-added and differentiated products, thereby promoting economically viable climate-resilient agricultural practices and fostering the implementation of adaptation measures. Additionally, the project recognizes the importance of engaging vulnerable groups, including women, children, and the elderly, in the implementation of EBA. This approach not only enhances local economies but also generates ownership and environmental benefits.

198. At the regional level, there is a lack of permanent and adequate financial resources to effectively address climate change's impacts on water security. Despite the region's substantial financial resources for water resource management, current strategies overlook EBA. As a result, high-mountain ecosystems face growing pressures and conflicts. Limited information and a lack of robust evidence-based criteria have contributed to the

underestimation of the cost-effectiveness of EBA in enhancing water security and reducing disaster risks. Moreover, there are limited and uncoordinated investments by public and private entities into the four strategic paramo complexes crucial for Bogotá's water supply.

199. The project will strengthen implementation capacity by supporting the establishment of a regional governance mechanism designed to define shared priorities and coordinate investments, thereby attracting funding for the task at hand. Project resources will also be utilized to design financial mechanisms that unlock continuous financing, ensuring long-term sustainability. To empower local municipalities and regional agencies, the project will provide a decision-making tool to identify investment priorities and develop tailored financial instruments. This comprehensive approach will enable these entities to address water management and ecosystem-based adaptation issues more effectively. By combining improved governance, strategic financial planning, and enhanced decision-making capabilities, the project aims to create a robust framework for sustainable water resource management and ecosystem protection in the region.

200. **(ix) Country Ownership:** The funding from the GCF will contribute to several national goals and measures outlined in the updated NDC, particularly to the NDC adaptation targets to protect watersheds that supply water, and to implement paramos ecosystem management. Noteworthy contributions to the NDC include the protection of four out of Colombia's 37 paramo complexes, the adaptation of the potato and dairy subsectors, agroclimatic information dissemination to farmers to promote agro-silvopastoral systems, and the capture of 790,679 tCO2eq through restoration and productive conversion. Additionally, the project will support recent national policies, including CONPES 3934 on green growth through bioeconomy efforts and CONPES 4021 on deforestation control and sustainable forest management, focusing on stabilizing agricultural frontiers in high-mountain areas.

201. This proposal, included in the Country Program as a priority with support from the Ministry of Environment and the Cuerpo Colegiado, has been developed collaboratively. Key government agencies such as EAAB, CAR, RAPE, Corpoguavio, Ideam, and Bogota city have participated and provided support letters. Private sector stakeholders, including ANDI, ACODAL, and Uniandes, have also been involved. The proposal has been discussed with rural local communities, women and youth groups, some municipal authorities, and local communities and NGOs working on the Tunjuelito urban wetlands. Stakeholder participation will continue during the funding proposal preparation and project implementation, following a more comprehensive approach in line with the GCF Environmental and Social Safeguards and Stakeholders Consultation Guidelines.

(x) Efficiency And Effectiveness: This initiative builds upon the lessons learned and experience of CI from previous projects in the region, including GEF project “Adaptation to Climate Impacts on Water Regulation and Supply for the Chingaza-Sumapaz-Guerrero Are” (2014-2021), allowing to apply experience and lessons learnt for optimization, innovation, efficiency of resources.

202. The cost of implementing EBA is lower and more sustainable compared to gray infrastructure-based measures aimed at increasing water availability or dealing with the costs of hydro-climatic disasters caused by extreme precipitation and temperature events that have resulted in significant losses in the region. For example, in 2010, floods caused by the La Niña phenomenon affected 62,548 people and led to losses estimated at USD $150.1 million in the city of Bogotá and the Cundinamarca Department.[36] Additionally, the 2015 fires caused by the El Niño phenomenon resulted in losses of USD $192.5 million in the Central East region.[37] By investing in EBA, the project aims to prevent such losses and promote long-term sustainability, making it a more cost-effective and resilient approach compared to single traditional infrastructure-based measures.

B.4. Engagement among the NDA, AE, and/or other relevant stakeholders in the country (max ½ page)

203. This CN was developed in response to an invitation by the NDP, acting as the NDA for Colombia, within the framework of the GCF's readiness program to support the country's PNACC. In March 2021, the NDA decided to include the project in the country's project portfolio for the GCF, as indicated in the supporting letter provided in Annex 8. During the project design, relevant stakeholders were actively engaged, contributing their knowledge, inputs and vision; all of them will also play a strategic role in the formulation of the funding proposal, as presented below.

204. Key national and regional partners, such as MinAmbiente, SDA, EAAB, the Cundinamarca Regional Autonomous Corporation (CAR), the Guavio Regional Autonomous Corporation (Corpoguavio), IDEAM and ANDI, were actively involved in the project as part of the technical and managerial committee. These entities recognized the project as an important opportunity to enhance sustainability and scale up adaptation measures. Throughout the

[36] CEPAL, 2012.
[37] DNP, 2017.

project, they provided valuable guidance and input for the structuring of this CN, affirming their support for resource management from the GCF.

205. The Ministry of Housing, City, and Territory became an integral part of the CN formulation process due to its competencies in promoting sustainable development and aligning policies on drinking water and sanitation with environmental policies (MinAmbiente). In particular, the ministry's involvement focuses on areas related to climate change, IWRM, and circular economy.

206. Effective coordination was established with technical experts and decision-makers from the Administrative Region RAPE-Central Region. The initiative was presented to them, and their endorsement was obtained, considering this project as strategically aligned with the fulfillment of Water Security Plan for the Central Region and the Sumapaz Pact. This pact emphasizes the protection of high-altitude wetlands (paramos) and climate change adaptation to ensure regional water security. Furthermore, opportunities for collaboration were identified with iAvH to support restoration processes, while Agrosavia will lead and support research on high-mountain production processes.

207. At the local level, CI-Colombia and EAAB conducted a series of meetings with the Mayor's Office of Bogotá, the SDA, and various institutes within the city (IDPC, IDRD, IDIGER). Similar engagements took place with the CAR and municipal mayors. The purpose of these meetings was to present the proposal and secure their endorsement. The response from these stakeholders has been highly positive, providing a favorable environment for action. Letters of support will be formally obtained from these entities as necessary, in alignment with the ongoing process.

208. It is important to highlight that CI-Colombia organized regional meetings in the early stages of project formulation. These gatherings involved a diverse range of actors, including academia, community organizations, environmental authorities, municipal mayors, NGOs, guilds, universities, and research institutes. Collectively, they identified adaptation needs and opportunities, contributing valuable insights that were incorporated into a comprehensive database. This database played a crucial role in informing the structure and development of the project initiative.

209. Lastly, the MinAmbiente, regional environmental authorities, and EAAB strongly support CI-GCF as the AE, with CI-Colombia acting as the EE. This decision is based on the significant recognition and trust CI has earned from stakeholders in the region through its successful execution of various projects that integrate biodiversity conservation, climate change action, social well-being, and economic development.

210. Fondo Acción, as a partner of CI in several initiatives and projects, has been contributing to the formulation process and through the active support of the NDA, Fondo Acción was considered as EE along CI for the implementation of the project. Fondo Acción has mobilized close to US$ 200M throughout its 24 years of experience in the implementation of environmental projects in Colombia and the design and management of environmental financial mechanisms. It was accredited by the GCF as a Direct Access Entity in 2018 and Its experience working with communities and with financial mechanisms will be extremely valuable during the implementation of Components 1, 2 and 3 of the Project. The specific role of Fondo Acción will be defined during project preparation.

C. Indicative Financing/Cost Information (max. 3 pages)

C.1. Financing by components (max ½ page)

Component/Output	Indicative cost (USD Millions)	GCF financing		Co-financing		
		Amount (USD Millions)	Financial Instrument	Amount (USD Millions)	Financial Instrument	Name of Institutions
Component 1: Enhanced regional and local water security and reduced flood and drought risk through mainstreaming ecosystem-based adaptation over 161,999 hectares in areas	**$28.7**	$22.5	Grant	$6.2	Grant/In-kind	Bogotá Aqueduct and Sewerage Company (EAAB) National Association of Industrialists (ANDI)

highly vulnerable to climate change						TBD Public and Private Sources
Component 2: Foster sustainable livelihoods of the most vulnerable communities through a just labor transition for water-resilient rural and urban areas	**$30.9**	$26.9	Grant	$4.0	Grant/In-kind	Regional Autonomous Corporation of Cundinamarca (CAR) District Secretary of Environment (SDA) TBD Public and Private Sources
Component 3: Accelerate climate change adaptation through promotion of enabling conditions for water governance, scaling, and sustainability	**$18.7**	$10.8	Grant	$7.9	Grant/In-kind	National Association of Industrialists (ANDI) TBD Public and Private Sources
Component 4: Science-based decision-making and Monitoring, Evaluation, Accountability, Learning (MEAL) systems	**$9.8**	$9.8	Grant	0	Grant/In-kind	IDEAM, IAvH, Agrosavia, local universities TBD TBD International think tank agencies
Project management costs (5%)	**$4.4**	$3.5	Grant	$0.9	In-kind	TBD Public and Private Sources
Indicative total cost (USD)[38]	**$92.5**		**$73.5**			**$19.0***

211. Co financing currently estimate of US19M is a conservative starting point. Once CN is approved and detailed design begins, it will be possible to secure larger cofinancing because the time frame for project implementation will be clearer, thus, allowing Government Agencies, private sector and development partners to commit resources. Final co financing budget will be defined during detail design and FP preparation, CI is aiming for co financing to reach at least 50% of the GCF Grant.

212. In addition, as explained in Section B.3, GCF funding, through its support to deploy new financial solutions have an estimated potential to unlock US$20M during the project and at least US$10M annually afterwards.

213. The activities and the budget estimates are indicative and will be defined in more detail in the Funding Proposal. During development of the Funding Proposal, a well-designed participative consultation process with key stakeholders will be conducted to review the CN, define in detail activities by Component, and allocate budget by activity, to ensure the most effective distribution of resources towards the achievement of sustainable mitigation and adaptation goals.

In this indicative Concept Note budget:

214. **Component 1** represents 31% of the overall budget and 30% of GCF resources. GCF resources will be largely used to cover the cost of service providers and grantees to implement rehabilitation and restoration activities in the activity, as well as staff time; workshop, meeting, and travel costs; and other related costs for capacity-building and planning work related to Component 1 activities. The significant investment required reflects the large area (161,999 hectares) targeted and time-intensive nature of the activities. EAAB and other sources will contribute co-financing to the funding of restoration work in Output 1.3, and other partners will provide in-kind staff time for this component.

215. **Component 2** represents 33% of the overall budget and 37% of GCF resources. GCF resources will largely be used to cover the cost of service providers and consultants to implement the transformation of agricultural production models into climate-change resilient and sustainable economic alternatives to improve the provision of water related ecosystem services of rural areas, benefiting 2,100 households. GCF resources will also cover CI staff time, workshop, meeting, and travel costs; and other costs for work related to Component 2 activities. Co-financing resources from CAR will contribute to Output 2.1.

[38] Columns may not add up to the total amounts due to rounding.

216. **Component 3** represents 20% of the overall budget and 15% of GCF resources. GCF resources will largely be used to cover the cost of service providers and consultants to implement the governance- and finance-related enabling conditions for project sustainability, as well as the endowment of a fund for the maintenance of long-term adaptation monitoring. GCF resources will cover staff time; workshop, meeting, and travel costs; equipment; and other related costs for work related to Component 3 activities. ANDI will also contribute to the endowment fund, and SDA and other sources will contribute to the design and implementation framework of sustainable financial mechanisms.

217. **Component 4** represents 11% of the overall budget and 13% of GCF resources. The component includes all costs related to establishing a hydrologic model of the watershed to support decision making on grey and green interventions to improve water security. The system will also support project monitoring, evaluation, accountability, learning and communication, and incorporates both project-level and results-level M&E. GCF resources will cover staff time; workshop, meeting, and travel costs; equipment; and other related costs for work related to Component 4 activities. IDEAM, IAvH and other agencies will also contribute with data, knowledge and expert time and advice.

218. **PMC** represents 5% of the overall budget and 4% of GCF resources. PMC costs will include staff and operating costs of the Project Management Unit (PMU) housed in CI Colombia and other project management costs consistent with GCF policies.

219. CI will seek to maximize all co-financing for this Program during Funding Proposal development.

C.2. Justification of GCF funding request (max. 1 page)

220. Climate change significantly impacts the water security of the Bogotá-Region Landscape. Temperature and precipitation changes will increase droughts and flood events, depending on the geographic location and temporal scale, thereby impacting the region's water supply systems. This generates a risk of water scarcity in some municipalities and poses a challenge for the treatment of potable water due to increased operational costs in the main Bogotá supply system. GCF funding plays a crucial role in driving climate change adaptation in the region, which currently faces significant delays.

221. Despite covering less than 0.6% of the country's area, the Bogotá-Region Landscape has the highest population density and serves as one of the country's major economic powerhouses. This is largely due to its access to water and reliable water supply system in Bogotá. However, the existing investments in the region's water supply and flood control infrastructure have not considered projections of precipitation and temperature changes, limiting their effectiveness in addressing climate change impacts. Additionally, there has been a lack of integration of ecosystem services within the water resources management plans, which could provide cost-effective solutions for adapting the water supply and flood control systems to climate change.

222. The current allocation of financial resources for the comprehensive management of high Andean ecosystems, which are rich in biodiversity and vital for water provision, is insufficient. Despite its proven effectiveness, EBA has not received adequate financial support. Furthermore, global investments in ecosystem-based adaptation represented only 0.6% to 1.4% of total climate financing in 2018, highlighting the large investment gap in natural assets. The GCF funding is, therefore, essential for mainstreaming ecosystem-based adaptation and shifting the paradigm of water resource management towards an integrated approach that encompasses both urban and rural areas, as well as green and grey infrastructure, to effectively tackle climate change impacts.

223. With the project's ownership shared by public, private, and community partners, and considering the proven capacity of high-mountain ecosystems to provide regulation and provisioning ecosystem services, the GCF investment is secure and favorable for implementation. Moreover, GCF support presents a significant opportunity to catalyze long-term financing schemes that leverage adaptation and water security using ecosystem-based adaptation and complementary measures. This includes the consolidation of a monitoring and tracking system and directing additional scaling-up efforts towards national resources. Additionally, the project will contribute to the country's climate change mitigation efforts through high-mountain ecosystems.

224. The GCF funding will have an invaluable impact on the living conditions of rural inhabitants in the high-mountain areas. These communities, which act as natural custodians of the Andean ecosystems and water resources, currently face poverty and high vulnerability to climate change due to their reliance on traditional production systems as well as limited access to finance. Approximately 2,100 rural farming families and 35 central region community aqueducts will be involved in the project, enabling them to adopt adaptive measures and promote territorial governance, which is vital for sustainability. The grant finance will empower these communities to build climate resilience thereby improving livelihoods and increasing food security without incurring further financial debt.

225. The GCF funding will also catalyze the implementation of ecosystem-based adaptation in urban areas, setting a precedent for Bogotá in wetland management for climate change adaptation. Furthermore, the project will

promote a paradigm shift within Latin American cities by showcasing the benefits of nature directly addressing the impacts of climate change and improving livelihoods of low-income urban populations. The project's funding, supported by GCF grants, will mobilize national contributions for these territories, which would otherwise be difficult to obtain.

226. The GCF's financial support is crucial for mobilizing adaptation efforts in the high-mountain region, identified as a priority in the NDC. It will remove barriers related to long-term financing and establish a sustainable mechanism to generate permanent income for the management of high-mountain ecosystems. To date, other financing alternatives, such as the water tariff framework or public and private investments, have not been able to sufficiently fill the investment gap.

227. In conclusion, the GCF's support will fill a gap in current funding mechanisms and thereby enable the implementation of comprehensive climate change adaptation measures in the Bogotá-Region Landscape, specifically targeting water security. By integrating ecosystem-based adaptation and leveraging the unique ecosystems of the high mountains, the project will enhance the resilience of both rural and urban communities, contributing to poverty reduction and sustainable development. The GCF funding will bridge critical investment gaps, catalyzing long-term financing and ensuring the effective management of water resources in the face of climate change.

228. During the Funding Proposal Stage, and once the project can provide likelihood around GCF funds, partners such as Bogotá Water utility, the District Secretary of Environment, the Regional Autonomous Corporation of Cundinamarca (CAR), and the Environmental Ministry have expressed the willingness to include additional co-finance. The target amount will be at least USD 30M of co-financing.

C.3. Sustainability and replicability of the project (exit strategy) (max. 1 page)

229. The sustainability and replicability of the project investments will be ensured through five main measures:

(i) **Social and institutional ownership of adaptation measures** that generate behavioral change among high mountain inhabitants will be achieved by: (i) increasing understanding of climate change and management alternatives; Generating and managing local-scale climate information; (iii) demonstrating the practical benefits of adaptation using ecosystem-based adaptation; and (iv) evaluating climate resilience at the beginning and end of the project.

(ii) **The consolidation of productive value chains**, including marketing and commercialization strategies that facilitate the sale of agricultural and livestock products and their derivatives produced within the framework of climate change adaptation will incentivize the continuation of these measures even after the project ends.

(iii) By developing **innovative alternatives for local economies** that include adaptation actions within the rural culture, the project aims to incubate new climate-resilient entrepreneurial ventures.

(iv) **Territorial governance** will be strengthened by: (i) increasing social recognition of traditional rural knowledge; (ii) improving relationships among stakeholders; (iii) enhancing climate knowledge; (iv) building capacity for community water management; and (v) creating coordination spaces that facilitate shared territory management.

(v) By establishing and operating a **long-term financial mechanisms** that channel opportunities for public and private financing towards adaptation that will continue to flow after project closing, the project will guide investment towards a portfolio of targeted measures and sites to enhance water security and reduce water-related hazards. In the long term, financing methods can also be developed based on capturing the added value associated with improving ecosystem conditions and climate risk in urban areas that have undergone interventions.

230. These measures aim to ensure the long-term effectiveness and sustainability of adaptation investments, promoting behavioral change, fostering economic opportunities, integrating adaptation into local cultures, enhancing governance, and establishing appropriate financial mechanisms.

D. Supporting documents submitted (OPTIONAL)

- ☒ Map indicating the location of the project/programme
- ☒ Diagram of the theory of change
- ☐ Economic and financial model with key assumptions and potential stressed scenarios
- ☐ Pre-feasibility study
- ☒ Evaluation report of previous project
- ☒ Results of environmental and social risk screening

Additional Documentation

(i) Annex 1. Bogotá- Region Landscape water and natural resources context
(ii) Annex 2. Climate change Scenarios
(iii) Annex 3. Urban Water Resilience

(iv) Annex 4. Socio-economic context of vulnerable urban – rural communities
(v) Annex 5. Water resources and land use
(vi) Annex 6. ROI analysis for NbS in Bogotá Supply System
(vii) Annex 7. Project Potential Mitigation Assessment
(viii) Annex 8. Support letters
(ix) Annex 9. GEF Evaluation report
(x) Annex 10. Project sites prioritization report
(xi) Annex 11. Results of environmental and social risk screening

Self-awareness check boxes

Are you aware that the full Funding Proposal and Annexes will require these documents? Yes ☒ No ☐

- Feasibility Study
- Environmental and social impact assessment or environmental and social management framework
- Stakeholder consultations at national and project level implementation including with indigenous people if relevant
- Gender assessment and action plan
- Operations and maintenance plan if relevant
- Loan or grant operation manual as appropriate
- Co-financing commitment letters

Are you aware that a funding proposal from an accredited entity without a signed AMA will be reviewed but not sent to the Board for consideration? Yes ☒ No ☐

ANNEX 4: GCF PPF APPLICATION "BUILDING A WATER-RESILIENT BOGOTA-REGION LANDSCAPE PROJECT"

Project Preparation Facility (PPF) Application

Application Title	Building a Water-Resilient Bogota-Region Landscape
Country(ies)	Colombia
Accredited Entity	Conservation International Foundation (CI)
Date of first submission/ Version number	*October 2024 [V.2]*
Date of current submission/ version number	*October 2024 [V.2]*

2024

GREEN CLIMATE FUND

Notes

- The PPF supports the development of projects and programmes and enhance their quality at entry into the Fund's pipeline. With a view to enhancing the balance and diversity of the project pipeline, the PPF is designed to especially support Direct Access Entities for projects in the micro-to-small size category. International Accredited Entities seeking project preparation support from the PPF are encouraged to do so especially for LDCs, SIDS and African countries where no Direct Access Entity is accredited. All Accredited Entities are encouraged to articulate counterpart support for project preparation within their requests for support from the PPF.
- A PPF submission should include below documents:
  1. PPF request (this form)
  2. PPF No-Objection letter (note1)
  3. Concept Note
- Please copy the National Designated Authority (ies) when submitting this PPF request.
- Requests for support from the PPF should be submitted at the same time or following submission of a GCF Concept Note for a project or programme.
- A guidance note is annexed to this application form and referenced throughout the document
- Further information on GCF PPF can be found on GCF website Project Preparation Facility Guidelines.

List of acronyms

AE: Accredited Entity

AGM: Accountability and Grievance Mechanism

AGROSAVIA: Colombian Corporation for Agricultural Research

ANDI: National Association of Industrialists

CAR: Cundinamarca Regional Autonomous Corporation

CI: Conservation International

Corpoguavio: Guavio Regional Autonomous Corporation

EAAB: Bogota Water Facility Company

EBA: Ecosystem-based Adaptation

EE: Executing Entity

ER: Emissions reduction

ESIA: Environmental and Social Impact Assessment

ESMF: Environmental and Social Management Framework

ESMP: Environmental and Social Management Plan

ESS: Environmental and Social Safeguards

EIRR: Economic Internal Rate of Return

FIRR: Financial Internal Rate of Return

FEA: Financial and economic analysis

FPIC: Free, Prior and Informed Consent

GAP: Gender Action Plan

GBV: Gender-based violence

GCF: Green Climate Fund

GDP: Gross domestic product

GHG: Greenhouse Gases

IavH: Humboldt Institute

IDEAM: Institute of Hydrology, Meteorology and Environmental Studies

IRMF: Integrated Results Management Framework

IWRM: Integrated Water Resources Management

Ha: Hectares

Logframe: Logical Framework

MoVs: Means of Verification

MtCO2e: Megatonnes of Carbon Dioxide equivalent

NDCs: Nationally Determined Contributions

NDA: Nationally Designated Authority

NGOs: non-governmental organizations

PPF: Project Preparation Facility

PMC: Project Management Costs

RAP-E: Administrative Central Region

SDA: Secretary of Environment of Bogotá

ToC: Theory of Change

TORs: Terms of Reference

US$: United States Dollars

WRI : World Resources Institute

A. Executive Summary			
Accredited Entity (AE)	Conservation International Foundation (CI)		
Has a Concept Note (note 2) been submitted in association with this request for support from the PPF?	Yes ☒ No ☐ If yes, please indicate Project/Programme title: Alternative Response Options for Mitigation & Adaptation of Coffee Farms (AROMA) Program	**Has a No-Objection Letter(note 3) been submitted for this request for support from the PPF?**	Yes ☒ No ☐ *(Please note that a PPF No-Objection Letter is a requirement for the submission of this request)*
Total Cost1[1]	Total cost of Project Preparation activities: US$1,683,539 Amount requested from GCF PPF: US$1,181,274 Grant ☒ (amount: US$1,181,274 Repayable Grant ☐ (amount:) Equity ☐ (amount:) Counterpart funding from the AE: US$502,265		
Anticipated Duration	Number of months to implement the Project Preparation activities: 20 months		
Summary of the request for Project Preparation support	On behalf of the government of Colombia, Conservation International Foundation (CI) and partners seek to develop a GCF Funding Proposal based on the Concept Note titled Building a Water-Resilient Bogotá-Region Landscape. CI has been working continuously for over 15 years in this landscape, including through two GEF projects, generating results, building knowledge, lessons learnt, and stakeholders trust that are the basis for the envisioned project. The Bogotá-Region project will serve as a catalyst for transforming the water sector in Colombia's central region at a critical moment in the nation's history in which people, the economy and industry are threatened by the abrupt decrease of water availability and increasing water-related risks. The project aims to making a paradigm shift in water security by re-thinking and re-defining economic and financial solutions, led by the water and environmental sector, that recognize the importance of climate investments in the territory and support EbA interventions along the watersheds. This initiative will leverage financial opportunities to operationalize locally led adaptation interventions to preserve water resources through a community-based implementation approach, consolidate a regional integrated water resources management (IWRM) and risk management framework. Sustainability and scaling up of project interventions will be ensured through setting up a strong regional and local governance, robust financial mechanisms to fund nature-based solutions and a science based IWRM decision support system to monitor impact and prioritize future interventions and investments. The PPF grant will enable the development and submission of a high-quality Funding Proposal. Although Conservation International has funded the preparation of the Concept Note and PPF application, and will cofinance the Funding Proposal development, additional resources are needed due to the complexity of the project and the complexity of project area, the more densely populated of the country. The paradigm shift and impact potential that the project will aim to achieve is ambitious because it aims to making structural changes in policy, governance, financial incentives and water sector overall intervention logic. Thus, PPF will support the development of high-quality and in-depth feasibility studies and a robust project design to ensure project outcomes can be achieved and sustained over time. In particular, PPF will advise on technical, legal, financial, regulatory and governance matters to assess feasibility and support design of project envisioned financial, governance and science-based solutions and field interventions to ensure the long-term financial sustainability of the results; and generation of adaptation outcomes		

[1] Budget figures are indicative. Co-financing needs and commitments for delivering a full Funding Proposal package are being finalized by CI and are subject to increases or decreases per final assessments. A final version of the budget (including breakdown by cost category) can be provided upon request when completed.

	to people, livelihoods and ecosystems. In addition, the complex conglomerate of regional and local actors needs to be continuously engaged during the FP development to maximize buy-in of the activities proposed and local ownership during the implementation. Each of the 7 intervention areas have their own challenges and power dynamics, and PPF activities will make possible to conduct a strong stakeholder engagement and consultation process in all project areas and to develop environmental, social and gender studies in line with GCF policies. Conservation International (Accredited Entity as well as Executing Entity in Colombia) will lead the development of the Funding Proposal with support of Fondo Acción, a national GCF accredited agency that is expected to participate as Executing Entity during implementation, and guided by national and local government authorities. The experience of 17 years of CI´s work on the landscape, investing more than 40M USD including two GEF projects has earned the trust of the community and local authorities, as well as technical, operational, and field expertise to review and refine technical inputs from partners and consultants, ensure holistic project design, oversee engagement with the Colombian government and stakeholders, and develop supplemental information to develop a complete and comprehensive GCF Funding Proposal package.

B. Description of Project Preparation Activities

Activities *(note 4)* **and Outputs** *(Please select Activity Areas (note 5) as needed)*	Month (Please shade the implementation period from the starting month of the Output and Activity in the schedule. Please also indicate the month of completion of each deliverable with "X" in the corresponding cell)																								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Activity 1: PPF activity area: Pre-feasibility, feasibility studies and project design																								
Output 1.1 Bogota Region Profile																								
Output 1.2. Climate Change Vulnerability Assessment																								
Output 1.3. Overall risk Identification and Assessment for the Project																								
Output 1.4 Climate & Biodiversity Assessment																								
Output 1.5. Options Analysis																								
Output 1.6. Analysis of National and Subnational Policies and Regulatory Frameworks																								
Output 1.7: Feasibility assessment and design of proposed interventions - Component 1. Mainstreaming ecosystem-based adaptation																								
Output 1.8: Feasibility assessment and design of proposed interventions - Component 2: sustainable livelihoods for a just labour transition																								
Output 1.9: Feasibility assessment and design of proposed interventions – Component 3: Regional and local water governance																								
Output 1.10: Feasibility assessment and design of proposed interventions – Component 3: Financial mechanisms and long-term sustainability and scalability strategy																								
Output 1.11: Feasibility assessment and design of proposed interventions – Component 4. Decision-making platform to forecast climate hazards and mainstream EBA																								
Output 1.12. Financial and Economic Analysis (FEA)																								
Activity 2: PPF activity area: Environmental, social and gender studies																								
Output 2.1: Environmental and Social Impact Assessment (ESIA) and Management Plan (ESMP)																								
Output 2.2: Stakeholder Assessment, Stakeholder Consultation Summary and Stakeholder Engagement Plan																								
Output 2.3: Gender Assessment and Gender Action Plan																								
Output 2.4: Accountability and Grievance Mechanism and Manual																								
Output 2.5: Community Health, Safety and Security Plan																								

Output 2.6 Indigenous Peoples and Cultural Heritage Plan																							
Activity 3: PPF activity area: Other project preparation activities Project Implementation Design and Indicators																							
Output 3.1: Project ToC/Logframe and country-specific sub-activities as appropriate.																							
Output 3.2. Project indicators, workplan and implementation timeline and milestones																							
Output 3.3. GHG Emissions Baseline Assessment																							
Output 3.4. Monitoring and impact evaluation plan																							
Output 3.5. Implementation arrangements and co-financing																							
Output 3.6. Adaptation beneficiary methodologies and calculations																							
Output 3.7. Operations and Maintenance Plan																							
Output 3.8. Exit Strategy																							
Output 3.9 Funding Proposal																							
Output 3.10. Project Budget																							
Output 3.11. Procurement Plan																							
Output 3.12. Legal Due Diligence																							
CI revision and submission of the work in collaboration with partners.																							
Estimated time for submission corresponding full Funding Proposal to the GCF																							
Revisions based on feedback from GCF will continue in months 13−20.																							

Please note that additional detail on the below Activities and deliverables is included in Annex 1 and 2 – Consultant TORs

Activity 1: Pre-feasibility, feasibility studies and project design

4. The Feasibility Study will be produced by a consultant engaged and supervised by CI. CI will guide, advise and review the Feasibility Study in collaboration with partners so that it can be included as Annex 2 for the Funding Proposal. Further revisions to the Feasibility Study will be based on GCF comments.

5. CI will engage consultants to support the design of the Project, including delivering studies comparing scenarios 'with and without' investments by GCF, reviewing current baselines, undertaking an options analysis, assessing feasibility and strengthening project design, and finalizing the Project description based on a synthesis of the outcomes of the study. The final Feasibility Study will need to be refined to ensure consistency with outputs.

Output 1.1. Bogota-Region Profile

6. The Bogota Region project will provide a brief overview of the biophysical and biological nature of the area covered by the project and will describe its social and cultural diversity, hydrological dynamics, regional and local supply systems, political systems, farming customs, demography, and the nature of local economies and limitations to economic development.

Output 1.2. Climate Change Vulnerability Assessment

7. The vulnerability assessment will focus on the Bogotá-Region landscape and the selected Project site locations (determined based on a preliminary climate change vulnerability assessment and a consultation process with local partners and the Colombian government) and will provide a clearer overview of the climate and socio-economic vulnerability of the direct and indirect beneficiaries of the project. This will also assess the vulnerability of the surrounding High Andean ecosystems to climate change and the potential impacts on ecosystem services provided by these to local communities. This vulnerability assessment will contribute to the identification of project adaptation beneficiaries and associated stand-alone annex to the FP.

Output 1.3. Overall risk identification and assessment for the Project

8. Develop a comprehensive Risk Identification and Assessment, that involves a thorough examination of risks to vulnerable communities, government staff and partners that may affect project implementation or result from project actions. The assessment will identify potential risks related to external factors (macroeconomic, regulatory, political, economic, conflict, and natural disasters), project-related factors (financial, operational, technical and innovation, legal, ESS, IP, SEAH) and partner-related factors that could impact project implementation. The assessment should develop tailored mitigation measures. The GCF PROM framework will be used in this risk identification. The assessment should include an inherent risk description, consequences of the risks, risk rating 1-5 for both likelihood (1=unlikely and 5=almost certain) and imapct (1=none and 5=catastrophic).

Output 1.4 Climate & Biodiversity Baseline Assessment

9. This deliverable includes a climate baseline and a biodiversity baseline analysis. It involves updating the existing biodiversity baseline and conducting a comprehensive survey across the high Andean ecosystems within the Bogota-Region Landscape. The survey will focus on a detailed characterization of biodiversity, establishing crucial impact indicators for monitoring the project's effects on key biodiversity result areas. Additionally, this output will include the design of effective measures for biodiversity conservation, ensuring that project interventions significantly contribute to the preservation and enhancement of natural ecosystems. Additionally, climate and risk baseline information will be thoroughly reviewed and, if necessary, collected to establish key indicators for the Project, enhance the climate rationale, and guide the design of prioritized actions in the Project's implementation sites. This comprehensive review of baseline survey data will provide a solid foundation for setting specific indicators for both project outputs and activities. The analysis will offer detailed insights into the climate rationale, focusing on climate variability and change across the project's target sites. Special attention will be given to the impacts of extreme events, such as floods and droughts, highlighting their significance in the context of climate change.

Output 1.5. Options Analysis

10. The Options Analysis will analyze different intervention options in the territory that could meet the project's objectives to supporting local communities and enhance the Bogota Region's water security, including previous work and lessons learned. The analysis should assess the comparative advantage of the Project-selected approaches, based on the efficiency, effectiveness, feasibility, buy-in, trade-offs and financial and economic analysis, and provide a rationale and justification for the chosen project design.

Output 1.6. Analysis of National and Subnational Policies and Regulatory Frameworks

11. This output will produce an overview of all relevant national and subnational climate, land use, and environmental policies, plans and strategies for water resilience and water management in the Bogota Region. This output will include a thorough regulatory and policy analysis to strengthen and validate the governance structure proposed by the project by clearly defining the roles and responsibilities of government agencies in resource management and utilization. This output will also identify gaps and potential reforms, at national and subnational levels, that could support and deepen a paradigm shift towards a transformative pathway of mainstreaming EBA for a water-resilient Bogotá-Region Landscape.

Output 1.7: Feasibility assessment and design of proposed interventions - Component 1. Mainstreaming ecosystem-based adaptation

12. Building on existing studies conducted by CI and partners, consultants will review site selection methodology, as well as the methodology for monitoring the water and natural resources of the Bogotá-Region landscape and assess the technical and financial feasibility of proposed activities to achieve project outcomes, considering barrier identification and interventions proposed to overcome such barriers. Consultants will refine the proposed interventions, considering barriers identified, and provide recommendations to strengthen the ToC and Logframe. This deliverable will be supported and validated by CI, and key partners, such as IDEAM and IavH and national universities.

Output 1.8 Feasibility assessment and design of proposed interventions - Component 2: sustainable livelihoods through a just labour transition for water resilience

13. Building on existing assessments conducted by CI and partners, consultants will assess technical and financial feasibility of proposed project activities to achieve intended project outcomes. Consultants will refine the proposed interventions, considering barriers identified, and provide recommendations to strengthen the ToC and Logframe. The deliverable will be co-designed between a consulting firm, local consultants, CI and key partners such as Agrosavia and IavH (Bogota Region Bioeconomy Hub). International consultants are expected to coordinal local stakeholder engagement and buy-in through local consultants and CI personnel.

Output 1.9: Feasibility assessment and design of proposed interventions – Component 3: Regional and local water governance:

14. The transformational potential and long-term sustainability of the project outcomes relies on component 3 to support the establishment of a regional governance structure to coordinate water security and environmental efforts of the several authorities and local governments with jurisdiction on the Bogota Region. This structure will align priorities and investments to maximize collective impact. This output shall identify the alternative legal backings for a regional structure and assess pros and cons to recommend the best choices. A strategy to establish and implement the structure and the plan to develop governance instruments to coordinate efforts including an Integrated Water Resources Management Plan for the Bogota Region Landscape. Local water governability instruments will also be assessed to devise a local water governability strengthening strategy. The output will assess, legal, technical and financial feasibility of proposed project activities to achieve intended outcomes for regional and local governance and enabling conditions needed to enhance water resource management and resilience from regional to local levels across the Bogotá Region. Consultants will refine the proposed interventions, considering barriers identified, and provide recommendations to strengthen the ToC and Logframe. This outcome will require close collaboration with CI and Fondo Acción, as co- Executive Entity, local consultants and key partners such as CAR, Corpoguavio, RAPE, Ministries of environment, housing and interior, DNP, Municipalities, EAAB, City of Bogota, amongst others.

Output 1.10: Feasibility assessment and design of proposed interventions – Component 3: Financial mechanisms and long-term sustainability and scalability strategy

15. This output will focus on establishing robust financial frameworks to support EBA for water resilience and environmental sustainability for the Bogota-Region. This output will evaluate the technical, financial and market feasibility of proposed mechanisms (PES, Tariffs, Fund) and other potential (bonds, Private- Public Partnerships, funds, biodiversity credits), by considering policy, legal, regulatory, governance, technical and other requirements, conditions to support their creation, as well as and barriers identified. Private sector participation will be led by ANDI through the Biodiversity and Development Alliance for the Bogotá Savanna. Collaboration with a wider group of water related funds and ongoing innitiatives should be enhanced. The output entails analyzing existing financial mechanisms and initiatives in the region, such as the Bogotá Water Fund, assessing and identifying complementarities. This output will be developed by a) the International Firm, who will focus on assessing feasibility, barriers, enabling conditions needed, and financially structuringi the instruments and mechanisms (PES scheme and environmental fee within the water tariff) for the project, based on best practices; b) individual local consultants hired by CI, who will lead the design the institutional architecture to operationalize selected instruments and mechanisms based on local regulations and in close coordination with regional and local stakeholders. The work will be supervised and guided by CI and Fondo Acción as co- Executive Entity, key partners such ANDI, SDA and EAAB, and the Global research nonprofit WRI. Complementary activities will be implemented through CI and partners.

Output 1.11: Feasibility assessment and design of proposed interventions – Component 4: Decision-making platform to forecast climate hazards and mainstream EBA

16. This output will design a strategy to develop a data-driven platform for informed decision-making for integrated water resource management at the Bogota-Region Landscape level. This output will design the project strategy, and provide recommendations to incorporate the latest scientific advancements in climate science to update existing climate change scenarios of the Bogota-Region, and build on the best resolution geographic data available for the Bogota Region in order to model more accurate and detailed projections of climate impacts at local and regional scales as well as model the incidence of land cover changes in water security and hydrological disaster risk. By incorporating Ecosystem-Based Approaches (EBA), the platform will help identify cost effective investments that leverage natural processes to enhance water security, mitigate flood risks, and reduce the impacts of droughts. The platform should be built on the informatic platform for the Monitoring, Evaluation, Accountability and Learning (MEAL) system for the Project. The design of this output will be supported and validated by CI, key partners such as IDEAM, EAAB and CAR, International Consulting Firm, and the national and international universities.

Output 1.13. Financial and Economic Analysis (FEA)

17. Includes EIRR, FIRR, and sensitivity analysis for Project interventions as well as the options analysis. Based on the budget and logical framework targets, a stand-alone annex along with a narrative will be produced for incorporation into the Feasibility Study and FP as appropriate.

Activity 2: Environmental, social and gender studies

18. Activity 2 will develop the relevant environmental and social safeguard plans and mitigation measures as identified by the preliminary ESS Screening Report and in accordance with the CI GCF Agency's Environmental and Social Management Framework (ESMF) to ensure that the Program is consistent with CI and GCF's Environmental and Social Safeguards (ESS) standards. The PPF funding will be used to engage consultants, supported by CI staff, to assess the Environmental and Social Safeguards that might be triggered (based on the preliminary CN ESS Screening) by Program activities and to ensure that mitigation measures are planned for. The deliverables will be an Environmental and Social Management Plan (ESMP) that covers ESS Standards 2, 4, 6, 8 and perhaps 3, 5, 7 and 9. PPF support for this Activity will ensure that the needs, priorities, and incentives of stakeholders at all levels are incorporated into Project design and identify potential ESS and Gender risks from the proposed Project approaches so these can be effectively mitigated.

19. PPF Activity 2 will also support efforts to develop and implement a comprehensive Stakeholder Engagement Plan and process that adheres to the principles of Free and Prior Informed Consent (FPIC) to design the Project and its implementation arrangements. This participatory engagement is essential for identifying

Project interventions, priorities, risks and barriers to design the ToC/Logframe, outcomes, outputs, activities, and indicator targets for the Project.

20. PPF funding will be used to engage consultants, supported by staff from CI and partners, to undertake stakeholder consultations (see below) and rigorous analyses of the implementation contexts in Colombia to complete comprehensive Stakeholder Engagement Assessments and Plans applicable to the context in Colombia. In tandem with these efforts, a detailed Gender Assessment will also be undertaken to provide context and analysis of the power dynamics, relative vulnerabilities, gender-based violence (GBV), and varying roles and responsibilities of men and women in the communities that will be involved in Project activities. The Project will strive to be gender-transformative by addressing identified gender issues through a well-defined Gender Action Plan (GAP) that is fully integrated into Project design and implementation. A Project-level Accountability and Grievance Mechanism (AGM) will also be designed to allow all stakeholders and interested parties to effectively register Project-related grievances so that their voices are fully heard during implementation. The AGM will integrate CI's and GCF's grievance redress policies and will provide information on GCF's independent redress mechanism.

21. Stakeholder engagement will be done at various levels. CI, partners and the consultants will hold an initial meeting with the NDA and other government representatives to map out the needs and plans for informing all stakeholders about the design and proposed implementation of the Project. CI, partners, and the consulting firm will organize consultations with government agencies, and with approximately 40 representatives of stakeholders (local communities, women's groups, civil society, private sector, recognized experts in critical biodiversity and ecosystem habitats) in each of the intervention sites (7) to inform the Stakeholder Assessment and Engagement Plan, Gender Assessment and Action Plan, ESMP and the Accountability and Grievance Mechanism. Community-level meetings will also be organized in each of the intervention sites (7) to collect additional data to inform the design of the Gender Assessment and Gender Action Plan, and the ESMP. Finally, a national level validation meeting to present the final draft Project documents and invite consultation on them will be organized.

Output 2.1: Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP)

22. An Environmental and Social Impact Assessment, including an Environmental and Social Management Plan" will be completed for the Project based on the preliminary ESS Screening Report. The Environmental and Social Management Assessment (ESIA) and the Environmental and Social Management Plan (ESMP) will address at minimum ESS Standards 2, 4, 6, 5, 8 and, perhaps 3 and 9 as well as the systems and capacities to implement the ESMP and aligned with requirements set out in the GCF Environmental and Social policy. Resettlement Plans, Livelihood Restoration and Compensation Plans, and other plans will be developed if found to be triggered, based on the findings during due diligence. The consultant will also identify capacity needs for implementing the ESMP and then develop a capacity building plan, with budget, indicating any resource and capacity building activities needed to make the ESMP operational. Furthermore, an ESMF capacity assessment covering all the ESS Standards will be conducted to identify the capacity needs for implementing other associated ESMF plans such as the IPP, Resettlement Plan, Livelihood Restoration and Compensation Plan, Health, Safety and Security Plan, Biodiversity Action/Management Plan, etc. as applicable.

Output 2.2: Stakeholder Assessment, Stakeholder Consultation Summary and Stakeholder Engagement Plan

23. This output includes the following:
    a. Stakeholder engagement assessment and strategy to identify and evaluate Project key stakeholders and stakeholder groups, including rural and urban communities, to be consulted and engaged in connection with the Project and develop a stakeholder and rural and urban communities' engagement strategy responsive to stakeholder and rural and urban communities needs and based on gender and equity considerations. Special attention must be given to assess, according to GCF ESMF policies, the potential presence of indigenous communities in the urban intervention area.
    b. Stakeholder consultation: Convene consultation meetings, focus group discussions, and interviews with key stakeholder groups, including rural and urban communities to support the completion of stakeholder and gender assessments and to engage key stakeholders, specially rural communities, in the development of Project activities, action plans, and budgets and to contribute to the design of the Theory of Change (TOC), Logical Framework ("Logframe") and workplan, in an inclusive, transparent and participatory manner.

c. Stakeholder Consultation Summary: Compile evidence of consultations and create a summary of all consultations conducted during FP development, including gender-disaggregated information on participants, meeting notes, and key inputs received.
d. Stakeholder Engagement Plan: The Stakeholder Engagement plan will follow GCF's guidance note on designing and ensuring meaningful stakeholder engagement during implementation of GCF-financed projects.
e. Community Engagement Plan: A detailed Community Engagement Plan will be developed following GCF's guidance note on designing and ensuring meaningful rural and urban community engagement during implementation of GCF-financed projects. This Engagement Plan will be co-designed by CI, key partners, and Consulting Firm.
f. Project design validation: Once Project design and documentation is in final draft stage, participate in a final Project validation meeting with key stakeholders to present the Project and obtain validation prior to its submission to GCF.

Output 2.3: Gender Assessment and Gender Action Plan

24. The gender assessment and action plan will involve:
    a. Gender-responsive data collection: Collect gender-responsive baseline data relevant to Project planning, implementation and monitoring, and identify potential Project beneficiaries (sex-disaggregated) and vulnerable groups, and the barriers that could prevent their participation and access to Project benefits. Engage with the identified beneficiaries and groups during the stakeholder engagement process to validate gender baseline data and information and seek input into the design of the Project to address the identified barriers for men, women, and vulnerable groups.
    b. Gender assessment and gender action plan: Undertake a participatory gender assessment consisting of a mix of desk review and direct stakeholder consultation (e.g., through focus groups, key informant interviews, a baseline survey, other stakeholder engagement, livelihoods and benefit sharing questions) that will be summarized in a gender assessment and used to inform activities for the gender action plan. This assessment will include consideration of gender-based violence, sexual exploitation and other acute issues and concerns. Complete a Gender Action Plan in the GCF template format for the Project, informed by the Gender Assessment and based on the Logframe and theory of change, that identifies actions to mitigate and/or minimize barriers to equal participation of men and women as well as opportunities to maximize the participation of marginalized groups. Create an accompanying budget to undertake all GAP activities during Project implementation. The gender-responsive actions and outputs will facilitate implementation of activities that promote gender equality and women's empowerment.

Output 2.4: Accountability and Grievance Mechanism and Manual

25. Develop an Accountability and Grievance Mechanism for the Project aligned with requirements set out in the CI GCF Agency's ESMF current GCF practices. Develop and socialize an AGM Manual with key stakeholders and partners to ensure communication channels and processes are adequate to meet the needs of all stakeholder groups effectively.

Output 2.5: Create a Community Health, Safety and Security Plan

26. Conduct a risk assessment and the development of mitigation and risk management interventions for identified risks to community health and safety. This should include an assessment of conflicts potentially related to the use of water resources in the region.

Output 2.6 Indigenous Peoples and Cultural Heritage Plan.

27. Develop an indigenous peoples and cultural heritage plan to identify the potential impacts (both positive and negative) of the project on the Muisca Community and their cultural heritage, design appropriate mitigation measures where negative impacts cannot be avoided, agree upon and negotiate benefits with the community, and adhere to the Free, Prior and Informed Consent (FPIC) process.

Activity 3: Project Implementation Design and Indicators

28. This activity will focus on the development of Project indicators and baseline information, systems for monitoring and reporting results against performance indicators, assessments of expected outcomes against investments, and monitoring and evaluation plans for the Project. These indicators will be included in the Project Logical Framework in the GCF template. This work will be conducted by experienced consultants, with extensive support from CI and partners, to fully leverage the technical and operational expertise that CI and partners have in implementing, monitoring and evaluating Projects, including those involving adaptations to climate change. CI will also rely upon the expertise of CI's Gordon and Betty Moore Center for Science and the Project Delivery and Monitoring team (for expertise in Project design, safeguards and gender mainstreaming).

Output 3.1: Develop and redraft overall Project ToC/Logframe and country-specific sub-activities as appropriate.

29. This Output will describe the paradigm shift to be achieved by the Project as required in the GCF's Integrated Results Management Framework. Co-benefits will also be identified as appropriate. This Output will result in a completed logical framework in the GCF template which identifies all Project Components, Outcomes, Outputs, Activities, Sub-Activities, and corresponding Deliverables.
30. Additionally, based on Outputs 1.7, 1.8, 1.0, 1.10, 1.11, this deliverable will include barrier identification, interventions to remove these barriers and how the project is addressing such barriers, trade-off (if existing), project design and implementation approaches for each of the project components that will be implemented during the project execution phase.

31. CI will work with the Colombian government, partners, and consultants to identify and include results areas with a breakdown of budget proportion by results areas, identify Project fund-level impacts related to each outcome and output as required for the Funding Proposal, and create a table of Project performance indicators, among other tasks.

Output 3.2. Develop the Project indicators, workplan and implementation timeline and milestones

32. This work will be based on information from the Feasibility Study, the ToC/Logframe as well as inputs from the stakeholder engagement and gender-related assessments. Indicators will include number of direct and indirect beneficiaries disaggregated by sex. Means of Verification will also be developed for all Project indicators. Based on the logical framework, the Project milestones and implementation timeline will be developed under this Output. This Output will contribute to development of the detailed Project budget.

Output 3.3. GHG Emissions Baseline Assessment

33. Develop a GHG emissions baseline assessment that elaborates on the climate rationale of the Project and helps inform the Options Analysis to be completed for the Feasibility Study. This work will describe the climate change context and GHG emission profile for each Project site location. The analysis will include a clear explanation of how loss and degradation of different ecosystems results in increased emissions, and how interventions to reverse these trends can result in emissions reductions. Where feasible, include data on greenhouse gas emissions and/or sequestration rates for each ecosystem identified to enable quantification of project mitigation impacts. These narratives are produced in addition to as well an excel annex showing Project emission reduction (ER) calculations across mitigation interventions (reduced deforestation, on-farm interventions, etc.). This calculation will consider where emissions reductions will occur in order to provide separate calculations for private sector co-financing and GCF investment emissions reductions.

Output 3.5. Monitoring and impact evaluation plan

34. CI will work with partners and consultants to develop and describe data collection methodologies for implementation of the Project (in alignment with the means of verification (MoVs) included in the logical framework) developed under 3.2, summarize the overall impact of the Project, develop the M&E plan along with an appropriate budget to ensure timely data collection, analysis, dissemination to stakeholders, and reporting to the GCF.

Output 3.6. Implementation arrangements and co-financing

35. The CI Team Leader and the project partners will collectively develop the implementation arrangements and co-financing protocol. A protocol for the roles and responsibilities of the Directive Committee and a Technical Committee will be developed to guide the implementation of all interventions. Executing Entities, named implementing partners, key regional and local government agencies, and academic partners will also be identified and due diligence to private sector partners will be conducted. Co-financing will also be secured. This output will also include coordinating with other similar projects (as described in the Concept Note) to identify synergies, avoid duplication and coordinate co-financing.

Output 3.7. Adaptation beneficiary methodologies and calculations

36. Develop an annex that describes the adaptation beneficiary methodologies calculations for both direct and indirect beneficiaries in excel format with accompanying narrative.

Output 3.8. Operations and Maintenance Plan

37. Develop the Project Operations and Maintenance Plan including maintenance requirements and budget for project procured durable goods both during implementation and beyond the Project period of performance-based on the GCF template and in coordination with participating partners and institutions.

Output 3.9. Exit Strategy

38. Based on the project design / logical framework, budget, financial and economic analysis, operations and maintenance plan, and co-finance contributions - create a narrative on the overall sustainability and exit strategies of the Project to describe how the Project interventions will continue beyond the Project implementation period. Include narrative on how GCF funding is catalytic for future investments and justified in the Project context.

Output 3.10 Funding Proposal

39. Based on the ensemble of design documents for the Project, compile the Project Funding Proposal based on GCF's Funding Proposal template in coordination with the Colombian government and partners.

Output 3.11. Project Budget

40. CI will work with partners and stakeholders to develop a comprehensive budget, including co-financing, based on the Project design, Project implementation workplan, and logical framework, in the required GCF format.

Output 3.12. Procurement Plan

41. Based on the budget and procurement needs, a detailed procurement plan will be developed to guide project implementation, in compliance with GCF requirements and applying the procurement policies of GCF, CI, and relevant partners.

Output 3.13. Legal due diligence

42. The Consultancy firm will engage a legal firm to conduct due diligence and prepare a legal memo to ensure proposed project activities are in compliance with local laws and regulations. The legal opinion will include information consistent with the requirements set forth in the section describing Annex 9: Legal due diligence (Regulation, Taxation, and Insurance) on pages 163-165 of the GCF Programming Manual and will include such information and analysis as described in this section, along with any other relevant information that the legal counsel determines necessary to respond to those requirements.

43. The scope and contents of opinion is expected to cover, among other elements where relevant, the following:
    - An overview of the main laws and regulations, including any international treaties and conventions that will apply in the implementation of the Project, and how the AE or other third parties, including GCF-approved consultants, involved in such implementation (e.g., Executing Entities (EEs)) will comply with them.

- An overview of any government, regulatory or corporate approvals, licenses or permits, including land rights, required for implementing and operating the Project, the relevant issuing authority and the date of issuance or expected date of issuance.
- Tax implications, including any applicable taxes on the expenditures to be financed with GCF resources and/or, depending on the type of financial instrument, the financial reflows to be received by the AE or EE from the downstream recipients and ultimately transferred to GCF (or any exemptions therefrom).
- Foreign exchange regulations and currency conversion arrangements related to the Project, including all documentation required for a payment to be made by and/or to the GCF.
- Any insurance requirements to be obtained by the AE, EE, or other involved parties, including GCF-approved consultants, for the implementation of activities; and
- The treatment and ownership of any immoveable assets that are financed by the Project. This must be consistent with the exit strategy to be outlined in the PPF.
- Any other applicable laws or regulations relevant to the Project.

C. Justification of the Project Preparation Request

44. Given the importance of the project to vulnerable local communities and Bogota Region water security, CI has funded the preparation of the Concept Note, PPF proposal and will cofinance the Funding Proposal providing contributions in the form of staff time to the costs of developing the funding proposal. However, CI is a non-profit entity with limited available resources and cannot cover the full amount required. Designing a robust proposal for a project in the Bogotá Region Landscape is a very demanding task due to its social, environmental and institutional complexity. It is the most densely populated area of the country with dense urban centers and dense rural areas where smallholdings predominate; Institutional stakeholders, in turn, cover all the range from Nacional Ministries, the administration of the capital city, 20 municipalities, more than 300 communal aqueducts and the largest industrial hub of the country amongst many others; in turn, ecosystems range from wetlands to semi-arid areas mountain forests and paramos with large highly transformed and degraded areas.

45. The paradigm shift and impact potential that the project will aim to achieve is ambitious because it aims to making structural changes in policy, governance, financial incentives and in the water sector overall intervention logic. Thus, PPF will support the development of high-quality and in-depth feasibility studies and a robust project design to ensure project outcomes can be achieved and sustained over time. The proposed preparation activities will also include development of robust baselines, and meaningful and quantifiable indicators needed to measure the success of this project. These indicators will encompass those related to gender, climate vulnerability, institutional alignment, systemic change, and environmental and social safeguards.

46. The complex conglomerate of regional and local actors needs to be continuously engaged during the FP development to maximize buy-in of the activities proposed and local ownership during the implementation that require substantial effort that can't be sustain without the GCF support. Each of the 7 intervention areas have their own challenges and power dynamics, and PPF activities will make possible to conduct a strong stakeholder engagement and consultation process in all project areas and to develop environmental, social and gender studies in line with GCF policies.

47. Although the high priority given to this project by the national and local governments, national regulations makes public funding for project formulation difficult, due to the uncertainty of getting a return from the investment. To support the development of the technical elements of this GCF Funding Proposal, CI is requesting a grant from the Project Preparation Facility. Given the limited availability of resources of CI, the development of this Funding Proposal will not be possible without this financial assistance.

Counterpart resources

48. CI is committed to supporting the development of the Funding Proposal through the allocation of significant staff time and other resources as co-financing.

49. Fondo Acción, which has been a partner in the formulation process is expected to act as an Executing Entity during the Funding Proposal implementation, will also allocate staff time as co-finance ($ 45,670) to participate in the project design, revision of deliverables, and engagement with stakeholders during the PPF phase. Fondo Acción will not receive PPF Funds.

50. While local partners are not able to provide financial resources for the development of a Funding Proposal, CI will engage the local, regional, and national government entities, private sector, academia, NGOs and communities who are expected to contribute to PPF activities through staff time to review documentation and engage in project design workshops and meetings over the course of Funding Proposal development.

Additionally, EAAB, CAR, and the District have included complementary activities to the PPF in their annual plans.

51. The PPF grant activities will build upon existing efforts, initiatives, and datasets wherever possible and focus on the activities described above in section B to fill information gaps for completing the Funding Proposal. In addition to providing support for the work involved in preparing the Funding Proposal, CI expects to leverage the experience and complementary efforts from the government, the private sector, NGOs, and other stakeholders to design this important project in a way that optimizes benefits for local communities, both during the implementation of the Project and over the long term.

D. Implementation Arrangement

52. Conservation International Foundation (CI) will be responsible and accountable to the GCF for the overall design, development, management, implementation and supervision of activities financed through this PPF in accordance with the CI's policies and procedures and with the PPF Grant Agreement to be signed with the GCF or its fiduciary agent. CI will carry out all fiduciary and financial management, procurement of goods and services, monitoring and reporting activities under this proposal.

53. Conservation International Foundation (CI), the Accredited Entity (AE), through its division CI-GCF Agency, will provide oversight of the implementation of the Project Preparation activities (including technical, financial, and administrative monitoring) and ensure alignment and compliance with GCF standards and policies and with the terms of the PPF Grant Agreement to be signed with the GCF, in accordance with CI's policies and procedures and with the PPF Grant Agreement to be signed with the GCF or its fiduciary agent.

54. CI will self-execute this PPF grant; CI, acting through its branch in Colombia (CI-Colombia) will serve as the sole Executing Entity for the PPF activities. CI-Colombia is a branch of CI, as such CI-Colombia is not a separate legal entity from CI. CI-Colombia applies all CI policies and procedures. As EE, CI-Colombia's work will focus on the areas of stakeholder consultation, institutional/partner coordination, provision of technical input, and review of consultant deliverables. CI PPF activities will be supported by CI divisions offering specific expertise required for elements of the Funding Proposal, including project design, gender, ESS, and science, to ensure that a high-quality, evidence-based, global Project is designed to meet GCF's standards. CI will also work closely with partners and local communities to ensure full ownership of the design and implementation of the project, as described below.

55. CI-GCF and CI-Colombia will work closely with Fondo Acción, who will act as an Executing Entity for some of the project activities during the Funding Proposal Implementation. During PPF implementation, Fondo Acción will be a key partner organization supporting the design, review, and provision of technical inputs for the deliverables financed through this PPF. CI is in the process of signing a Memorandum of Understanding (MoU) with Fondo Acción to formalize collaboration during the 20 months of PPF implementation until the Funding Proposal is approved by the GCF.

56. The development of the Funding Proposal will be led by a PPF Project Lead, a CI-Colombia staff member who will act as team leader, provide technical support for activities, and ensure that all elements of the Funding Proposal are delivered in a timely manner and at the rigorous standards of the GCF. Additional CI staff will collaborate in the project design and revision of deliverables (Annex 3). CI Operations staff will manage grants and contracts, finances, and financial reporting as PPF project management for this grant. CI Operations staff will have support in project financial management and procurement from one local consultant to ensure day to day follow-up and timely response.

57. Since 2006, CI-Colombia has been collaborating with various governmental and private institutions to implement actions focused on conservation, protection, ecological restoration, and sustainable production alternatives in strategically important areas that provide valuable ecosystem services in the Bogotá-Region Landscape. CI-Colombia, due to its extensive experience within the Bogotá-Region Landscape, has deployed more than US$40 million in 17 years to implement responsible practices, cultural preservation, sustainable alternatives, ecological restoration, participatory planning, protected area management, monitoring, economic incentives, and conservation interventions. The last project implemented within this framework, was the GEF "Adaptation to climate impacts on water regulation and supply in the Chingaza-Sumapaz-Guerrero area" project conducted between 2015 and 2021, which has served as a model for designing and implementing climate change adaptation measures in high-mountain areas. These experiences have not only contributed to policy development but also offer valuable insights for scaling up similar initiatives worldwide.

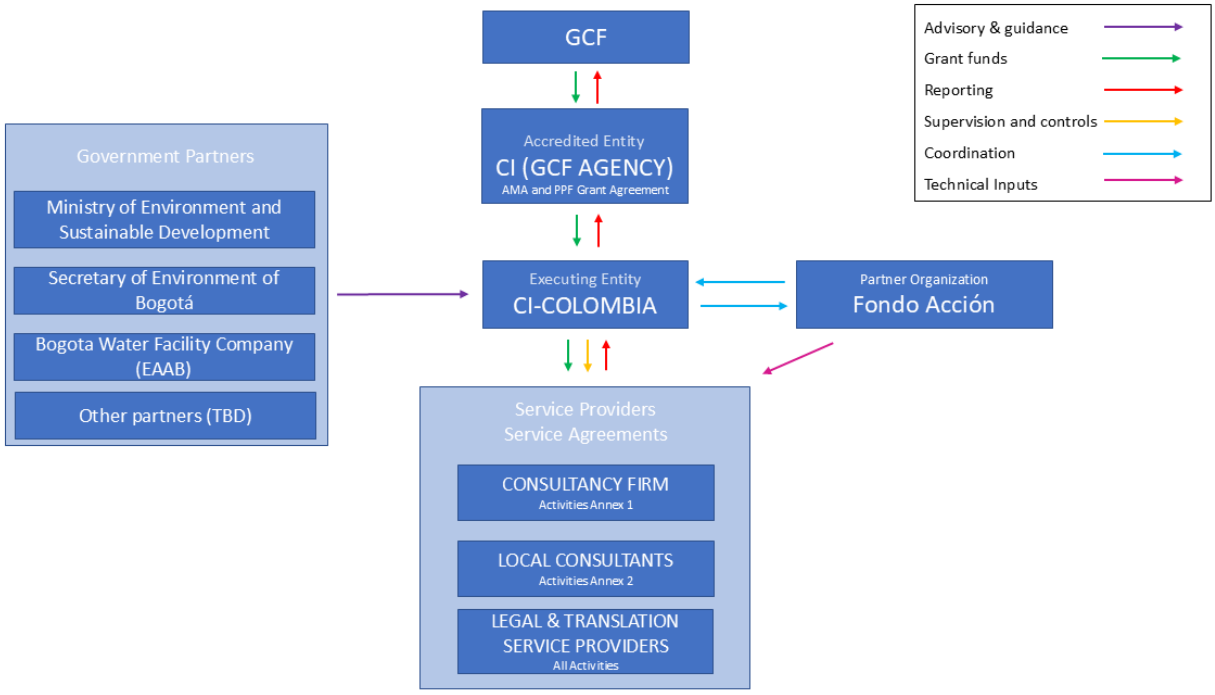

Figure 1: Financial and Contractual Agreements; PPF Grant Implementation Arrangements

58. To provide the technical inputs needed to complete the Funding Proposal and Annexes, CI will procure and enter into a services agreement with consultancies and service providers through a competitive selection procedure and in accordance with CI's procurement policies. CI will engage an international consulting firm, as well as local consultants to support CI to design interventions, develop indicators, and provide detailed recommendations and information on environmental and social safeguards, gender mainstreaming, economic and financial impacts, implementation timetable, and conduct stakeholder engagement. Through a Request for Proposals and following CI's Procurement Policy, CI will seek to engage an international firm to support the terms of reference included in Annex 1 to this PPF application. Additionally, due to the complexity and estimated amount of work required to design the project components, CI is taking the approach of hiring specialized local consultants (Annex 2) in rural development and financial instruments and mechanisms to work closely with CI's Project Lead, Fondo Acción and the International Consulting Firm. In particular, the financial instruments and mechanisms, that envision a PES mechanism and water tariff modification require extensive knowledge and experience with local financial and regulatory frameworks; and the need to ensure sufficient knowledge and expertise of the Bogotá-Region Landscape ecosystems and governance,

59. CI will also enter into service agreements to contract translation/interpretation and legal services. Translation and interpretation will support specific stakeholder meetings. A legal firm will conduct due diligence and provide a legal memo to ensure Project activities comply with Colombian laws and regulations.

60. All third parties receiving GCF PPF funds will undergo CI's due diligence processes. All contractual agreements that CI enters with third parties receiving PPF funds will be in compliance with CI and GCF standards and policies and the terms of the PPF Grant Agreement entered into between CI and GCF and will provide for controls on the use of GCF funds, including compliance with the GCF Prohibited Practices Policy.

61. To ensure alignment of the Project with the national structures and policies of Colombia, CI will execute PPF activities in close consultation with the Ministry of Environment and Sustainable Development; the Ministry of Housing, City, and Territory; Mayor's Office of Bogotá lead by Secretary of Environment of Bogotá (SDA); the Bogota Water Facility Company (EAAB); the Cundinamarca Regional Autonomous Corporation (CAR); the Guavio Regional Autonomous Corporation (Corpoguavio); Administrative Central Region (RAP-E); the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM); Humboldt Institute (IaVH), Colombian Corporation for Agricultural Research (AGROSAVIA); and National Association of Industrialists (ANDI). Consistent communication between CI, the Project partners and national officials will be maintained throughout

the preparation of the Funding Proposal and the complete draft will be provided to the NDA for review and approval prior to submission to GCF. Communications and relationships with national officials are expected to be consistent and inclusive throughout Project development and implementation.

62. An annual financial audit of the PPF grant will be conducted by an independent external audit firm in accordance with international standards on audit in accordance with the terms of the PPF Grant Agreement to be signed with the GCF or its fiduciary agent.

63. Risks concerning AML/CFT will be properly identified, and mechanisms and controls put in place to mitigate those risks within the project preparation facility cycle, according to CI's obligations to the GCF under the PPF Grant Agreement to be signed with GCF or its fiduciary agent and GCF AML/CFT Policy. [**yes x**, no □, unsure □]
64. CI will submit a Funding Proposal to the GCF that is supported by the PPF resources as detailed in section E below "Budget details and disbursement schedule" within 2 years of approval of this application, as per GCF Board Decision B.13/21.

E. Budget Details and Disbursement Schedule - Confidential								
CC	**Outputs and Activities**	**Qty**	**Unit cost (e.g. rate)**	**Duration (e.g. days)**	**Total cost (USD)**	**Amount provided by AE (USD)**	**Amount requested from GCF (USD)**	**Description or Notes**
Activity 1: Pre-feasibility, Feasibility Studies, and Project Design								
C	Consultancy Firm	See notes			$330,633	$0	$330,633	Final costs will be determined by the consultancy proposal. To include consultant time on the Feasibility Study and the following deliverables: Inception Report, Vulnerability Assessment, Risk Identification and Assessment, Baseline Analysis and Report, Financial and Economic Analysis, Options Analysis, Analysis of National and Subnational Policies and Regulatory Frameworks, and Feasibility Assessment and Design of components 1, 2, 3 and 4.
C	Consultant Local	See notes			$121,583	$56,000	$65,583	The proposal includes 4 local consultants financed through PPF resources (see Annex 2) who will provide technical inputs to the FP development and support CI-Colombia coordination and engagement efforts with stakeholders, partners and the International Consultant firm across the three levels of government and the 7 project intervention sites. Additionally, CI will finance time of consultants specialized in sustainable productive systems, sustainable tourism, natural capital, and ecosystem services to provide technical inputs to the project design and feasibility assessment.
S	Local CI Staff	2	$67,226	*Staff*	$134,451	$40,481	$93,971	PPF Funding proposed for 2 CI Colombia Program Staff to support Activity 1.
PS	Professional Services- Legal Due Dilligence	1	$13,000	*Contracts*	$13,000	$0	$13,000	Legal Due Diligence for the proposed project.
PS	Professional Services- Translation services	1	$5,000	*Contracts*	$5,000	$0	$5,000	Translation and/or Interpretation Services for Stakeholder validation to ensure all project communications are translated and interpreted to the local language to meet stakeholder needs.
TMW	Travel, Meetings & Workshops	2	$10,299	*Events*	$20,597	$0	$20,597	PPF Funding is proposed for 2 Inception meetings with stakeholders & Consultants and Staff travel costs related to the component
O	Other Direct Costs				$41,159	$41,159	$0	Includes all project administrative support costs and co-finance for equipment for PPF personnel, such as 1 laptop for the project lead.
	Sub-total				**$666,423**	**$137,640**	**$528,783**	

Activity 2: Environmental, Social, and Gender Studies								
C	Consultancy Firm	See notes			$70,150	$0	$70,150	Final costs will be determined by the consultancy proposal, which will include consultant time for ESIA and ESMP, stakeholder consultations and development of the SEP, gender assessment, and gender action plan deliverables, development of the Accountability and Grievance Mechanism, Indigenous peoples and cultural heritage plan, Community health Safety and Security Plan. Work and travel will involve stakeholder engagement, data collection, interviews, and meetings with government representatives.
C	Consultant Local	See notes			$20,287	$0	20,287	PPF Funding is proposed for local consultants who will support CI-Colombia and the consultancy firm in coordinating and providing high-level analysis and review of the Safeguards and Gender deliverables to ensure alignment with activities proposed in component 1,2,3, 4 and with GCF standards for funding proposals.
S	Local CI Staff	3	$51,407	*Staff*	$80,798	$18,765	$62,033	Staff of CI Colombia Program included in the PPF (Three staff positions)
S	International CI Staff (Safeguards and Gender Specialists - existing Staff)	2	$805	*Staff*	$13,024	$13,024	$0	International CI Staff that will support the implementation of activity 2 and the development of the Safeguards and Gender deliverables for the Funding Proposal.
TMW	Meetings and Workshops	42	$864	*Events*	$36,297	$0	$36,297	PPF funding is proposed for conducting 26 consultation meetings for Activity 2 with stakeholders in the Project areas.
O	Other Direct Costs				$21,129	$21,129	$0	Includes all Project Administrative Support Costs & the equipment cost category
	Sub-total				**$241,685**	**$52,917**	**$188,767**	
Activity 3: Project Implementation Design and Indicators								
C	Consultancy Firm	See notes			$176,080	$0	$176,080	Final costs will be determined by the consultancy proposal. To include consultant time for project alignment and the following deliverables: Theory of Change and Logical Framework, Workplan and Implementation Plan, GHG Emissions Baseline Assessment, Monitoring and Impact Evaluation Plan, Implementation Arrangements, Adaptation Beneficiary Methodologies and Calculations, Operations and Maintenance Plan, Procurement Plan, Exit Strategy, Maps, support with Project Budget, and alignment with Funding Proposal.

C	Consultant Local	See notes			$42,000	$6,000	$36,000	The proposal includes 4 local consultants financed through PPF resources (see Annex 2) who will provide technical inputs to the FP development and support CI-Colombia coordination and engagement efforts with stakeholders, partners and the International Consultant firm across the three levels of government and the 7 project intervention sites. CI will finance time from local consultants to provide technical inputs to the project design and feasibility assessment.
S	Local CI Staff	3	$26,421	*Staff*	$79,262	$25,857	$53,405	PPF Funding is proposed to co-finance 3 CI Colombia Program Staff who will support the implementation and development of Activity 3 and its deliverables for the funding proposal.
S	Local Fondo Acción Staff	1	$45,670	*Staff*	$45,670	$45,670	$0	Co-financing provided by Fondo Acción to cover staff involvement during the PPF implementation phase to support the design of the Funding Proposal.
S	International CI Staff (M&E Specialist - existing Staff)	2	$46,141	*Staff*	$92,282	$92,282	$0	International CI Staff that will support the implementation of activity 3 and support the development of the Funding Proposal.
TMW	Travel, Meetings & Workshops	29	$714	*Events*	$20,697	$0	$20,697	PPF funding is proposed for conducting 13 validation meetings for Activity 3 with stakeholders in the Project areas.
O	Other Direct Costs				$20,727	$20,727	$0	Includes all Project Administrative Support Costs
	Sub-total				**$476,718**	**$190,536**	**$286,182**	
	Grand total of operation costs				**$1,384,826**	**$381,094**	**$1,003,732**	
	Contingency (up to 1%)				$10,037	$0	$10,037	
	Other costs2							
Project Management Costs								
S	**Local CI Staff**	3	$54,405	*Staff*	$117,545	$75,433	$42,112	PPF Funding proposed for two CI Colombia Program Staff for PPF operations and monitoring with consultants.
PS	**Audit cost**	2	$16,425	*Lump Sum*	$32,850	$0	$32,850	PPF Funding proposed for two Annual Audits.
O	**Other Direct costs (Project support costs, communications, and supplies)**				$45,738	$45,738	$0	Includes all Project Administrative Support Costs & Printing, supplies, and communication costs
	Sub-total PMC				$196,133	$121,171	$74,962	
	Total Project Costs				**$1,590,997**	**$502,265**	**$1,088,732**	
	AE Fee 8.5%				$92,542	$0	$92,542	

	Grand Total of PPF Grant	**$1,683,539**	**$ 502,265**	**$1,181,274**	

CI Budget Notes:

1."Cost Category" column added for clarity. Coding: C=consultancy, S=staff, TM=travel, meetings and workshop, PS=professional and contractual services, O=Other

Disbursement and Reporting Schedule (note 8):

Implementation period

Months 1−12: Proposal development. Complete Funding Proposal will be submitted to the GCF at the end of the 12th month following PPF grant effectiveness.

Months 12-20: GCF review period. CI, in coordination with consultants, partners, and the NDAs, will respond to GCF review and feedback of the submitted proposal.

Disbursement Schedule

1st Tranche: 50% of total grant, which equates to US $590,637 that only will be disbursed upon or after effectiveness of the Grant Agreement and also upon fulfilment of the disbursement conditions specified in the Grant Agreement and Standard Conditions.

2nd Tranche: 40% of total grant, which equates to USD $472,510 that only will be transferred (provided that at least 70% of the 1st Tranche has been incurred) upon submission of an interim progress report and Certified Financial Report and also upon fulfilment of the disbursement conditions specified in the Grant Agreement and Standard Conditions.

Final Tranche: 10% of total grant, which equates to USD $118,127 that only will be transferred upon submission of a project completion report and final Audit Report. Submission of a completion and audit report will be furnished no later than three (3) months and four (4) months, respectively, after the completion of the PPF support.

Reporting plan
An interim progress report of the first 12 months of the PPF project will be submitted within thirty (30) days following the end of Month 12 of the PPF grant.

Submission of a completion and audit report will be furnished no later than three (3) months after the termination of the PPF grant.

For reporting purposes, CI will submit all deliverables of proposed project preparation activities and a draft Funding Proposal of the underlying project together with the completion report for this PPF application.

In addition to formal reporting, CI will engage with GCF Secretariat staff throughout proposal development to ensure that critical milestone documents are acceptable to the GCF and that the programme approaches will be supported.