GREEN CLIMATE FUND

Meeting of the Board
26 – 29 October 2026
Songdo, Incheon, Republic of Korea
Provisional agenda item 10

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23 October 2026

Consideration of funding proposals – Addendum XVI

Funding proposal package for FP323

Summary

This addendum contains the following seven parts:

a) A funding proposal titled "Building Water Resilience in Bogotá and the Region";
b) No-objection letter issued by the national designated authority(ies) or focal point(s);
c) Environmental and social report(s) disclosure;
d) Secretariat's assessment;
e) Independent Technical Advisory Panel's assessment;
f) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
g) Gender documentation.

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The documents are presented as submitted by the Accredited Entity.

Funding Proposal

Project/Programme title:	***Building Water Resilience in Bogotá and the Region.***
Country(ies):	*Colombia*
Accredited Entity:	*Conservation International Foundation*
Date of first submission:	*2026/05/08*
Date of current submission	*2026/08/09*
Version number	*V.06*

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Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the GCF Information Disclosure Policy, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

"FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]"

GREEN CLIMATE FUND

KEY ACRONYMS AND TERMS

AE	Accredited Entity
ANLA	National Environmental Licensing Authority
AMA	Accreditation Master Agreement
CAR	Regional Autonomous Corporation of Cundinamarca
CI	Conservation International
DANE	National administrative Department of Statistics
EAAB	Bogotá Water and Sewage Company (*Empresa de Acueducto y Alcantarillado de Bogotá*)
EbA	Ecosystem-based Adaptation
EE	Executing Entity
ENSO	El Niño Southern Oscillation
E2050	Colombia's Long-Term Climate Strategy 2050
FAA	Funded Activity Agreement
FS	Feasibility Study
GCF	Green Climate Fund
GDP	Gross Domestic Product
GSOC	Global Soil Organic Carbon
IAVH	Alexander von Humboldt Institute
IDEAM	Colombia's Institute of Hydrology, Meteorology and Environmental Studies
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
MEAL	Monitoring, Evaluation, Accountability and Learning
Minambiente	Ministry of Environment and Sustainable Development
NAP	National Adaptation Plan
NbS	Nature-based Solutions
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organization
PES	Payments for Ecosystem Services
PMU	Project Management Unit
PNGIBSE	National Policy for Integrated Management of Biodiversity and Ecosystem Services
POT	Territorial/land-use plan (*Plan de Ordenamiento Territorial*)
PSC	Project Steering Committee
RAP-E	Administrative Planning Region (*Región Administrativa y de Planeación Especial*)
RLE	Red List of Ecosystems
SDA	Bogotá District Secretariat of Environment
SIAC	Environmental Information System of Colombia
SINAP	National System of Protected Areas
SNIF	National Forest Information System
ToC	Theory of Change
TNC	The Nature Conservancy
UNEP	United Nations Environment Programme
WOP	Water Operators Partnership
WRI	World Resources Institute

A. PROJECT/PROGRAMME SUMMARY

A.1. Project or programme	Project	**A.2. Public or private sector**	Public
A.3. Request for Proposals (RFP)	*If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.* Not applicable		

A.4. Result area(s)

*Check the applicable GCF result area(s) that the overall proposed project/programme targets below. For each checked result area(s), indicate the estimated percentage of **GCF and Co-financers' contribution** devoted to it. The total of the percentages when summed should be 100% for GCF and Co-financers' contribution respectively.*

	GCF contribution	Co-financers' contribution[1]
Mitigation total	Enter number %	Enter number %
☐ Energy generation and access	Enter number %	Enter number %
☐ Low-emission transport	Enter number %	Enter number %
☐ Buildings, cities, industries and appliances	Enter number %	Enter number %
☐ Forestry and land use	Enter number %	Enter number %
Adaptation total	Enter number %	Enter number %
☒ Most vulnerable people and communities	34%	20%
☒ Health and well-being, and food and water security	46 %	20 %
☐ Infrastructure and built environment	Enter number %	Enter number %
☒ Ecosystems and ecosystem services	20 %	60%

A.5. Expected mitigation outcome *(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)*		**A.6. Expected adaptation outcome** *(Core indicator 2: direct and indirect beneficiaries reached)*	• *Indicate total number of direct and indirect beneficiaries*	
			Direct: 3,013,383 Women 51%	*Indirect:* 7,083,799 Women 51%
			29% of Bogotá-Region population 5% of the Colombia's population	71% of Bogotá-Region population, 14% of the Colombia's population
A.7. Total financing (GCF + co-finance[2])	76,738,917 USD	**A.9. Project size**	Medium (Upto USD 250 million)	
A.8. Total GCF funding requested	45,717,002 USD			

[1] Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e. GCF financial resources requested by the Accredited Entity) to implement the project or programme described in the funding proposal.
[2] Refer to the Policy of Co-financing of the GCF.

A.10. Financial instrument(s) requested for the GCF funding	*Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.* ☒ Grant 45,717,002 USD ☐ Loan Enter number ☐ Guarantee Enter number ☐ Equity Enter number ☐ Results-based payment Enter number		
A.11. Implementation period	2027-2032 (5 years)	**A.12. Total lifespan**	20 years
A.13. Expected date of AE internal approval	Click or tap to enter a date.	**A.14. ESS category**	B
A.15. Has this FP been submitted as a CN before?	Yes ☒ No ☐	**A.16. Has Readiness or PPF support been used to prepare this FP?**	Yes ☒ No ☐
A.17. Is this FP included in the entity work programme?	Yes ☒ No ☐	**A.18. Is this FP included in the country programme?**	Yes ☒ No ☐
A.19. Complementarity and coherence	*Does the project/programme complement other climate finance funding (e.g. GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1.* Yes ☒ No ☐		
A.20. Executing Entity information	There are two Executing Entities: • Conservation International Colombia (CI-Col) • Fondo para la Acción Ambiental y la Niñez (Fondo Acción)		

A.21. Executive summary (max. 750 words, approximately 1.5 pages)

1. Ten million people who live in Bogotá, Colombia and surrounding municipalities are increasingly water-insecure due to change in the amount and intensity of rainfall, heat extremes, prolonged dry periods and compound climate variability that is driven by climate change. At the same time, degradation of native High Andean ecosystems in the region's upstream catchments has reduced the landscape's capacity to capture, regulate, and store water. Although ecosystem restoration and improved land-use practices are known to reverse these trends, their implementation has remained limited in scale and proven impact.
2. The project will address four priority adaptation gaps: insufficient long-term financing for watershed resilience; weak integration of climate risk into land-use, watershed and water-security planning; limited local implementation capacity; and the absence of an operational monitoring, reporting, and verification system that links interventions to measurable hydrological outcomes for climate resilience.
3. To address these gaps, the project proposes a Watershed Transformation Model (Component 1) that combines ecosystem conservation and restoration, climate-resilient productive systems, strengthened community and municipal water management, and the development of a long-term financing and monitoring architecture. The objective is to improve water resilience at scale, with hydrological outcomes measured through Volumetric

Water Benefits (VWBs) Accounting, and to establish a credible basis for sustained public and private investment.

4. To this end, the project is structured around two mutually reinforcing components. Component 1 will conserve and restore strategic high-Andean ecosystems, including *páramos*, forests, and riparian corridors, to improve infiltration, reduce erosion, and stabilize baseflows. On agricultural lands, it will apply practices that improve infiltration while promoting climate-resilient production through silvopastoral systems, agroecological practices, diversified agrifood systems, and more efficient water use. To sustain changes in agricultural practices and ecosystem conservation, these actions will be complemented by interventions that target people's livelihoods, by commercialization and access to market of rural products that support water resilience and improvements to community-run water supply systems.

5. Component 2's objective is to generate the financial flows needed to maintain and scale up the interventions in Component 1. The project will unlock a sustainable financing mechanism from Bogotá's water utility by operationalizing an existing regulation that allows utilities to recover the costs of eligible environmental investments through the water tariff. Component 2 will also operationalize a financial mechanism designed to to attract additional resources for the continued implementation, maintenance and expansion of watershed resilience activities, which will ensure long-term sustainability of the Watershed Transformation Model in Bogotá and the Region.

6. The project prioritizes four intervention landscapes (Guandoque, Villapinzón, Tominé and Tunjuelo) that were selected based on climate risk, hydrological relevance, ecosystem condition, water-regulation potential, socioeconomic diversity, stakeholder readiness, and institutional feasibility. Within each of these landscapes, further prioritization has identified watersheds and parcels suitable for conservation, restoration, or sustainable productive transformation.

7. The project will directly benefit over 3 million people, including farmers, landowners, producer associations and community water organizations in prioritized watersheds, through restored and conserved ecosystems, climate resilient productive practices, improved water services and better access to markets that value water- friendly products. Rural women and vulnerable groups are specifically targeted for tailored support. A further 7 million indirect beneficiaries, including the urban and peri-urban population supplied by the Bogotá Water Utility and other users of the Bogotá-Region's water resources, are expected to benefit from a more reliable, cleaner water supply and lower treatment costs. Institutional beneficiaries include the Utility, municipal and regional authorities, environmental regulators and private companies, who gain tested methodologies, decision support tools and investment frameworks that use VWWs to quantify and verify hydrological outcomes for planning, reporting and investment decision-making.

8. GCF financing is justified because it enables a transition that would otherwise be significantly slower or nonexistent, more fragmented, and less climate effective. In the absence of GCF support, investments would likely remain limited to small-scale, fragmented conservation and restoration efforts with communities' depending on unsustainable productive practices, and no mechanism to systematically quantify and verify the hydrological outcomes of upstream interventions in a manner capable of attracting sustained investment.

9. The project delivers a paradigm shift by moving from isolated and small-scale approaches to a coordinated, watershed-scale, where sustainable, climate-resilient livelihoods are anchored in watershed resilience and in a conservation-production model backed by sustainable financing mechanisms that use quantified and verified hydrological outcomes, through VWBs, to unlock long-term public and private resources in water resilience.

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate context (max. 1000 words, approximately 2 pages)

10. The project addresses a complex and intensifying climate change problem that is already affecting water security, ecosystems, livelihoods and economic stability in the Bogotá Region and is expected to intensify over the coming decades. This section is structured to explain the climate context and the climate vulnerability analysis and to show how these link to the project responses in terms of site selection and interventions. Supporting background information, analysis and key references are provided in the Feasibility Study, Annex 2. This section starts by explaining **climate-related features** that are critical to understanding the project rationale. Then, the **climate vulnerability analysis** and its implications are described. The third section describes how the climate risks combined with non-climate risks lead to the **selection of the intervention landscapes**. The fourth step is an explanation of how the identified **climate risks impact project design**.

Climate change context in the Bogota Region

11. The region's water system depends on high-mountain ecosystems (*páramos*, high-Andean forests, wetlands and agricultural areas in the upper watersheds) that regulate runoff, sustain dry-season baseflows, retain sediments and protect water quality. Climate change is altering the hydrological behavior of these landscapes through sustained warming, greater precipitation variability, more intense rainfall events, longer dry periods and El Niño Southern Oscillation (ENSO)-related extremes. These hazards interact with existing structural water stress, ecosystem degradation, land-use pressure and uneven institutional capacity, creating a systemic adaptation need rather than a conventional infrastructure challenge.

12. The Bogotá-Region is characterized by high exposure of its population and infrastructure to climate driven water supply changes. The region encompasses Bogotá city and 33 surrounding municipalities covering approximately 829,212 hectares. It is home to over 10 million inhabitants[3,4] and contributes 26.9% to national GDP, making it a critical area for ensuring climate adaptation and water security. Municipal water supply systems and community-managed aqueducts are highly dependent on local hydrological conditions. The socio-economic context is markedly different across the landscape. Although Bogotá accounts for almost a third of the national GDP, more than 50% of the municipalities in its area of influence have fewer than 20,000 inhabitants, depend largely on subsistence agriculture and monoculture, and rural poverty is widespread.

13. The Bogotá-Region presents a complex mosaic of land cover types that reflect centuries of human intervention superimposed on diverse natural ecosystems. The region's land cover patterns demonstrate the tension between rapid urban expansion and the preservation of critical environmental services, particularly in the context of the Sabana de Bogotá ecosystem (see Annex 2; Chapter 1). Land change analysis reveals a 50% loss of high Andean forests between the 1940s and 1950s, and 45% loss of *páramos* in the 1960s and 1970s due to potato cultivation. The *páramos* continues to face substantial pressures, such as coal mining, quarrying, establishment of livestock pastures, expansion of potato crops (often on leased land) and rural housing development. These activities contribute to soil degradation, stream sedimentation and water pollution.

14. The Bogotá River basin already exhibits high water stress due to imbalance between supply and demand, compounded by seasonal variability and urban growth. The Bogotá-Region is one of Colombia's most water-stressed metropolitan areas, where rapid urbanization, intensive agriculture, and industrial development converge to create complex water management challenges. The Bogotá Aqueduct and Sewerage Company (EAAB) serves as the primary water utility, providing service to 95.9% of the population across Bogotá and four surrounding municipalities, while 18 other municipalities depend on local water sources with varying degrees of reliability and quality.[5] The water infrastructure of the Bogotá-Region is under significant stress from recurring droughts, rapid urban growth, aging systems, and climate variability. For example, in 2024–2025, the city confronted its most severe drought in over four decades, which led to record-low reservoir levels—at one

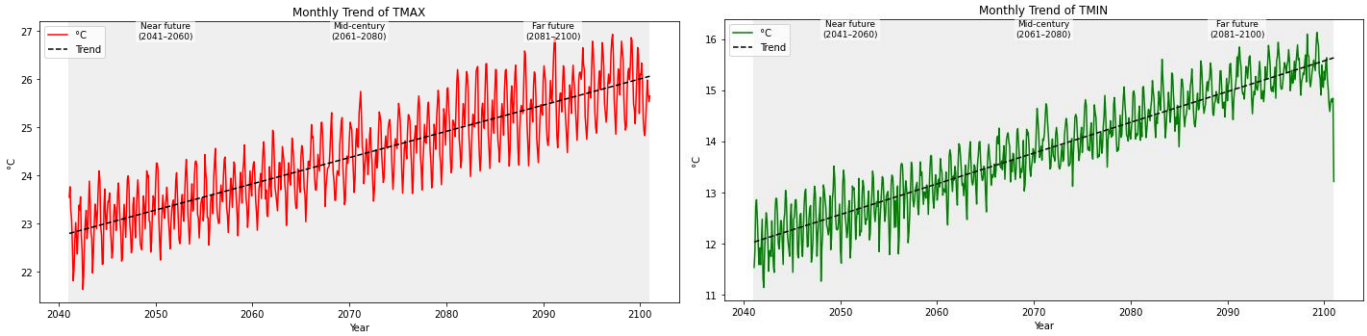
[3] See Annex 2 for full references for section B.1.
[4] 10,097,172 according to DANE, 2025. Población total. https://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion
[5] IDOM, Gobernación de Cundinamarca, Findeter y Alcaldía de Bogotá, 2022)

point, the Chingaza system dropped to just 10.5–16% of capacity—forcing authorities to implement water rationing for the first time since the 1980s.[6]

15. The region is experiencing increasing climate variability and extremes that affect water regulation, ecosystem integrity, and the resilience of rural and peri-urban communities. Baseline climate analysis for 1991–2020 (Annex 2; Section 2.2) shows a warming trend (~0.2°C per decade) and strong precipitation variability (750–1450 mm/year range) indicating that the region already operates under significant hydro-climatic variability, which is amplified by ENSO.[7]

16. Future climate projections confirm that these pressures are expected to intensify. Using downscaled CMIP6 projections, the Feasibility Study (Annex 2; Section 2.3) assesses both SSP2-4.5 and SSP5-8.5 for the Bogotá Region.[8] Under both scenarios, maximum and minimum temperatures follow a sustained warming trajectory through the second half of the century. Under SSP2-4.5, maximum temperature increases by about 1.5–2.0 °C and minimum temperature by around 2.0 °C by 2100. Under SSP5-8.5, projected warming is substantially stronger, with maximum temperature increasing by about 3.0–3.5 °C and minimum temperature by about 3.5–4.0 °C.

Figures 1 and 2. Projected monthly trend in maximum (left) and minimum temperature (right) under SSP5-8.5 in the Bogotá Region, 2041–2100. Source: IDEAM (2025); compiled by IDOM.



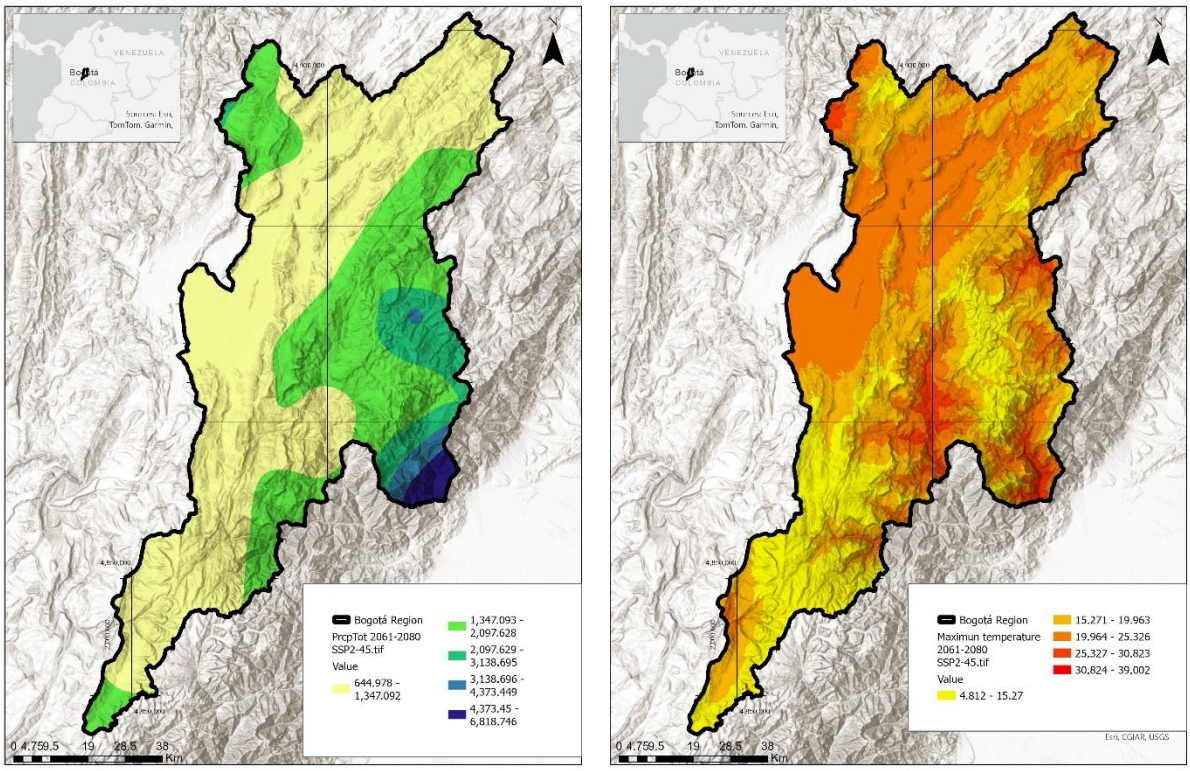
17. Both the SSP2-4.5 and SSP5-8.5 scenarios imply reduced nocturnal cooling and increasing heat stress across both highland and lowland areas. Rainfall changes are equally significant. Under both scenarios, the region broadly maintains its current bimodal precipitation pattern, but rainy seasons become more intense, annual variability increases, and the contrast between wet and dry periods becomes sharper. These changes will raise the likelihood of both flash-flood conditions and dry-season water stress. Projected climate change varies across the Region's complex landscape, principally due to differences in elevation and topography, with higher precipitation expected in the eastern lowlands and warming across the region, including the traditionally cooler high-altitude areas.

[6] World Bank, 2025. Lessons from Bogotá's drought management. Obtenido de https://blogs.worldbank.org/en/latinamerica/mantenerse-unidos-tiempos-crisis-lecciones-gestion-sequias-bogota

[7] IDEAM, 2025; IDOM, 2025 – See Annex 2

[8] IDEAM, 2024; IDEAM, 2025; IDOM, 2025 – See Annex 2

Figures 3 and 4. Spatial distribution of projected average precipitation (left image) and average maximum temperature (right image) under SSP2-4.5 in the Bogotá Region, 2061–2080. *Source: IDEAM (2025; compiled by IDOM.*



Climate Vulnerability Analysis: methodology and implications

18. A Climate Vulnerability Analysis was conducted to help identify priority intervention landscapes for the project (see Annex 2; Chapter 4). The risk assessment follows the IPCC Sixth Assessment Report framework, which recognizes that **Risk is a function of climate Hazards, Vulnerability and Exposure**. The climate hazards described previously interact with existing socio-institutional vulnerability. Vulnerability was measured using a composite index comprised of 26 indicators that evaluate adaptive capacity, sensitivity, public management, social conditions, infrastructure, security, emergency response, and demographic pressure. These indicators do not measure climate directly; rather, they capture the capacity of municipalities and communities to anticipate, absorb, and respond to climate impacts through financing, planning, land-use control, service provision, and emergency management.

19. The climate vulnerability analysis identifies heterogeneous but significant weaknesses across the intervention landscapes (Guandoque, Villapinzón, Tominé and Tunjuelo). In Guandoque, vulnerability is shaped by low investment capacity, weak digital connectivity, and uneven project management performance, with Tausa and Zipaquirá showing particularly significant constraints and demographic pressure. In Villapinzón, structural vulnerability is associated with low self-financing capacity, limited connectivity, and gaps in sanitation and land-use planning, which constrain the long-term sustainability of *páramo* interventions. In Tunjuelo, as a peri urban and rural zone within the Bogotá District, vulnerability is driven by pressure on land use, poverty and socioeconomic challenges which increases water demand and reduces the watershed's capacity to hydrological regulation. In Tominé, municipalities such as Guasca, Guatavita, Chocontá, and Sesquilé combine relatively stronger governance conditions with persistent pressures related to water demand, limited environmental investment, connectivity gaps, and recurrent climate-related emergencies.[9]

[9] DANE, 2025; IDOM, 2025 – See Annex 2

Figure 5. Climate risk to high Andean forest and páramo systems associated with decreased precipitation under SSP5-8.5. Source: IDEAM (2025), compiled by IDOM

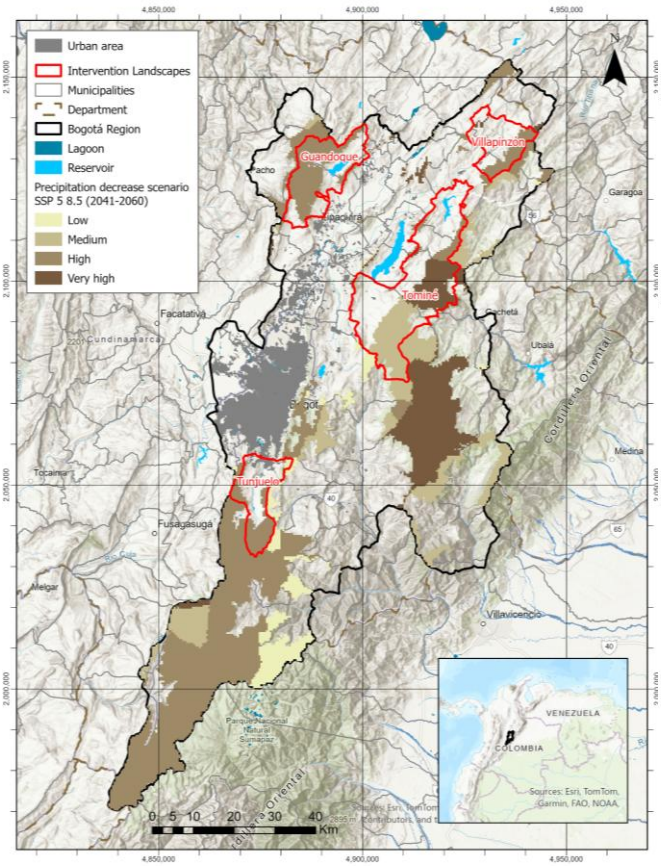
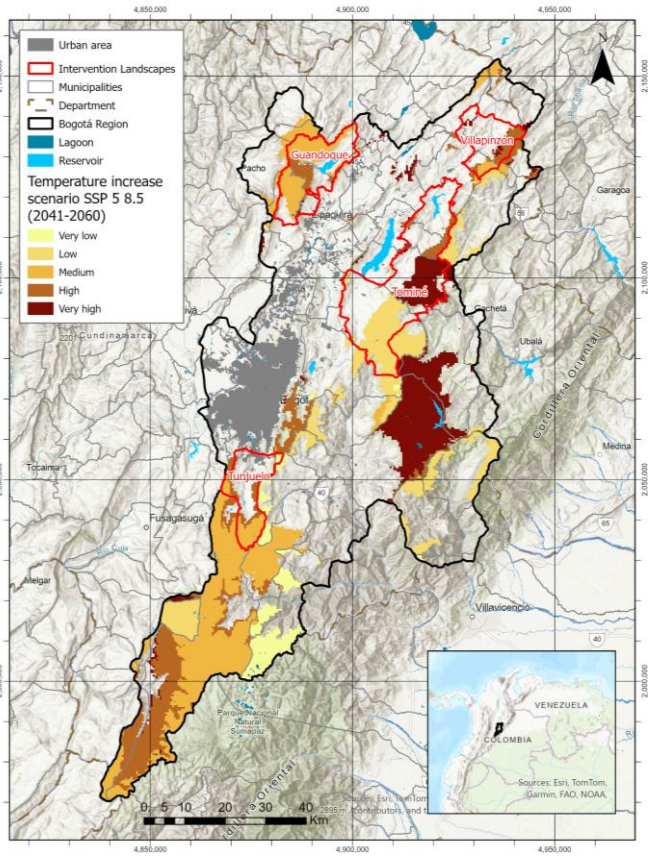


Figure 6. Climate risk to high Andean forest and páramo systems associated with increased temperature under SSP5-8.5. Source: IDEAM (2025), compiled by IDOM.



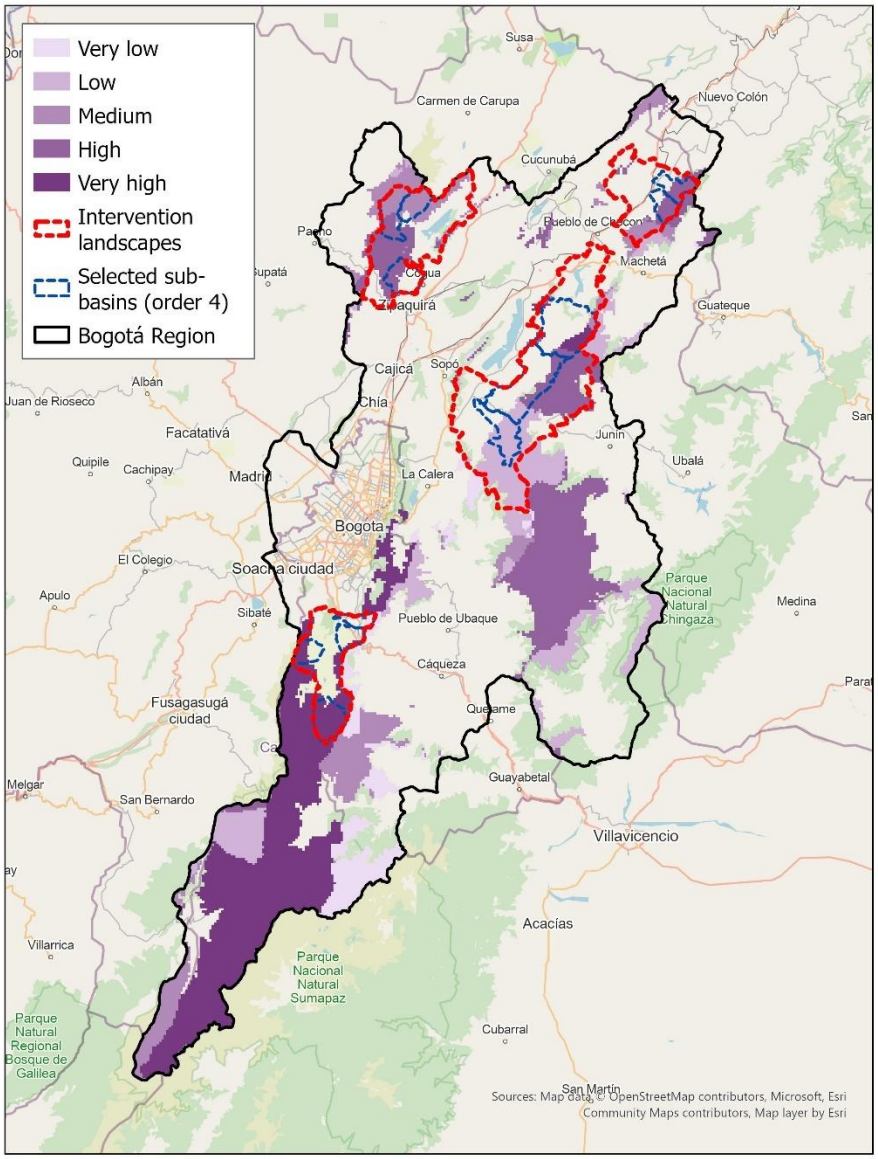
20. The climate vulnerability analysis shows that the highest-risk areas are those where climate hazard, ecosystem exposure, and socio-institutional vulnerability overlap. Using an impact-chain and risk-component approach, the analysis identifies high and very high risk for high Andean Forest and *páramo* systems in areas exposed to reduced precipitation and increased temperature under SSP5-8.5 for 2041–2060.[10] The maps highlight concentrations of elevated climate risk in parts of Guasca, Guatavita, Villapinzón, the southeastern sector of the Guandoque–Tominé corridor, and the south of Bogotá in the Curubital watershed, where future climate pressure converges with structural vulnerability and the strategic role of water-regulating ecosystems.[11]

Rationale for intervention landscapes

21. Intervention landscapes for the project have been chosen based not only on climate risk and vulnerability, but also on non-climate drivers, including land-use dynamics, ecosystem degradation, socioeconomic pressures, and institutional conditions that influence water security outcomes. The approach for site selection at the intervention landscape scale and at a finer scale within each landscape is described in Chapter 4 of Annex 2. Ultimately, intervention landscapes have been chosen based on their role in supporting reservoirs and local urban water supplies through a robust strategic approach based on the following factors: climate risk, water regulation impact, environmental and ecological criteria, socioeconomic diversity, stakeholder engagement and institutional capacity and governance considerations. Further, the four intervention landscapes are intended as demonstrations of proof of concept and are not therefore the only landscapes where ecosystem protection/restoration and transformation of agricultural practices is needed.

[10] GIZ, 2019; IDEAM, 2025; IDOM, 2025 – See Annex 2
[11] IDEAM, 2025; DANE & DNP, 2025; IDOM, 2025 – See Annex 2

Figure 7. Integrated climate risk map for the Bogotá-Region, showing how intervention landscapes and selected sub-basins focus on areas of very high, high and medium risk. Source: see Annex 2 (Chapters 3 and 4), compiled by IDOM.



22. The Bogotá-Region is already experiencing warming and marked hydroclimatic variability. Future scenarios point to higher temperatures, more intense rainfall peaks, continued drought risk, and stronger climate extremes. The territories that host strategic water-regulating ecosystems also display uneven but significant adaptive-capacity constraints. This combination of increasing hazard, high ecosystem exposure, and structural vulnerability justifies targeted ecosystem-based adaptation investments to strengthen water regulation, reduce landscape degradation, improve local adaptive capacity, and protect the hydrological functions on which Bogotá and surrounding municipalities depend.[12]

From climate risk to project design: the impact chain

23. To inform project design, the climate problem is expressed through an explicit impact chain linking climate drivers to project solutions (see Annex 2; Section 2.8). The climate problem in the Bogotá Region can be summarized as follows: sustained warming, more irregular precipitation, stronger extreme rainfall, prolonged drought, wildfire, and structural water stress are reducing the capacity of high-Andean ecosystems and

[12] (GIZ, 2019; IPCC, 2022; IDEAM, 2025; DANE & DNP, 2025; IDOM, 2025 – See Annex 2

productive landscapes to regulate water. This alters runoff patterns, increases erosion and sediment transport, reduces baseflows, weakens water quality and undermines infrastructure reliability. The consequences are felt both in upstream municipalities and in the metropolitan population that depend on these landscapes for water supply.

24. The project design is underpinned by the following impact chain: climate hazards affect high-Andean ecosystems and water-regulating landscapes; these impacts reduce hydrological regulation, increased runoff variability, sedimentation, drought stress and water supply reliability risks; and the proposed solutions, ecosystem conservation and restoration, climate-resilient productive practices, improved community water systems and long-term watershed financing, are designed to address the underlying drivers of risk rather than only their symptoms. To clarify how the results of the climate risk assessment translate into project design, impact chains were identified that explicitly link climate hazards, biophysical and socioeconomic impacts to the proposed adaptation solutions. This approach allows the assessment to move from a descriptive analysis of climate trends to a causal understanding of how risks materialize and why targeted interventions are required. The table below summarizes the key impact pathways identified for the project.

Table 1. The Project Impact Chain

Climate hazard	Impact pathway	Exposed/vulnerable system	Why risk increases	Solutions
Increased temperature and heat extremes	Higher evapotranspiration, soil moisture loss, ecosystem stress and reduced water-regulation capacity	Páramos, High Andean forests, wetlands and upper-basin soils	Strategic ecosystems become less able to regulate runoff and sustain baseflows, affecting downstream water security	Conservation and restoration of high-Andean ecosystems, including active and passive restoration, soil recovery and ecological connectivity
More irregular precipitation and shorter wet periods	Reduced sustained rainfall, lower infiltration, greater seasonal water variability and increased dry-period stress	Water supply watersheds, rural communities, productive systems and urban water users	Water availability becomes less reliable, especially where demand is high and regulation capacity is degraded	Nature-based solutions to increase infiltration, soil-water retention and hydrological regulation at plot, landscape and watershed scale
Extreme rainfall events	Increased surface runoff, erosion, sediment transport, flooding and water-quality deterioration	Upper watersheds, community water systems, reservoirs and downstream users	Degraded landscapes generate higher runoff peaks and sediment loads, increasing treatment needs and infrastructure stress	Restoration, revegetation, sustainable productive systems and on-farm water management to reduce runoff and erosion
Drought and prolonged dry periods	Reduced baseflows, water scarcity, pressure on reservoirs and higher competition for water	Bogotá's water supply system, rural aqueducts, smallholder producers and ecosystems	Existing water systems and rural municipalities have limited technical, financial and institutional capacity to buffer prolonged deficits	Climate-resilient productive practices, water-use efficiency in community-run water systems and improved watershed management
Increased wildfire conditions	Loss of vegetation cover, soil degradation, biodiversity loss and reduced hydrological regulation	Páramos, High Andean forests and productive landscapes	Fire-prone and degraded areas lose ecological functionality, increasing downstream hydrological risk	Ecosystem protection, restoration, sustainable land management and community-based prevention measures
Compound climate variability, including ENSO-related extremes	Alternating drought, intense rainfall, landslides and hydrological instability	Regional water supply systems and intervention landscapes	Climate variability interacts with ecosystem degradation, urban demand and institutional constraints, producing systemic water-security risk	Integrated watershed resilience model combining NbS, livelihoods, governance and sustainable financing

Conclusion

25. The Bogotá Region faces compounded climate risks to water security driven by rising temperatures, increasingly variable and intense rainfall, and the ongoing degradation of high Andean and *páramo* ecosystems that naturally capture, regulate, and purify water. These hazards result in reduced dry-season baseflows, more frequent disruptions to water supply, increased sediment and nutrient loads, and higher urban flood peaks. Together, these impacts raise operating costs for water utilities and disproportionately affect vulnerable communities. Climate change is intensifying hydrological variability, while ecosystem degradation is weakening the region's natural buffering capacity, directly threatening potable water supply, flood protection, and public health.

26. The analyses presented in Annex 2 and summarized in this section demonstrate that climate change is intensifying an already vulnerable water supply system. The water supply risk is determined by a complex interaction of climate hazards, exposure and vulnerability combined with patterns of ecosystem degradation and institutional capacity. The four selected landscapes represent hydrologically strategic areas based on both climate risk and non-climate factors. The climate hazards identified as part of the Climate Vulnerability Analysis have also been used in an explicit impact chain that links climate drivers with the proposed project response. This structured approach strengthens the scientific and strategic basis for the project and aligns the climate context clearly with the proposed interventions.

B.2 (a). Theory of change narrative and diagram (max. 1500 words, approximately 3 pages plus diagram)

27. The Theory of Change diagram (Figure 8) summarizes the project's causal logic. As presented in Annex 2, Section 6.1, the project is designed as a watershed transformation model in which ecosystem-based adaptation and productive transformation generate verifiable hydrological results and these results are then used to mobilize sustained public and private finance for water resilience.

Project logic

28. The theory of change is grounded in the analytical sequence developed in Annex 2. It defines the climate problem and shows that sustained warming, more irregular and extreme precipitation, prolonged drought, and increased wildfire and frost risks are reducing the capacity of high-Andean ecosystems and productive landscapes to regulate water, with consequences for runoff variability, erosion, sediment transport, water quality, and supply reliability. Chapter 1 shows that this climate problem affects a regional water system that is operationally dependent on high-mountain ecosystems, while Chapter 4 demonstrates that intervention landscapes and watersheds were prioritized based on climate risk, vulnerability, and hydrological relevance for Bogotá's water supply system and the Region. The project responds to this problem through a single investment logic:

GOAL STATEMENT

IF watershed interventions are designed and implemented to generate verifiable hydrological results, together with improved rural livelihoods, **THEN** public and private financing solutions for water resilience in Bogotá and the Region will be unlocked and scaled, **BECAUSE** water utilities, municipalities and private companies will have a tested proof of concept with verifiable hydrological benefits in ecosystem-based adaptation and productive transformation, leading to sustained hydrological improvements in the supplying watersheds.

29. This logic is set out in Annex 2, Section 6.1 and is supported by the VWB-based methodological framework, which links project activities to measurable changes in modifiable inputs such as land management, water management, technical capacity, and access to productive assets or finance. A core set of indicators is anchored in the Volumetric Water Benefits (VWB) framework, which serves as the primary measure of direct hydrological outcomes. It is linked with complementary indicators on ecosystem condition (restoration), climate resilient agricultural production systems, water governance and innovative finance mechanisms for water security, as well as livelihood improvements across target watersheds. All of those are used to explain and track the contribution of individual activities to these hydrological results.

30. The VWB framework applied in the project is aligned with internationally recognized Volumetric Water Benefit Accounting (VWBA) approaches, which define volumetric water benefits as the volume of water resulting from water stewardship activities that positively modify hydrological conditions and contribute to reducing shared water challenges. This approach provides a standardized methodology to quantify and communicate hydrological outcomes, while also incorporating complementary indicators to capture non-volumetric outputs and broader water stewardship effects.

Component structure

31. Annex 2, Chapter 5 concludes that the most effective response is an integrated package of nature-based and productive measures acting on the hydrological functions of the supplying watersheds, and that such measures must be paired with a financing strategy capable of continuing after the grant period. On that basis, Annex 2, Chapter 6 organizes the project into two complementary components. Component 1 proves the watershed intervention model by generating the highest hydrological benefit in priority intervention landscapes. Component 2 establishes the financing architecture required to replicate and scale that model.

32. Component 1 groups the activities that directly modify the ecological and productive drivers of hydrological performance. As described in Annex 2, Chapter 6 and detailed in Chapter 8, these activities are conservation of high-Andean ecosystems, restoration of degraded ecosystems, climate-resilient production systems at farm level, commercialization and market access for water-regulating rural products, and improved efficiency and water-loss control in community-run water systems. These activities are grouped together because they act on different but connected causes of declining water regulation. Conservation prevents further loss of regulating ecosystems. Restoration recovers hydrological functions in areas where those functions have already been impaired. Productive reconversion changes land-use practices that intensify erosion, runoff, and pressure on strategic ecosystems. Commercialization links that transition to viable income streams. Water-system efficiency reduces losses and local exposure to drought and flow variability.

33. Each activity under Component 1 is linked to a defined set of indicators that capture both its direct contribution to hydrological performance and its enabling effects. Conservation, restoration, and productive reconversion are directly associated with changes in runoff, infiltration, and water retention, as reflected in VWB metrics. Complementary indicators, such as hectares under sustainable management, improved production systems, and reduced system losses, serve to explain how these activities generate measurable hydrological benefits.

34. Component 2 groups the activities that address the structural financing and evidence gap identified in Annex 2, Chapter 3. These are the incorporation of an environmental investment component into the EAAB tariff and the operationalization of a long-term private financing mechanism. They are grouped together because both rely on the same enabling condition: hydrological outcomes must become measurable, traceable, and relevant to investment decisions. Without that translation, public and private financing flows remain fragmented, short-term, and weakly connected to watershed performance.

Interlinkages between components

35. The activities in Component 1 are designed to function as a connected territorial package rather than as standalone interventions. Conservation and restoration improve infiltration, soil-water retention, vegetation cover, erosion control, and baseflow regulation in the strategic headwaters and upper basins identified through the prioritization process in Annex 2, Chapter 4. Productive reconversion addresses the same hydrological problem from the farmed landscape by replacing land uses that degrade watershed function with systems that are more compatible with soil protection, reduced runoff, and climate resilience. Commercialization and market access ensure that the transition does not depend only on technical advice or short-term incentives but is linked to economic conditions that allow producers to maintain resilient practices. Improvements in community-run water systems reduce non-revenue losses, improve local water-use efficiency, and lower exposure to prolonged dry periods in upstream municipalities.

36. Component 2 enables the results of this territorial package to be scaled. The tariff-based mechanism uses measured hydrological outcomes to justify environmental investment within the regulatory framework applicable to the water utility. The private financing mechanism uses the same evidence base to channel private capital into prioritized watershed interventions. As explained in Annex 2, Chapter 6, the two components are therefore connected through verifiable hydrological performance. Component 1 generates it, while Component 2 uses that evidence to inform and mobilize long-term public and private investment in watershed interventions.

Barriers, gaps and project response

37. Annex 2, Chapter 3 identifies four priority adaptation gaps: insufficient long-term financing for watershed resilience; inadequate integration of climate risk into land-use, watershed, and water-security planning; weak local implementation capacity in upstream municipalities and community-run water systems; and the absence of an operational MRV architecture capable of translating hydrological outcomes into decision-making and investment. These gaps persist because of four structural barriers: financial, regulatory and planning, institutional, and technical.

38. The financial barrier is the absence of a structured and scalable financing architecture for watershed resilience. Public, tariff-based, and private flows exist, but they are not aggregated around a common hydrological performance framework. The project addresses this barrier through Component 2 by establishing tariff-based environmental investment and a long-term private financing mechanism capable of directing recurrent funding to watershed interventions linked to measurable outcomes.
39. The regulatory and planning barrier is that regulatory and planning instruments are not consistently operationalized in a way that aligns land-use, watershed protection, climate adaptation, and water-security planning in the territories that sustain Bogotá's water supply. The project addresses this barrier through the proposed model that combines conservation, restoration, and productive reconversion in priority landscapes identified through the climate-risk and hydrological prioritization process described in Annex 2, Chapter 4. These activities act directly on the land-use dynamics that drive runoff intensification, erosion, contamination, and declining baseflow stability.
40. The institutional barrier is the uneven capacity of upstream municipalities, producer organizations, and community-run water systems to implement and maintain adaptation measures over time. The project addresses this through farm-level technical support, support to producer organizations, and operational improvements in community-run systems, allowing local actors to implement resilient practices, reduce water losses, and manage climate-related supply stress more effectively.
41. The technical barrier is the lack of integrated methodologies, tools and institutional processes to operationalize available climate and hydrological data into investment-relevant indicators, including metrics, such as run off, quantified through Volumetric Water Benefits (VWB) methodologies, limiting the measurement, verification and use of hydrological outcomes in planning, regulation and financing. The project addresses this through the VWB-based performance framework that underpins both components: Component 1 generates the evidence, and Component 2 establishes the methodologies, reporting protocols, and operational structures that make that evidence usable for finance and regulation.

Outcomes

42. The theory of change leads to two mutually reinforcing outcomes. Outcome 1 is that the watershed transformation model is proven to achieve the highest hydrological benefit in priority watersheds through conservation, restoration, productive reconversion, market-linked livelihood transition, and reduced losses in community-run water systems. As indicated in Annex 2, Chapters 6 and 9, this outcome is expressed through deliverables such as hectares effectively conserved and monitored, hectares restored according to approved designs, hectares under climate-resilient practices, products placed in Bogotá markets, upgraded community water systems, and measurable hydrological benefits at plot and watershed scale.
43. Outcome 2 is that finance is mobilized to replicate and scale the watershed transformation model through an operational environmental investment component in the tariff and a structured private financing mechanism. As indicated in Annex 2, Chapters 6 and 9, this outcome is expressed through deliverables such as regulator-accepted reporting, operational financing structures, mobilized public and private finance, and hectares financed at scale.
44. Together, these outcomes lead to the project impact of long-term financially sustainable water resilience in Bogotá and the Region. Annex 2 is explicit that this impact does not arise from hydrological improvement alone, nor from finance alone, but from their interaction: measurable adaptation results create the basis for long-term investment, and long-term investment allows the intervention model to persist beyond the grant period and expand to additional watersheds.

Assumptions

45. The theory of change rests on assumptions tested in Annex 2, Chapter 7. First, the selected interventions must remain feasible within a four-year horizon under current regulations and without legislative reform, protected-area expansion, or relocation. Second, the prioritized landscapes must retain sufficient ecological functionality for conservation, restoration, and productive reconversion to generate measurable hydrological gains. Annex 2 concludes that the system is degraded but still recoverable, which makes this assumption reasonable.
46. Third, producers and local organizations must be able to adopt and maintain resilient land-use practices when these are paired with technical support, productive alternatives, and market access. This assumption is reflected in the inclusion of commercialization as part of Component 1 rather than as a parallel activity. Fourth, utilities and private actors must be willing to allocate finance once hydrological outcomes become measurable

and reportable in formats relevant to regulation and investment. This assumption is addressed by embedding methodological development, reporting protocols, and financing structures within Component 2.

Co-benefits

47. The same intervention package also generates co-benefits documented in Annex 2, Chapter 5, Chapter 10, and Appendices II and III. Co-benefits are distinguished from direct benefits in that they arise from the same activities but do not constitute the primary adaptation objective. Instead, they represent additional environmental, economic, social, and mitigation outcomes that reinforce the overall impact of the intervention model.

48. Environmental co-benefits include biodiversity conservation, improved ecological connectivity, reduced erosion and sediment transport, and protection of high-Andean ecosystems that support endemic and threatened species. Economic co-benefits include more stable rural income opportunities linked to differentiated products and potential reductions in downstream water treatment costs associated with better watershed condition. Mitigation co-benefits arise from increased carbon sequestration in restored and conserved ecosystems, while social co-benefits include more reliable rural water services and greater capacity of local actors to operate and maintain adaptation measures.

Basis for indicators

49. The project's primary benefit is adaptation through improved hydrological regulation, expressed in measurable changes in runoff, water retention, and dry-season reliability, as captured by the VWB indicator. These constitute the project's direct benefits because they reflect the core climate adaptation objective and are directly linked to the hydrological performance of watershed interventions.

50. The theory of change provides the basis for the results framework by establishing a clear line of sight from climate problem, to barrier, to activity, to outcome, and then to indicator. As set out in Annex 2, Chapter 9, indicators can therefore be assigned to hydrological performance, effective hectares intervened, efficiency in community-run systems, operational financing mechanisms, finance mobilized, and the principal environmental, economic, social, and mitigation co-benefits generated by the same intervention model.

51. In line with VWBA principles, the project distinguishes between volumetric indicators, such as reduced and avoided runoff, expressed in VWB, and complementary non-volumetric indicators that capture enabling conditions, activity performance, and broader social, economic, and environmental outcomes. While volumetric indicators provide the core measure of hydrological benefit, additional indicators are necessary because changes in water volume alone do not fully capture the resolution of shared water challenges.

52. Therefore, the project integrates both types of indicators: volumetric indicators quantify direct changes in hydrological performance resulting from interventions, while complementary indicators measure the effectiveness of water stewardship activities, including land-use transformation, capacity development, and improved management practices. This combined approach ensures that hydrological benefits are not only quantified but also contextualized in terms of their contribution to water security, ecosystem resilience, and Sustainable Development Goal 6 targets.

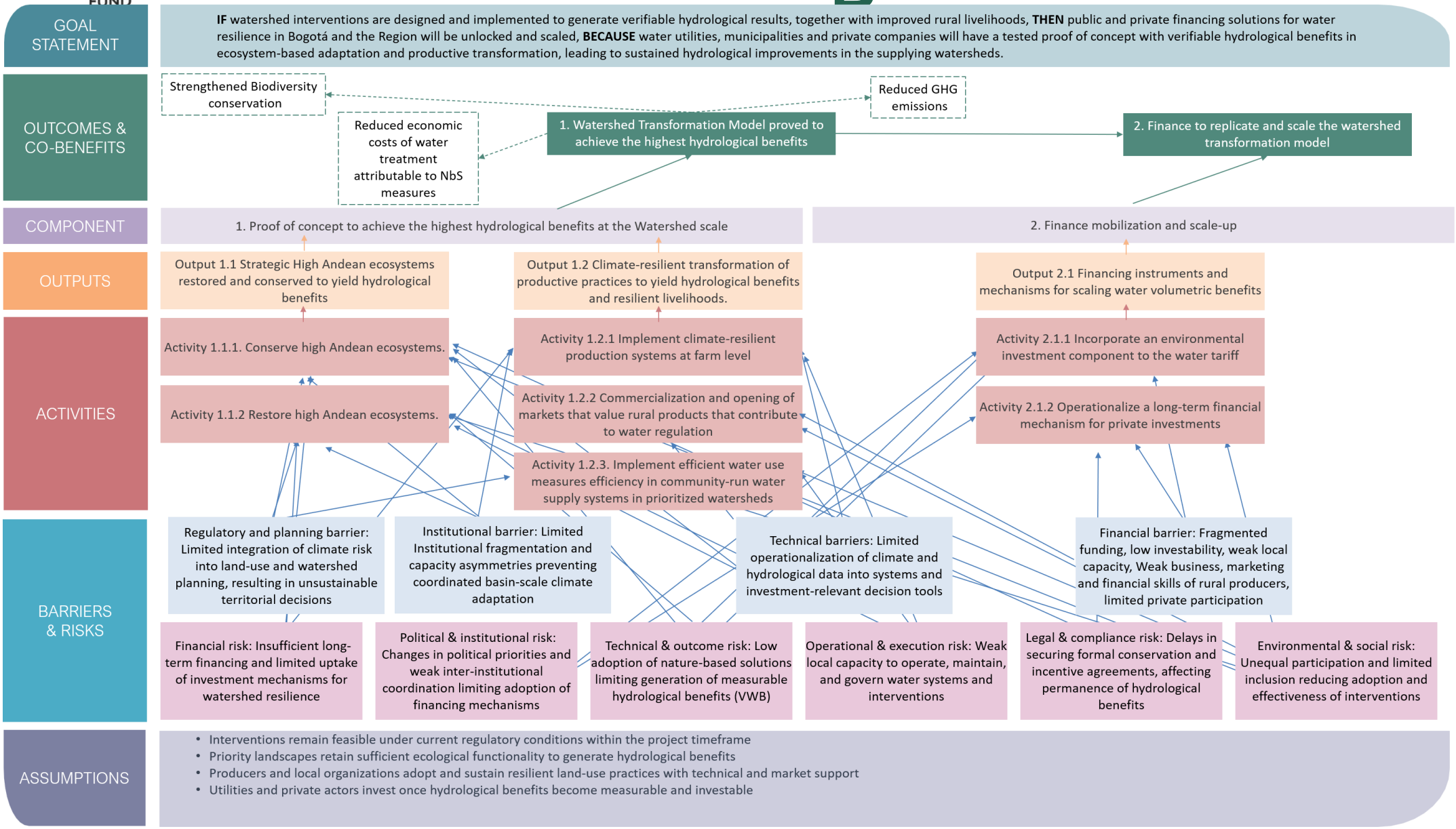
53. The VWBA framework also informs the selection of activity-level indicators by linking each intervention type to expected hydrological outcomes and associated enabling factors. As a result, indicator methodologies are directly derived from the characteristics of project activities, ensuring that all reported results are traceable to intervention design and implementation.

54. Indicator selection and design are based on the measurable variables directly influenced by project activities, including land-use change, vegetation cover, water-system efficiency, and adoption of resilient production practices. The VWB indicator aggregates these changes into hydrological performance metrics (reduced and avoided runoff), while complementary indicators capture intermediate and enabling outcomes at activity level.

55. The methodologies underpinning these indicators are detailed in Section E and Annex 2, Chapters 8 and 9, including calculation approaches, data sources, and assumptions, ensuring full consistency between activities, measured outcomes, and reported results.

B

B


GOAL STATEMENT
IF watershed interventions are designed and implemented to generate verifiable hydrological results, together with improved rural livelihoods, THEN public and private financing solutions for water resilience in Bogotá and the Region will be unlocked and scaled, BECAUSE water utilities, municipalities and private companies will have a tested proof of concept with verifiable hydrological benefits in ecosystem-based adaptation and productive transformation, leading to sustained hydrological improvements in the supplying watersheds.
OUTCOMES & CO-BENEFITS
Strengthened Biodiversity conservation
Reduced GHG emissions
Reduced economic costs of water treatment attributable to NbS measures
1. Watershed Transformation Model proved to achieve the highest hydrological benefits
2. Finance to replicate and scale the watershed transformation model
COMPONENT
1. Proof of concept to achieve the highest hydrological benefits at the Watershed scale
2. Finance mobilization and scale-up
OUTPUTS
Output 1.1 Strategic High Andean ecosystems restored and conserved to yield hydrological benefits
Output 1.2 Climate-resilient transformation of productive practices to yield hydrological benefits and resilient livelihoods.
Output 2.1 Financing instruments and mechanisms for scaling water volumetric benefits
ACTIVITIES
Activity 1.1.1. Conserve high Andean ecosystems.
Activity 1.1.2 Restore high Andean ecosystems.
Activity 1.2.1 Implement climate-resilient production systems at farm level
Activity 1.2.2 Commercialization and opening of markets that value rural products that contribute to water regulation
Activity 1.2.3. Implement efficient water use measures efficiency in community-run water supply systems in prioritized watersheds
Activity 2.1.1 Incorporate an environmental investment component to the water tariff
Activity 2.1.2 Operationalize a long-term financial mechanism for private investments
BARRIERS & RISKS
Regulatory and planning barrier: Limited integration of climate risk into land-use and watershed planning, resulting in unsustainable territorial decisions
Institutional barrier: Limited Institutional fragmentation and capacity asymmetries preventing coordinated basin-scale climate adaptation
Technical barriers: Limited operationalization of climate and hydrological data into systems and investment-relevant decision tools
Financial barrier: Fragmented funding, low investability, weak local capacity, Weak business, marketing and financial skills of rural producers, limited private participation
Financial risk: Insufficient long-term financing and limited uptake of investment mechanisms for watershed resilience
Political & institutional risk: Changes in political priorities and weak inter-institutional coordination limiting adoption of financing mechanisms
Technical & outcome risk: Low adoption of nature-based solutions limiting generation of measurable hydrological benefits (VWB)
Operational & execution risk: Weak local capacity to operate, maintain, and govern water systems and interventions
Legal & compliance risk: Delays in securing formal conservation and incentive agreements, affecting permanence of hydrological benefits
Environmental & social risk: Unequal participation and limited inclusion reducing adoption and effectiveness of interventions
ASSUMPTIONS
• Interventions remain feasible under current regulatory conditions within the project timeframe
• Priority landscapes retain sufficient ecological functionality to generate hydrological benefits
• Producers and local organizations adopt and sustain resilient land-use practices with technical and market support
• Utilities and private actors invest once hydrological benefits become measurable and investable

B

Figure 8. Theory of Change for the project

B.2 (b). Outcome mapping to GCF results areas and co-benefit categorization

Fill in the GCF results area table below to map each project/programme outcome identified in section B.2(a) to the contributing GCF results area(s) by referring to the description of eight results areas provided in the guidance note.

Outcome number	GCF Mitigation Results Area (MRA 1-4)				GCF Adaptation Results Area (ARA 1-4)			
	MRA 1 Energy generation and access	**MRA 2** Low-emission transport	**MRA 3** Building, cities, industries, appliances	**MRA 4** Forestry and land use	**ARA 1** Most vulnerable people and communities	**ARA 2** Health, well-being, food and water security	**ARA 3** Infrastructure and built environment	**ARA 4** Ecosystems and ecosystem services
Outcome 1 Watershed Transformation Model proved to achieve the highest Hydrological Benefits.	☐	☐	☐	☐	☒	☒	☐	☒
Outcome 2 Finance to replicate and scale the watershed transformation model	☐	☐	☐	☐	☒	☒	☐	☒

If any co-benefits have been identified in section B.2(a), fill in the Co-benefit table below to map each co-benefit to the corresponding category as defined in the FP guidance note.

Co-benefit number	Co-benefit					
	Environmental	**Social**	**Economic**	**Gender**	**Adaptation**	**Mitigation**
Co-benefit 1 Strengthened Biodiversity conservation	☒	☐	☐	☐	☐	☐
Co-benefit 2 Reduced economic costs of water treatment attributable to NbS measures	☐	☐	☒	☐	☐	☐
Co-benefit 3 Reduced GHG emissions	☐	☐	☐	☐	☐	☒

B.3. Project/programme description (max. 2500 words, approximately 5 pages)

Overview: *Additional detail on Project approaches is available in* ***Annex 02, Chapter 8***

56. Building on the Theory of Change presented in Section B.2, the project is designed to demonstrate that integrated watershed interventions in priority landscapes of the Bogotá Region can generate measurable hydrological benefits and that these benefits can serve as the basis for mobilizing sustained public and private finance for water resilience. As set out in Annex 2, Chapters 6 and 7, the project does not rely on a single intervention to produce impact. It tests a watershed transformation model in which conservation, restoration, productive reconversion, market access, and local water-system improvements jointly improve hydrological regulation, while a second component uses the resulting hydrological evidence to establish a financing structure capable of scaling the model beyond the lifetime of GCF support.

57. The project therefore combines two outcomes. Outcome 1 proves that the watershed transformation model achieves the highest hydrological benefit in selected watersheds. Outcome 2 converts that proof of concept into

an operational financing architecture capable of supporting continued and scaled investment in watershed resilience through a tariff-based environmental investment route and a long-term private financing mechanism. As clarified in Annex 2, quantified hydrological benefits through VWBA provides the measurement, verification, and reporting framework that links hydrological outcomes to planning and investment decisions, not the objective in itself. The objective is to establish an intervention model plus a financing structure that can sustain and replicate climate-resilient water security investments across the Bogotá Region.

INTERVENTION LANDSCAPES

58. Project interventions will be concentrated in prioritized intervention landscapes where hydrological outcomes can be maximized within the implementation period and where successful demonstration can support replication and scale-up. The selected intervention landscapes are Tunjuelo, Guandoque, Villapinzón, and Tominé:

Intervention landscapes	Prioritized watersheds
Guandoque	Guandoque-Salitre-Susagua watershed
Villapinzón	Upper Bogota River watershed
Tominé	San Francisco-Aves-Chipata watershed
Tunjuelo	Curubital-Quebrada Yomasa-Quebrada Aguadulce-Quebrada Paso Colorado

59. The project's intervention landscapes were selected to deliver credible proof of concept by concentrating interventions where hydrological outcomes can be maximized during the project implementation period. Watersheds were prioritized based on their role in supporting reservoirs and local urban water supply systems, and the climate vulnerability of ecosystems and people. The following factors were used to prioritize watersheds (See Annex 2, Chapter 4):

- **Climate change:** based on projected shifts in temperature and precipitation patterns that can alter evapotranspiration and runoff regimes, influencing both drought risk and high-flow events in the watersheds
- **Water regulation impact:** based on potential changes in vegetation cover and land management to maximize the reduction of excess runoff peaks and sustain baseflows, strengthening watershed level water regulation under current and future climate scenarios.
- **Environmental factors:** based on prioritizing current land cover condition and connectivity of páramos, forests and riparian ecosystems, which control habitat quality, biodiversity, soil stability and capacity to regulate water flows.
- **Socioeconomic diversity:** based on presence of varied agricultural activities and socioeconomic contexts that enables concept testing across different configurations in the Bogota Region.
- **Strong territorial engagement:** based on CI's prior projects in the Bogotá Region that have built strong relationships with territorial actors that are already familiar with proof of concept. This is an advantage for successfully mobilizing a broad set of stakeholders for achieving impact at scale during project implementation.
- **Institutional ability:** based on the presence of different types of local and regional authorities in the Bogotá Region to ensure successful implementation, replication and scaleup.

60. This assessment prioritized high-mountain watersheds with very high climate-hydrological priority, high importance for the Bogotá water supply system managed by EAAB, and high relevance for connectivity under climate change scenarios. Within this framework, watersheds feeding the main reservoirs of the EAAB systems, upper watersheds with intakes for the principal "*acueductos locales*[13]", and areas critical for páramo ecosystem connectivity were identified as priorities, thereby ensuring that investments directly target climate-sensitive headwaters and strategic ecological corridors. To translate this regional analysis into actionable implementation, the prioritization was refined down to the scale of "*veredas*[14]" as the minimal geo-referenced administrative unit, combining biophysical, environmental, and socioeconomic criteria to ensure feasibility and strong local alignment at farm and property level.

[13] *Acueductos veredales* are civil society groups that provide water, mostly in rural areas. They operate under the same regulations as larger service providers. Local supply systems not associated with EAAB.

[14] In Colombia, a vereda is a rural administrative division within a municipality

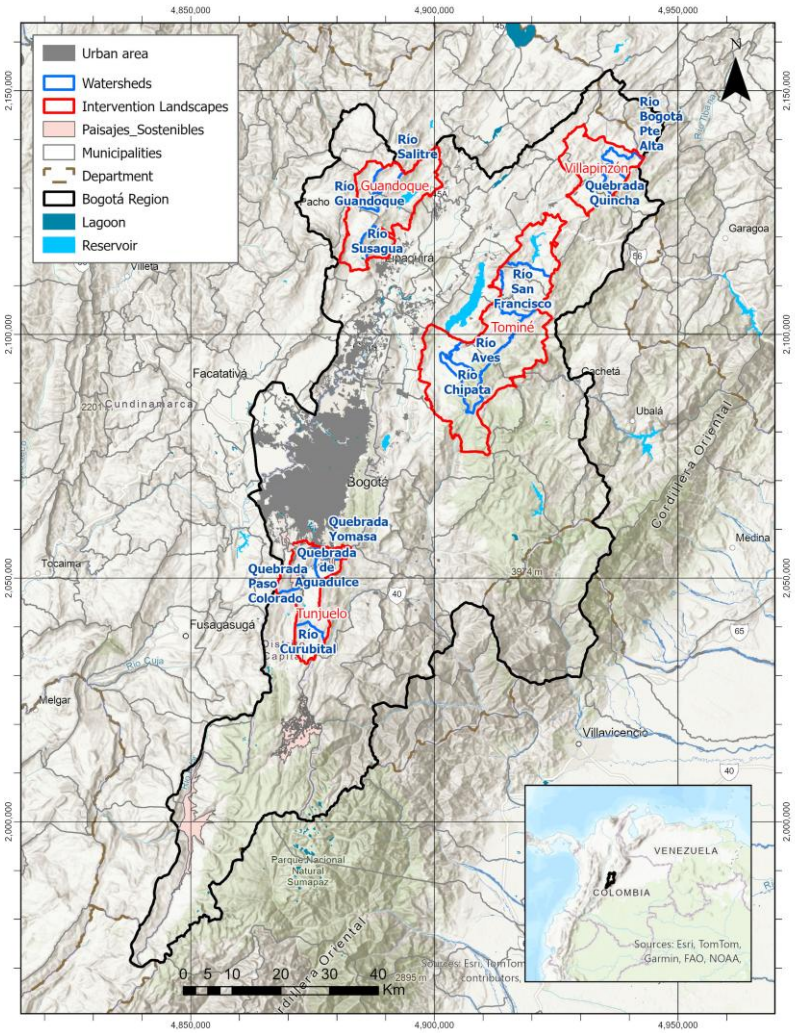


Figure 1 Intervention landscapes and watersheds of the project

COMPONENT 1. PROOF OF CONCEPT TO ACHIEVE THE HIGHEST HYDROLOGICAL BENEFITS AT THE WATERSHED SCALE

61. The objective is to generate robust territorial evidence of hydrological benefits and VWB generation, that begins at the plot scale and gradually scales to the watershed level, while strengthening climate resilience and livelihoods, to trigger long-term financing under Component 2. Outputs under Component 1 prove that i) Restoration and conservation interventions in headwaters areas, riparian areas and farms, together with ii) climate-resilient transformation of productive practices leads to better livelihoods, iii) commercialization and access to markets for products that contribute to water-resilience and iv) improved local water management reduces pressure on strategic ecosystems and, ultimately, yields water benefits.

62. Component 1 is designed to demonstrate that integrated watershed interventions can improve hydrological performance while strengthening climate resilience and livelihoods in priority supplying watersheds. Activities under this component will be implemented in a) Public Protected Areas, b) Private Protected Areas (Civil Society Natural Reserves), and c) public and private property lands benefiting farmers, landowners, producer associations and local organizations.

63. The following table organizes activities considered during project formulation as part of the Options Analysis to select the highest impact interventions (Annex 2, Chapter 5). Potential activities are separated into those that can better prove the concept in selected watersheds (with relatively low barriers and fast, visible climate and water benefits) and those that are harder to achieve and require regulatory changes, substantial financing and social agreements. Activities highlighted in green will be implemented by the project:

Activities that are feasible to implement during a GCF project, with low financial resources and yielding high hydrological benefits 5- year	**Activities that require policy changes, high financing and are not feasible to implement in a 5-year GCF project.**
- Conserve high Andean ecosystems - Restore high Andean ecosystems - Implement climate-resilient production systems at farm level in prioritized watersheds - Commercialization and opening of markets that value rural products that can contribute to water regulation - Implement efficient water use measures in community-run water supply systems in prioritized watersheds.	- Grey infrastructure - Extensive control of invasive species - Control or expand protected areas with more restrictive zoning - Relocation of populations/land purchase from farmers for restoration - Prohibiting cattle and potatoes in critical zones

The project is built around a Watershed Transformation Model logic, which combines farm-level interventions at a watershed-level level included under output 1.1 and 1.2. Selected interventions under the Watershed Transformation Model aim to maximize climate adaptation, hydrological benefits over time and a sustained paradigm shift. Communities in selected watersheds will construct Watershed Visions (under activity 1.1.2 and 1.2.1) as a tool for local buy-in and locally-led adaptation. Communities, supported by CI technical teams, will build a vision for their territories, identifying priority areas for conservation, restoration, and sustainable production across the landscape. Then, through Climate Resilient Farm Plans (under activity 1.1.2 and 1.2.1), each participating family will co-design, along CI, a strategy that integrates conservation, restoration, and climate-resilient production activities on their farm. Together, they will guide coordinated interventions presented below and that generate measurable watershed-scale hydrological benefits while strengthening community resilience, livelihoods, and stewardship of natural resources.

Chapter 8 in Annex 2 provides a full description of each output, activity and subactivity, including implementation model, partners, interventions, contribution to the watershed transformation model and proof of concept, deliverables and indicators. A summary of each activity is provided below:

64. **Output 1.1.** Strategic High Andean ecosystems restored and conserved to yield hydrological benefits:

Activity 1.1.1. Conserve high Andean ecosystems. This activity aims to conserve 26,071 ha of native High Andean ecosystems (*páramos*, high Andean forests, wetlands, recharge zones and other water-regulation areas) to prevent degradation of natural ecosystems that are threatened with conversion to other land use. These ecosystems are critical for downstream water security because they function as natural water storage and regulation systems, infiltration, soil-water storage, low runoff coefficients, and stable dry-season flows. Conserving these areas will help maintain ecohydrological functions that are critical for climate adaptation. Interventions will take place in Protected Areas and private lands. This activity addresses key institutional and financing barriers that limit the effective conservation of high-Andean ecosystems, including limited capacity and resources to implement monitoring, surveillance, PA management under climate change and coordinated, watershed-level incentives for conservation on private lands.
Sub-activities are:

1.1.1.1. Implement control and surveillance, monitoring and climate training in Protected Areas.
1.1.1.2. Reduce ecosystem loss through conservation agreements and payments for landowners.

Sub activity 1.1.1.1 will be led by CI as EE, providing project coordination among partners, communities and landowners as well as technical oversight. IAvH, as implementing partner, will provide training on climate adaptation, adaptive management, monitoring, among others. CAR and CORPOGUAVIO will implement and co-finance monitoring, surveillance, and control activities in protected areas under their jurisdiction, according to the PA management plans.

Sub-activity 1.1.1.2 will be led by FA, as the EE, to ensure that Payments for Conservation financed through different public funding sources are coordinated, complementary, and aligned with the interventions under Outputs 1.1 and 1.2. FA will also verify beneficiaries' land tenure rights, a prerequisite for accessing conservation incentives. The SDA, the Government of Cundinamarca, and the EAAB will provide funding for the Payments for Conservation. SDA and the Government of Cundinamarca will disburse incentives directly to landowners, while EAAB resources will be managed by CI, which will also support the implementation of Payments for Conservation co-financed by SDA. In addition, under

Activities 1.1.2 and 1.2.1, CI will promote community participation and local ownership in the selected watersheds. No GCF funds will be used to finance Payments for Conservation, rather all incentives will come from cofinancing sources.

The primary impact indicator for this activity is hectares conserved and effectively monitored. This indicator is relevant because the adaptation value of conservation depends not only on signing agreements but on keeping hydrologically strategic land under a conserved condition that avoids future increases in runoff, erosion, and sediment delivery. The activity also contributes to modeled VWB generated, particularly through avoided runoff, avoided sediment transport, and maintained baseflow regulation.

65. **Activity 1.1.2.** Restore high Andean ecosystems will restore 2,032 ha of páramo and high-Andean forest areas in order to recover hydrological functions already impaired by land-use change, erosion, soil compaction, grazing, cultivation, or vegetation loss. The activity will rehabilitate degraded areas in both protected areas and private lands, restoring their capacity to capture, store, and gradually release water, thereby contributing to a more stable water supply for downstream communities and ecosystems over time. Landowners, who will implement restauration measures, will be selected based on predefined criteria (See Annex 26).

1.1.2.1 Implement passive restoration of moderately degraded lands allowing natural regenerative processes.
1.1.2.2. Implement active restoration of highly degraded lands.

CI, as the EE, will lead and coordinate restoration efforts across priority landscapes, working closely with CAR and CORPOGUAVIO to align restoration activities within their respective jurisdictions. To promote long-term sustainability, CI will partner with local community organizations, strengthening their capacities and transferring knowledge to support the continuation of restoration efforts beyond the project period. Through grants provided by CI, these organizations will implement restoration measures under CI's technical guidance and supervision. Native plant material will be sourced from local nurseries. Co-financing for this activity will be provided by SDA, EAAB, the Coca-Cola Foundation, and AB InBev. CI and its local partners will work directly with landowners and their families to implement restoration measures identified in their Climate-Resilient Farm Plans.

The primary impact indicator is hectares restored in accordance with approved restoration designs. The activity also contributes to VWB generated, especially through reduced surface runoff, reduced sediment yield, and progressive recovery of subsurface storage and baseflow.

66. **Output 1.2.** Climate-resilient transformation of productive practices to yield hydrological benefits and resilient livelihoods.

Activity 1.2.1. Implement climate-resilient production systems at farm level will transform 2,409 hectares of productive land into sustainable production systems that improve infiltration, soil-water retention, and drought buffering at the plot and farm scale. The activity addresses a key barrier to climate-resilient land management, many landowners lack the knowledge, technical capacities, and financial resources needed to adopt sustainable production practices and diversify their incomes. As a result, conventional agricultural and livestock practices often contribute to soil degradation, erosion, runoff, and pressure on strategic ecosystems. Through technical assistance and the implementation of climate-resilient production systems, the activity will enable farmers to adopt more sustainable and productive practices that strengthen farm resilience while improving water regulation. Farmers, who will implement measures to achieve farm-level resilience for water regulation, will be selected based on predefined criteria in prioritized agricultural lands (See Annex 26). Sub-activities are:

1.2.1.1. Implement silvopastoral systems in place of traditional dairy production
1.2.1.2. Implement agroecological practices in traditional potato production systems
1.2.1.3. Implement efficient use and water saving at farm level
1.2.1.4. Implement and diversify agrifood systems

CI, as the EE, will lead and coordinate productive transformation interventions across the priority landscapes. Consistent with the approach used for restoration activities, the same local community organizations will implement productive transformation measures under CI's technical guidance and supervision. Co-financing for this activity will be provided by EAAB, the Coca-Cola Foundation, and AB InBev. CI and its local partners will work directly with landowners and their families to co-design and implement interventions through their Climate-Resilient Farm Plans,

ensuring that productive transformation measures are tailored to local needs and aligned with broader watershed resilience objectives.
The main impact indicator is hectares under climate-resilient practices. This indicator captures actual land-use change on the productive footprint that drives hydrological outcomes. The activity also contributes to VWB generated by reducing runoff peaks, improving infiltration, and lowering sediment exports from production areas.

67. **Activity 1.2.2.** Support commercialization and market access for water-regulating products. This activity ensures that productive transformation becomes economically viable and durable. Annex 2 makes clear that low adoption incentives are a major implementation gap; producers are unlikely to sustain resilient practices if they remain disconnected from markets that recognize and reward differentiated products. Throughout this activity, the project will support producer associations and local organizations, whose affiliated producers are already implementing climate-resilient production practices in selected watersheds to commercialize rural products and access markets. By creating economic opportunities linked to sustainable production, the activity will enable producers to increase and diversify their incomes while maintaining practices that contribute to water regulation, climate adaptation, and landscape resilience.
Producer associations and local organizations will be selected based on predefined criteria (See Annex 26). Sub-activities are:

1.2.2.1. Develop business models for climate-resilient production systems.
1.2.2.2. Implement commercialization and market access initiatives through producer associations

FA, as the EE, will lead and coordinate this activity. FA will provide grants to selected local organizations and producer associations who will implement business models, commercialization activities, and market access initiatives with technical support from Fondo Acción. Local producers will participate through these organizations, contributing to the implementation of supported business models and sustainable market opportunities.

The main impact indicator is number of new clients to place products in Bogotá markets, complemented where possible by revenues generated from participating producers' associations. It captures whether market access was actually achieved and whether productive reconversion can be sustained through income generation. Although this activity does not generate hydrological benefits directly, it is essential to maintaining the land-use changes that underpin the hydrological impact of Activity 1.2.1.

68. **Activity 1.2.3.** Implement efficient water use measures in 40 community-run water supply systems in prioritized watersheds. This activity addresses local water insecurity in upstream municipalities and rural communities by reducing losses, improving operational efficiency, and increasing the capacity of 40 community-run systems to manage climate-related supply variability. The activity aims to reduce non-revenue water (NRW) while ensuring that rural community-run water supply systems deliver a better service and water quality to users. Annex 2 identifies these systems as highly exposed to drought, flow variability, and limited technical capacity. This activity will support long-term resilience of rural communities relying on these services in the Bogota Region. Beneficiary community-run water systems will be selected based on predefined criteria in selected watersheds (See Annex 26). Sub-activities are:

1.2.3.1. Install macro-metering and upgrade community-run water supplies systems to cut losses.
1.2.3.2 Apply efficient water use practices in water supply community-run systems
1.2.3.3. Implement drinking-water treatment in water supply community-run systems

FA, as the EE, will lead and coordinate this activity. FA will provide technical assistance and grants to selected community-run water supply systems' organizations. Fondo Acción will lead the development and implementation of tailored support packages based on the technical diagnostics conducted for each participating water system. For this, FA will engage a specialized consulting firm.

The main impact indicator is related to the installation of macro-meters because this will allow identification of leaks and application of tailored water efficiency measures in each of the community-run supply water system. This indicator measures the direct adaptation effect of reduced losses and improved use of limited water resources under climate stress. Depending on the intervention, the activity may also contribute to beneficiaries with improved water security, which is linked to the overall project impact.

COMPONENT 2. FINANCE MOBILIZATION AND SCALE-UP

69. Component 2 converts the hydrological proof of concept generated under Component 1 into an operational financing structure. Its purpose is not to add a parallel objective, but to ensure that the benefits demonstrated in the priority watersheds can continue after the project and expand to additional territories. Annex 2 is explicit that the project impact depends on the combination of hydrological proof and financing architecture. To ensure that scaled-up finance for VWBs occurs in the short run, three key regulatory frameworks were evaluated:

- Environmental compensation for private companies: Law 2173 of 2021 ("Áreas de Vida") requires medium and large businesses to conduct tree planting in priority areas, though full implementation awaits new territorial guidelines. Colombia lacks an integrated financial framework for volumetric water metrics, but many companies are setting stewardship and compensation goals for sustainability. Bogotá-based firms in the CEO Water Mandate and UN Global Compact have significant upcoming compensation targets.
- Water and Basic Sanitation Regulation: Resolution CRA Resolution 1032 of 2026 allows service providers to charge an environmental investment component to recover costs related to environmental investments.
- General Environmental Law: Article 111 of Law 99 of 1993 obliges local governments to allocate at least 1% of unrestricted budgets to conserve strategic water areas. Law 2320 of 2023 updated this requirement, prioritizing nature-based solutions, adaptation, restoration, and conservation payments in key areas.

70. Component 2 prioritizes activities that are feasible under existing laws from those that require broader policy, financial and social consensus. These activities were selected from a larger set of options presented in the following table. Component 2 activities are highlighted in green:

Activities that are feasible to implement during a 5-year GCF project, under current policy and legislation	**Activities that are unlikely to be fully structured within the5-year GCF project timeframe.**
- Incorporate an environmental investment component to the water tariff. - Operationalize a long-term financial mechanism for private investments in integrated water interventions	- Increase and better use of the "1% resources" usually allocated to land purchase - Impact compensations from projects subject to environmental licenses - Flexibilization and expansion of PAS (PES) - Green bonds - Credits (green or concessional credit lines) - Carbon credits - Tax for investment scheme - Regulation of Law 2173 (Areas of Life)

The project has prioritised the incorporation of an environmental investment component into the water tariff and the establishment of a long-term private financing mechanism because both options can be developed within Colombia's existing legal and institutional framework and become operational during the first five years. They build on existing governance arrangements and on the evidence to be generated under Component 1, without depending on new legislation or the creation of additional regulated markets.

Traditional public instruments, including land acquisition, conservation payments and resources linked to the statutory 1% environmental investment requirement, remain relevant, but they are often implemented through individual land purchases or dispersed projects, resulting in slow progress, high transaction costs and limited territorial coverage. Moreover, land acquisition alone does not remove the productive pressures that drive degradation or ensure the presence of local communities with the incentives and capacity to maintain, monitor and consolidate the interventions, prevent new settlements and avoid inappropriate practices in the páramo.
Other instruments, including environmental compensation, green bonds, concessional credit, carbon credits or new tax arrangements, may become useful in the future, but they require further regulatory development, predictable revenue streams, creditworthy issuers, additional certification systems or institutional processes that extend beyond the initial five-year period. Likewise, the integration of obligations under Law 2173, regulated at the end of 2025, into the watershed intervention portfolio will depend on its full territorial operationalisation, which is currently subject to the designation of *Áreas de Vida* by municipalities. The project therefore prioritises mechanisms that can be implemented from the outset and are compatible with existing governance arrangements (See Annex 2 Appendix IV for detailed explanations).

71. **Output 2.1.** Financing instruments and mechanisms for scaling water volumetric benefits

Activity 2.1.1 Iincorporate an environmental investment component to the water tariff. This activity aims to establish the technical conditions necessary for the incorporation of an Environmental Investment Component (EIC) into EAAB's water tariff, creating a sustainable financing mechanism for watershed protection and climate adaptation investments in the Bogotá Region. The EIC means that utilities can recover the costs of eligible environmental investments linked to source-water protection and hydrological regulation. Eligible investments include ecosystem restoration, conservation of strategic ecosystems, riparian restoration, aquifer recharge protection, water-resource monitoring, land acquisition for conservation, and Payments for Environmental Services. Such activities align with the Watershed Transformation Model. EAAB currently applies the CRA tariff methodology, which includes fixed and consumption charges to recover administration, operation, and investment costs. The EIC is allowed under Law 142 of 1994, Decree 1207 of 2018, Resolution 874 of 2018, and CRA Resolution 1032 of 2026. Under the current tariff methodology, eligible environmental investments are incorporated within the Environmental Investments and Risk Management component and may be recovered through regulated investment costs (CIAR) and associated operating costs (COIR).

However, although regulation allows utilities to incorporate an EIC, neither EAAB nor any other major utility in Colombia has operationalized it yet. Current gaps remain, including: the absence of hydrological baselines, trend analyses, and scenario-modelling capacities for watershed regulation services; the lack of a prioritized and costed investment portfolio aligned with eligible environmental investment and regulated cost categories; insufficient evidence on the cost-effectiveness of watershed investments; and the absence of a reporting architecture capable of generating the indicators, regulatory reports, and supporting cost records required by CRA and SSPD. Sub activities will address those gaps and build a path for replication and scalability:

2.1.1.1. Define and validate indicators and methodologies to demonstrate the cost-effectiveness of water-resilience investments.

2.1.1.2. Implement systematic reporting for authorities that measure investments effectiveness in hydrological outcomes.

2.1.1.3. Develop replication models for other water utilities.

The main impact indicator is “environmental investment component operational in EAAB’s tariff with regulator-accepted reporting”. This indicator is appropriate because the relevant result is not the production of studies alone, but the establishment of a financing route that is operationally and regulatorily usable. The activity also supports scale by creating a replicable model for other utilities.

CI-Colombia, as the EE, will coordinate Activity 2.1.1 and ensure that the technical development remains aligned with the proof of concept and evidence generated under Component 1. TNC will provide specialized technical support for hydrological assessment, Watershed Investment Portfolio, cost-effectiveness methodologies; and reporting and replication framework. EAAB will co-finance the activity and contribute tariff expertise, operational information, and hydrological data, with no GCF funds flowing to the utility

72. **Activity 2.1.2** Operationalize a long-term financial mechanism for private investments. This activity will establish and operationalize a watershed continuity financing mechanism to mobilize long-term private-sector investment for activities included within the Watershed Transformation Model (Component 1) in the Bogotá Region. The mechanism will provide companies with a credible, watershed-scale vehicle through which they can support the stewardship[15] (maintenance), monitoring, and expansion of interventions in priority watersheds that are relevant to their operations, supply chains and water stewardship commitments. Private-sector contributions will provide a sustained source of financing that supports long-term watershed interventions and may be channeled into i) direct investment in new restoration, conservation, and sustainable productive transformation activities in additional hectares; and ii) stewardship for areas restored and sustainably transformed through GCF-supported investments and reinvestment for expansion. Under the second window, participating companies can support both the continuity of existing outcomes by financing stewardship and monitoring activities, and allocate a portion of their contribution to the expansion of watershed interventions through the same financing window. Resources allocated to reinvestment will go to additional watershed interventions under the Watershed Transformation Model (Activities included in Component 1), expanding

[15] The stewardship concept refers to the set of activities required to ensure that the restored, conserved, or sustainably productive converted areas continue delivering hydrological benefits over time consistent with Conservation Agreements and Climate-Resilient Farm Plans.

implementation to new hectares and increasing the scale and sustainability of project impacts across the Bogota Region. Participating companies may choose to contribute through either financing window depending on their investment objectives, water stewardship commitments, and priority landscapes.

The mechanism will channel financing toward watershed transformation activities (component 1), supported by the quantification, verification, and reporting of hydrological outcomes through VWBA methodologies and field data generated through Component 1. The mechanism addresses a key barrier to private financing in watershed resilience by providing a credible, scalable, and long-term financing mechanism that enables companies to invest in watershed resilience at landscape level while relying on established partners and a credible structure for implementation, monitoring, and reporting hydrological outcomes quantified through VWBA methodologies. Additional investments made through the mechanism will be supported by tools for spatial prioritization and VWBs quantification, helping direct resources toward the most impactful interventions, improve value for money, territorial coordination, increase transparency and accountability for participants. Sub-activities are:

2.1.2.1. Develop automatic tools for spatial prioritization of investments, monitoring and quantification of water volumetric benefits
2.1.2.2. Establish the operational and financial structure of the mechanism.

The main impact indicators are “long-term private mechanism structured and capitalized”, “private finance mobilized (USD)”, and “hectares financed at scale”. These indicators capture whether the mechanism moves from concept to operation and whether it channels resources toward watershed interventions beyond the original project footprint, demonstrating both paradigm shift potential and long-term financial sustainability.

FA, as the EE, will structure and operate the financial mechanism and manage private-sector contributions. TNC will develop the spatial-investment prioritization tool, while WRI will develop the VWB tool to support monitoring, reporting, and attribution of hydrological benefits of additional investments through the mechanism. Once the mechanism is fully operational, CI may implement stewardship activities financed through the mechanism.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

NDA and Government Partner

73. In Colombia, the National Designated Authority (NDA) to the Green Climate Fund is a collegiate body composed of the Ministry of Environment and Sustainable Development (MADS), the Ministry of Finance and Public Credit, the Ministry of Foreign Affairs, and the National Planning Department (DNP). This structure ensures alignment of GCF-funded activities with national climate policy, fiscal oversight, international cooperation priorities, and development planning frameworks. The NDA will ensure that the project remains consistent with Colombia’s Nationally Determined Contribution (NDC), National Adaptation Plan (PNACC), National Development Plan, and national biodiversity and water governance strategies. The Accredited Entity and Executing Entities will maintain regular communication with the NDA throughout implementation and will provide periodic technical and financial reports in accordance with GCF requirements. The DNP acting as representative of the National Designated Authority (NDA) will also participate in the Project Steering Committee (PSC) to strengthen policy coherence and institutional sustainability. The District Secretariat of Environment of the Bogotá Mayor’s Office (SDA) will be a key Government partner to provide political and technical alignment with Bogotá’s policy priorities. The SDA will chair the PSC.

Accredited Entity

74. Conservation International Foundation (CI), through its CI-GCF Agency, will serve as the Accredited Entity (AE) for the Project. In accordance with the Accreditation Master Agreement (AMA) between CI and the GCF, the CI-GCF Agency will be responsible for the overall oversight of the Project, including technical, financial, and administrative monitoring and supervision through progress reporting, audits, and periodic site visits, as well as the review and approval of the Executing Entities’ (EEs’) annual workplans and budgets. The CI-GCF Agency will also provide implementation support, guidance, and fiduciary oversight to the EEs; monitor progress toward the achievement of Project outputs and outcomes; ensure compliance with GCF policies and requirements; submit periodic reports to the GCF; and oversee project evaluation and closure. CI-GCF will disburse GCF funds to the EEs in accordance with the AMA and applicable CI-GCF policies and procedures. The CI-GCF Agency currently serves as the AE for two GCF-

funded projects and one GCF programme addressing climate change mitigation, adaptation, and sustainable livelihoods (FP158, FP235, and FP259).

Executing Entities

75. CI, acting through its branch office in Colombia ("CI-Colombia"), will serve as one of the Executing Entities (EEs) for the Project. CI-Colombia will be responsible for the implementation of Component 1 (Output 1.1 – partial Activity 1.1.1, sub-activity 1.1.1.1, and Activity 1.1.2, sub-activities 1.1.2.1 and 1.1.2.2; and Output 1.2 – Activity 1.2.1, sub-activities 1.2.1.1 through 1.2.1.4) and Component 2 (Output 2.1 – Activity 2.1.1, sub-activities 2.1.1.1 through 2.1.1.3). Fondo para la Acción Ambiental y la Niñez ("Fondo Acción") will serve as the other Project EE and will be responsible for the implementation of Component 1 (Output 1.1 – partial Activity 1.1.1, sub-activity 1.1.1.2; and Output 1.2 – Activities 1.2.2, sub-activities 1.2.2.1 and 1.2.2.2 and Activity 1.2.3, sub-activities 1.2.3.1 and 1.2.3.2) and Component 2 (Output 2.1 – Activity 2.1.2, sub-activities 2.1.2.1 and 2.1.2.2). CI, as AE will enter into the following corresponding Agreements with the EEs: an Internal Grant Agreement with CI-Colombia and a Subsidiary Agreement with Fondo Acción. These Agreements will define the respective fiduciary responsibilities, reporting obligations, procurement standards, and safeguards compliance requirements. The EEs will coordinate implementation through the project governance arrangements described below and will ensure compliance with the Funded Activity Agreement (FAA), applicable GCF policies, and project requirements. In the event of a dispute among the Executing Entities (EEs), resolution procedures established under the Grant Agreements with the CI-GCF Agency shall apply.

76. CI-Colombia is a branch of CI and applies all CI policies and procedures. As one of the Project EEs, CI-Colombia will enter into a variety of agreements (Sub-grant Agreements, Services Agreements, and Memoranda of Understanding) for this Project. CI-Colombia will be responsible for Project coordination, 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.

77. Fondo Acción is a National Direct Access Entity accredited by the Green Climate Fund, with a longstanding track record in environmental and sustainable development programming in Colombia. Established in 2000 as a private, non-profit organization, Fondo Acción has over two decades of experience in designing, financing, and implementing initiatives that promote the preservation, protection, and sustainable management of natural resources, as well as in supporting rural and community-based development processes aligned with climate resilience objectives. The organization has significant experience administering climate-related financial mechanisms, including trust funds, competitive grant programs, and performance-based incentive schemes, and has managed GCF resources under its accreditation, demonstrating compliance with international fiduciary, safeguards, and monitoring requirements. Fondo Acción has delivered climate change readiness and implementation support to national and subnational actors, strengthened institutional capacities for climate planning and finance, and operationalized conservation finance models, ranging from debt-for-nature swaps to innovative risk-financing instruments such as parametric insurance in coastal ecosystems.

78. Under Component 1, CI-Colombia as EE, will lead the implementation of conservation measures under Activity 1.1.1 (sub-activity 1.1.1.1) in collaboration with the relevant Protected Area Authorities CAR and CORPOGUAVIO, as well as the implementation of passive and active restoration interventions (Activity 1.1.2, sub-activities 1.1.2.1 and 1.1.2.2) and climate-resilient production systems (Activity 1.2.1, sub-activities 1.2.1.1 through 1.2.1.4), in close coordination with local authorities, beneficiary landowners, and the Bogotá District Secretariat of Environment (SDA, co-financier). To support implementation, CI-Colombia will manage competitive grant processes and enter into grant agreements with local organizations responsible for restoration and productive transformation activities, as well as contractual and grant arrangements to support the production and supply of plant material through community nurseries (see Annex 23). Under Component 2, CI-Colombia will lead the implementation of Activity 2.1.1 (sub-activities 2.1.1.1 through 2.1.1.3) and coordinate with the Bogotá Water and Sewerage Company (EAAB, co-financier) to support the development and piloting of an environmental investment component within EAAB's water tariff. CI-Colombia will also enter into a grant agreement with The Nature Conservancy (TNC, subgrantee) to support the operationalization of this mechanism, with potential for replication and scaling by other water service providers. All grants awarded to beneficiary organizations and individuals under the Project will be managed through transparent and competitive selection processes based on predefined eligibility and selection criteria as specified in Annex 26 (Grants Manual) and in accordance with the contractual arrangements further described in Annex 23.

79. CI-Colombia will maintain close collaboration with national and subnational authorities to ensure coherent and coordinated implementation of project activities. CI-Colombia will be responsible for monitoring water, ecological, and climate resilience indicators and targets, as well as for knowledge management and replication strategies. Targeted technical support will also be provided by other CI divisions during project execution. Cooperation with government institutions —including the SDA, and the Regional Autonomous Corporations (CAR and CORPOGUAVIO)— will be formalized through Memoranda of Understanding and technical agreements; no cash transfers of GCF funds will be made to government entities. CI-Colombia will also ensure coordinated implementation of co-financing resources.

80. Under Component 1, Fondo Acción, as EE will lead the implementation of the private-land conservation incentive mechanism under Activity 1.1.1 (sub-activity 1.1.1.2), supporting the establishment and operation of Payments for Conservation schemes in accordance with Colombia's Payments for Ecosystem Services framework. In this role, Fondo Acción will support beneficiary eligibility verification, including verification of land tenure requirements, and contribute to the monitoring, and compliance verification of Conservation Agreements. Monetary incentives under the Payments for Conservation scheme will be provided by the SDA, the Government of Cundinamarca (co-financier), and the EAAB, while Fondo Acción will support the operation of the mechanism and the verification processes required for performance-based disbursements. Fondo Acción will also lead the implementation of Activities 1.2.2 (sub-activities 1.2.2.1 and 1.2.2.2) and 1.2.3 (sub-activities 1.2.3.1 and 1.2.3.2), providing technical assistance and in-kind grants to producer associations, local organizations, and community-run water supply systems to strengthen commercialization, market access, climate-resilient value chains, and water-use efficiency and resilience in rural water supply systems. Under Component 2, Fondo Acción will lead the implementation of Activity 2.1.2 (sub-activities 2.1.2.1 and 2.1.2.2), including the establishment and operationalization of a long-term financial mechanism designed to mobilize private-sector investment for water resilience and watershed conservation in the Bogotá Region as part of the Project's sustainability and exit strategy. All grants awarded to beneficiary organizations and individuals, including Conservation Agreements, will be managed through transparent and competitive selection processes based on predefined eligibility and selection criteria as specified in Annex 26 (Grants Manual) and in accordance with the contractual arrangements further described in Annex 23.

81. All beneficiary agreements managed by Fondo Acción will include provisions related to fiduciary compliance, safeguards, reporting requirements, and grievance redress mechanisms. The CI-GCF Agency has assessed Fondo Acción's fiduciary and operational capacities and has determined that it meets GCF standards and procedures for the administration of project funds. Any additional capacity-strengthening needs identified during project inception will be addressed through targeted technical support.

Implementing Partners

82. The EEs will engage Implementing Partners (IP) to support implementation of Project activities or sub-activities. Of these IPs, the EEs will provide GCF resources to identified Implementing Partners, Beneficiary Organizations, and other Service Providers (collectively, "sub-awardees") in compliance with GCF requirements. The identified **Implementing Partners** include IAvH, and TNC. Each institution will implement defined technical activities in accordance with approved work plans and budgets. Sub-grant agreements will specify scope of work, reporting requirements, procurement standards, safeguards compliance, and audit provisions. While sub-grantees will receive funds through the Executing Entities, the Accredited Entity will retain ultimate fiduciary oversight responsibility in accordance with the AMA. The IPs will have no discretionary authority over the implementation, modification, or allocation of resources related to the respective sub-activities. All decision-making authority will remain with the relevant Executing Entity. Furthermore, the IPs will not transfer, re-grant, or channel project funds to any third parties. The grant agreements will require full compliance with the Accredited Entity's obligations under the AMA and the FAA, including all applicable fiduciary, environmental and social, procurement, monitoring, reporting, and audit requirements. The EEs may also coordinate with implementing partners who do not receive GCF funds or resources like the Regional Autonomous Corporation of Cundinamarca (CAR) and the Regional Autonomous Corporation of Guavio (CORPOGUAVIO).

Subgrantee Organizations

83. CI Colombia will also enter into cash and in-kind sub-grant agreements with eligible local organizations for the implementation of restoration and climate-resilient production interventions, including the establishment of chicken coops, greenhouses, gardens, rainwater harvesting systems and for the implementation of restoration treatments in

degraded areas in accordance with the environmental zoning of protected areas; and, for the provision of plant material for restoration in public protected areas and civil society reserves.

84. Fondo Acción will enter into cash and in-kind sub-grant agreements with eligible local producer associations to support the implementation of business models, productive improvements, commercialization and market access strategies under Activity 1.2.2 . Fondo Acción will also enter into in-kind grant agreements or other appropriate implementation arrangements with eligible community-water supply systems organizations under Activity 1.2.3.

Project Governance

85. The project governance structure will be led by a Project Steering Committee (PSC) responsible for providing strategic guidance and oversight. The PSC will serve in an advisory capacity only and will not exercise decision-making authority over project implementation, resource allocation, fiduciary management, procurement, or other operational matters, which will remain the responsibility of the Accredited Entity and the relevant Executing Entities. The PSC will provide strategic direction and alignment with National and Local policy priorities, review annual work plans, monitor implementation progress, address inter-institutional coordination challenges, and support adaptive management decisions. The PSC will be initially chaired by the Bogotá District Secretariat of Environment (SDA) and include senior representatives from the Ministry of Environment and Sustainable Development (MinAmbiente), the Bogotá Water and Sewerage Company (EAAB), the Government of Cundinamarca, the Administrative Planning Region (RAP-E) Regional Autonomous Corporation of Cundinamarca (CAR), Regional Autonomous Corporation of Guavio (CORPOGUAVIO), and the National Planning Department (NDA).

86. The Project Steering Committee serves as a key governance body, meeting at least twice per year and convening extraordinary sessions as needed to address emerging issues. It provides strategic guidance to the Executing Entities (EEs) and is supported administratively by the Project Management Unit (PMU). To ensure inclusive and well-informed discussions, the Committee may also invite additional stakeholders to contribute perspectives, expertise, and recommendations on specific topics, as appropriate; however, such participation is advisory in nature and does not confer decision-making authority.

87. The project will also be supported by a Technical Advisory Committee (TAC) and a Private Sector Advisory Committee (PSAC), which will serve in an advisory capacity only. The TAC, composed of representatives from MinAmbiente, SDA, the Government of Cundinamarca, the Administrative Planning Region (RAP-E), CAR, CORPOGUAVIO, EAAB, IAvH, TNC, and WRI, will provide expert, strategic, and technical guidance to project governance bodies and meet at least twice per year. CI-Colombia will serve as Secretary to the TAC. The PSAC will provide strategic advice to align Project activities with private-sector investment opportunities, strengthen collaboration, support stakeholder engagement, and identify opportunities for scaling and replication. The PSAC will meet at least twice per year, and its composition will be determined during Project implementation. Government employees participating in these committees will not receive compensation from GCF funds. For both Committees, members will be required to sign a Conflict of Interest Declaration, and robust disclosure and recusal procedures will be implemented to ensure the transparent management of any actual, potential, or perceived conflicts of interest.

88. The composition of the above committees (PSC, TAC, and PSAC), including the entities represented therein, may be modified during Project implementation in accordance with the needs and requirements of the Project. Day-to-day implementation will be coordinated through a Project Management Unit (PMU) composed of staff from CI Colombia and Fondo Acción. The PMU will be responsible for operational coordination, financial and technical reporting, procurement oversight, safeguards compliance, and monitoring and evaluation. The PMU will provide administrative and logistical support to the Project governance bodies, prepare reports and updates, coordinate compliance with GCF requirements, and help ensure transparent, effective, and high-quality Project implementation. The Executing Entities will retain responsibility for implementation decisions within their respective activities.

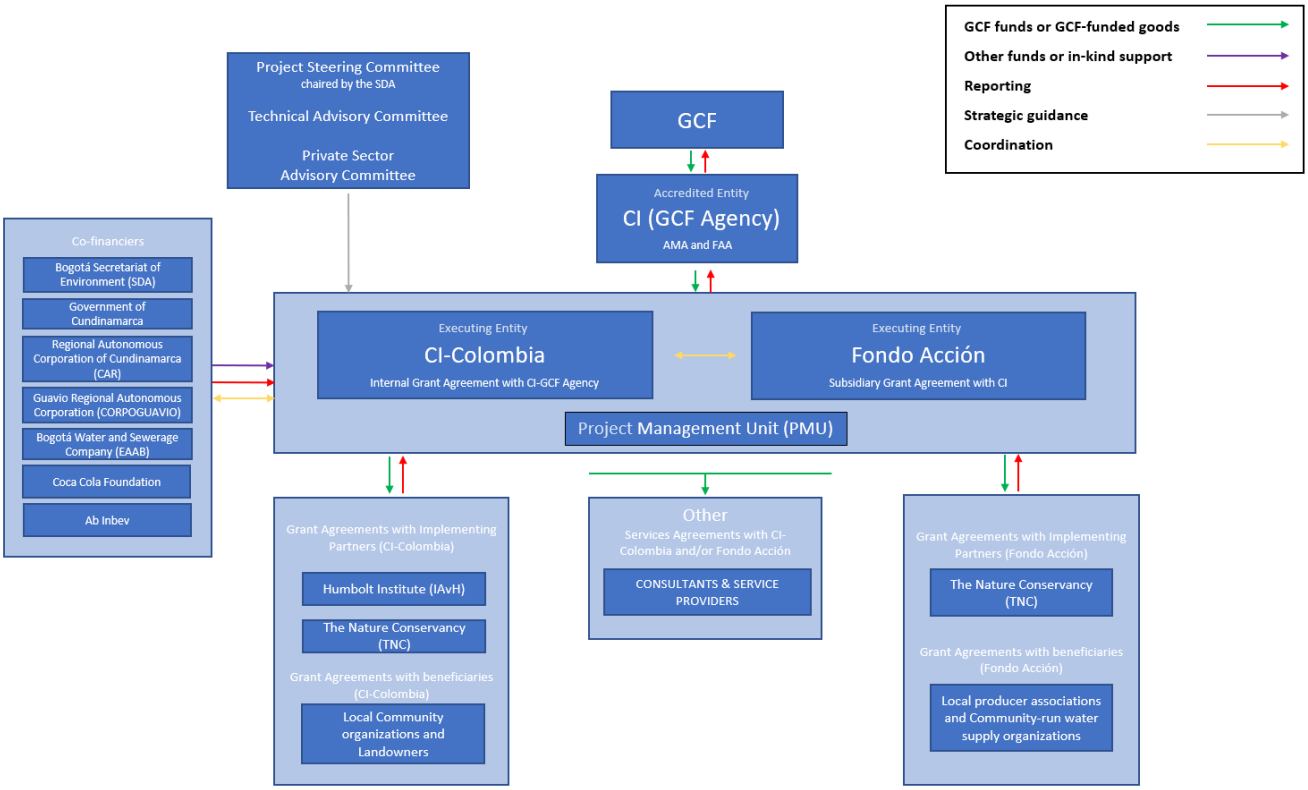


Figure 2. Project implementation organigram showing fund flows, reporting lines, and governance relationships

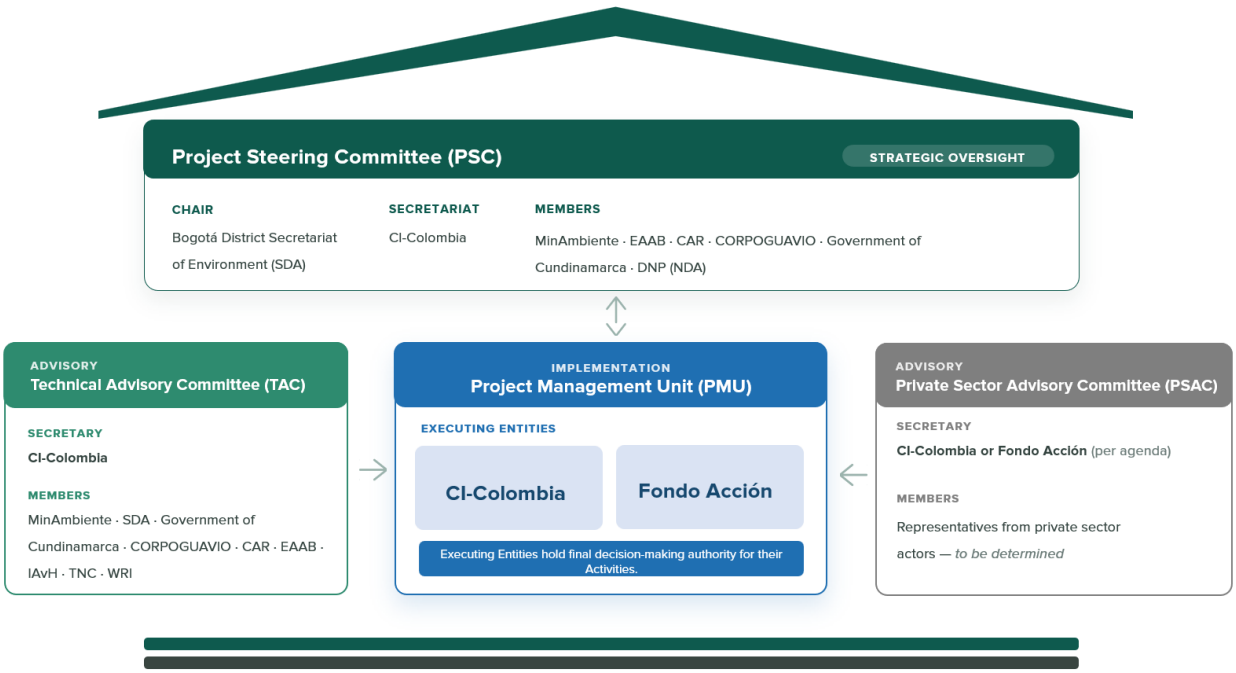


Figure 3. Project Governance Structure

B.5. Justification for GCF funding request (max. 1000 words, approximately 2 pages)

89. Addressing water supply challenges in the Bogotá Region requires unified watershed-scale intervention supported by coordinated public and private action. To date, the absence of such a strategy has resulted in fragmented interventions, varying methodologies, and inconclusive evidence regarding hydrological benefits that underpin long-term sustainability investments. GCF Project Preparation Facility (PPF) support has demonstrated stakeholder commitment to a coordinated approach. Building on this, the proposed project will deliver, for the first time, a robust watershed-scale model with quantifiable and verifiable hydrological outcomes, establishing the evidence base required to justify sustained and scaled investment.

90. Historically, interventions have addressed isolated dimensions of the challenge. Conservation agencies have focused on protected areas; environmental authorities have made payments for ecosystem services and invested in restoration; and rural development programs have operated largely disconnected from environmental objectives. Institutional fragmentation and limited financial resources have prevented the implementation of an integrated watershed model at scale. GCF funding is therefore essential to demonstrate the effectiveness of comprehensive, cross-sectoral intervention and to guide future coordination of public and private stakeholders.

91. While evidence, including from previous GEF-supported initiatives, demonstrates that climate-resilient productive systems can improve both livelihoods and water resilience, adoption remains constrained. Local communities face significant upfront costs, limited technical capacity, and insufficient access to markets that reward sustainable production. GCF resources will address these barriers by providing targeted financial and technical support that enables the transition from traditional practices to climate-resilient systems, while facilitating access to differentiated markets that strengthen long-term economic incentives.

92. At present, existing financing mechanisms and instruments, including payments for conservation, do not adequately link upstream land management with downstream demand for measurable water resilience outcomes. These mechanisms have typically delivered short-term impacts and lack scalability. Although enabling regulations exist to channel resources from water users, and private sector commitments to water stewardship are growing, investments remain limited due to regulatory uncertainty, underdeveloped financing structures, and lack of verified impact metrics. GCF grant finance is therefore critical to de-risk early-stage investments, support the Bogotá Water Utility in managing regulatory constraints, and establish a credible financial mechanism capable of mobilizing significantly larger public and private capital over time.

93. GCF resources under Component 1 will generate critical public goods that cannot be financed through commercial means. This includes the development of locally calibrated hydrological models, establishment of monitoring systems, and implementation of interventions at sufficient scale to produce statistically robust evidence of impact. These investments are essential to reduce uncertainty, improve intervention design, and build confidence among investors and regulators. They also constitute a prerequisite for Component 2, which will operationalize long-term financing pathways through mechanisms such as tariff-based environmental investment and private sector contributions to watershed stewardship activities, supported by quantification and verification of Volumetric Water Benefits. Without concessional finance, these foundational investments would remain too risky and insufficiently proven to attract follow-on capital.

94. The proposed use of grant financing from GCF is justified by the nature of the activities and the absence of reliable revenue streams to service non-grant instruments. A large portion of the requested grant is directed toward public goods, including watershed-scale monitoring systems, data generation, institutional coordination, and early-stage ecosystem protection and production system transformation, which do not generate cash flows. This financing structure reflects a clear financing gap, as the USD 31 million in co-financing is primarily directed to implementation and complementary activities, while critical upfront investments to scale field investments, invest in hydrological evidence generation, coordination systems, and market creation for rural products are not financeable under current public budgets or private investment conditions. The scale of the GCF grant therefore represents the minimum level of concessional support required to implement interventions at sufficient spatial and temporal scale to generate robust hydrological evidence and reduce uncertainty for future investors. Smaller or fragmented investments would fail to generate the credibility needed to unlock downstream financing.

95. The justification for GCF funding is further strengthened by the public-good nature of project benefits. Improved water regulation, reduced sedimentation, enhanced baseflows, biodiversity conservation, reduced treatment costs, and increased carbon sequestration generate system-wide benefits that are not fully captured by individual land users or institutions. This misalignment weakens incentives for self-financing and limits private investment. A grant is required

to internalize these positive externalities, particularly during early implementation stages when impact verification is still being established.

96. Repayable instruments such as loans, guarantees, or equity are not appropriate at this stage. The project is characterized by high uncertainty regarding hydrological outcomes, lack of monetized revenue streams, and strong public-good externalities. Upstream interventions produce benefits that accrue broadly across the system but are not captured in a way that could support repayment. Grant financing is therefore necessary to absorb early-stage risks, and establish the conditions under which future investments in nature-based solutions may be scaled and continuous.

97. GCF support is also justified in affordability and equity grounds. The project targets vulnerable stakeholders, including smallholder farmers, community water providers, women, Indigenous groups, and other climate-exposed populations, who face limited access to finance and high exposure to climate risks. These actors lack the capacity to absorb transition costs or take on debt. Grant-based financing is therefore essential to ensure inclusive participation and enable the adoption of climate-resilient practices without increasing vulnerability.

98. GCF financing is designed to be catalytic rather than substitutive. The requested USD 45.72 million is expected to mobilize USD 31 million in co-financing from public and private actors while establishing the conditions for significantly larger future investment flows. Rather than replacing domestic or private finance, GCF resources will organize and de-risk these flows around a credible, evidence-based model for water resilience. Additional private sector participation is expected to be driven primarily by large water users, including industrial and commercial actors, as well as corporate water stewardship commitments. These commitments will be operationalized through investments in prioritized watershed interventions, supported by robust systems for quantifying and verifying hydrological outcomes. Participating companies will be able to report the verified Volumetric Water Benefits generated through those investments as part of their water stewardship and sustainability reporting.

99. Component 2 operationalizes this pathway by introducing two long-term financial solutions. On one side, an environmental investment component into the water tariff which will enable a continuous regulation-backed revenue stream dedicated to ecosystem-based adaptation in the watersheds. These resources are intended to sustain and expand watershed interventions beyond the life of the project and to repay the upfront EAAB investment in the project. On the other, a continuity-financing mechanism through which participating companies will support the continued implementation and expansion of watershed stewardship activities that deliver verified hydrological outcomes. Therefore, initial private sector co-finance presented in this proposal represents only the first phase of investment mobilization, with substantially larger flows expected over time as evidence is generated and mechanisms mature.

100. Overall, GCF financing is justified because it enables a transition that would otherwise be significantly slower, more fragmented, and less climate effective. In the absence of GCF support, investments would likely remain limited to small-scale, fragmented conservation and restoration efforts, with insufficient coordination, limited monitoring, and no mechanism to generate, quantify, and verify hydrological outcomes in a manner capable of attracting sustained financing.

101. The project delivers a paradigm shift by moving from fragmented, input-based approaches to a coordinated, watershed-scale, outcomes-based financing system, where resource allocation is increasingly tied to measurable hydrological performance through sustainable financing mechanisms. By addressing early-stage risks, affordability constraints, public-good externalities, and institutional barriers, GCF support will deliver immediate adaptation benefits while establishing a replicable model for financing water resilience in the Bogotá region and other mountain-fed urban systems.

B.6. Exit strategy (max. 500 words, approximately 1 page)

102. The exit strategy is designed to ensure project investments generate water resilience benefits in the Bogotá Region long after GCF funding ends, and that the watershed transformation model is applied at scale in the region. The exit strategy relies on three main elements: a watershed transformation model supported by verifiable hydrological results, social and institutional ownership of climate-resilient conservation and productive practices and increased and reliable income for rural households linked to commercialization of products associated with water resilience.

103. A central element of the exit strategy is operationalization of Output 2.1, which establishes financing instruments and mechanisms for scaling watershed interventions that deliver hydrological benefits. The project will define and validate methodologies to demonstrate the cost-effectiveness of watershed investments for the Bogotá water utility, establish systematic reporting of hydrological outcomes, and test the incorporation of an environmental investment component within the water tariff framework. The incorporation of this mechanism is supported by EAAB, who will provide upfront investment in the watersheds as co-financing, to advance and operationalize the environmental investment

component, providing a clear pathway for integration into the utility's investment plans. This lays the groundwork for recurrent utility-funded investment in upstream watershed resilience.

104. In parallel, the project will design and operationalize a long-term financial mechanism for private investments, with tools for spatial prioritization and quantification of VWBs that enables companies to finance prioritized watershed interventions aligned with their water stewardship and compensation targets and deliver verified VWBs that can be transparently tracked and reported in corporate sustainability and water stewardship disclosures. This mechanism will be hosted and managed by Fondo Acción, a Fund backed by public and private entities, ensuring its continued operation beyond the project period.

105. Once these two mechanisms are in place and supported by credible evidence from Component 1, they are expected to channel ongoing public and private resources into watershed interventions after GCF support ends. The project will leave behind a tested, replicable, and scalable watershed transformation model in priority watersheds. This model combines restoration and conservation of high Andean ecosystems, climate-resilient production systems, and improved community water management to generate measurable hydrological improvements and co-benefits such as reduced water treatment costs and increased carbon sequestration. The use of reduced runoff and Volumetric Water Benefits as core metrics, supported by field data and monitoring systems, will create a robust evidence base to support continued investment by utilities, municipalities, and private actors.

106. Prioritization and quantification tools embedded in the financial mechanism will be automatic, reducing operation costs after the project ends. These monitoring systems will be operated by CI Colombia, the same financial mechanism, ensuring their continuity after project closure. Additionally, TNC and WRI, which act as project partners, will continue supporting technical updates and intake of such tools with public and private actors. Project tools and methodologies will be documented and made accessible to support replication.

107. Social and institutional ownership is built through participatory planning, capacity development, and community-based implementation. Smallholder families prepare climate-resilient farm plans, while producer organizations, community water providers, and protected area managers participate directly in watershed-level planning and implementation. As these actions translate into tangible results in productivity and water availability, continued adoption is expected based on practical and economic benefits.

108. By the end of the project, these actors are expected to have the technical, organizational, and governance capacity to maintain climate-resilient practices. Monitoring systems and demonstrated benefits will inform ongoing decision-making. Higher and more stable income linked to production, market access, and value addition provides a direct incentive for continuation and positions local stakeholders as long-term custodians of watershed resources.

109. By project completion, the financing mechanisms, monitoring systems, and coordination arrangements are expected to be fully operational, with responsibilities transferred to the EEs, Bogotá water utility and implementing partner institutions with no reliance on external grant funding for continued operation but rather public and private investments.

110. Collectively, these elements ensure that the Bogotá Region will have in place a functioning system capable of sustaining and expanding investments in water resilience. This represents a shift from short-term, project-based interventions toward a system in which watershed investments are guided by measurable results and supported by ongoing public and private financial flows.

A. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount	Currency
	45.72	million USD ($)

GCF financial instrument	Amount	Tenor	Grace period	Pricing
(i) Senior loans	Enter amount	Enter years	Enter years	Enter %
(ii) Subordinated loans	Enter amount	Enter years	Enter years	Enter %
(iii) Equity	Enter amount			Enter % equity return
(iv) Guarantees	Enter amount	Enter years		
(v) Reimbursable grants	Enter amount			
(vi) Grants	45.72			
(vii) Results-based payments	Enter amount			

(b) Co-financing information	Total amount	Currency
	31.02	million USD ($)

Name of institution	Financial instrument[16]	Amount	Currency	Tenor & grace	Pricing	Seniority
Bogota District Environment Secretariat (SDA)	In kind	12.78	million USD ($)			
Gobernación de Cundinamarca (CUND)	In kind	1.00	million USD ($)			
Bogotá Water and Sewerage Company (EAAB)	Cash	5.84	million USD ($)			
AB InBev	Cash	1.50	million USD ($)			
Regional Autonomous Corporation of Cundinamarca (CAR)	In kind	0.72	million USD ($)			

Regional Autonomous Corporation of Guavio-CORPOGUAVIO (CORP)	In kind	0.34	million USD ($)			
Coca Cola Foundation	Cash	2.50	million USD ($)			
Conservation International (CI)	Cash	1.15	million USD ($)			
Conservation International (CI)	In kind	5.19	million USD ($)			

(c) Total financing (c) = (a)+(b)	**Amount**	**Currency**
	76.74	million USD ($)

(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)	

C.2. Financing by component

Component	**Output**	**Indicative cost** million USD ($)	**GCF financing**		**Co-financing**		
			Amount million USD ($)	**Financial Instrument**	**Amount** million USD ($)	**Financial Instrument**	**Name of Institutions**
Component 1. Proof of concept to achieve the highest Hydrological Benefits at the Watershed scale	1.1 Strategic High Andean ecosystems restored and conserved to yield hydrological benefits	32.56	11.08	Grants	1.03	Grants	AB InBev
					0.95	Grants	CI
					1.66	Iin-kind	CI
					1.72	Grants	Coca Cola
					0.33	In-kind	CORP
					0.68	In-kind	CAR
					12.16	In-kind	SDA
					2.00	Grants	EAAB
					0.95	In-kind	CUND
	1.2: Climate-resilient transformation of productive practices to yield hydrological benefits and resilient livelihoods.	31.05	23.99	Grants	0.41	Grants	AB InBev
					0.19	Grants	CI
					2.43	In-kind	CI
					0.69	Grants	Coca Cola
					3.34	Grants	EAAB
Component 2. Finance mobilization and scale-up	2.1 Financing instruments and mechanisms for scaling water volumetric benefits	7.64	6.95	Grants	0.05	Grants	EAAB
					0.64	In-kind	CI

M&E	1.80	1.59	Grants	0.21	In-kind	CI
PMC	3.69	2.11	Grants	0.06	Grants	AB InBev
				0.02	Grants	CI
				0.24	In-kind	CI
				0.01	In-kind	CORP
				0.05	In-kind	CUND
				0.09	Grants	Coca Cola
				0.04	In-kind	CAR
				0.62	In-kind	SDA
				0.45	Grants	EAAB
Indicative total cost (USD)	**76.74**	**45.72**	**31.02**			

The detailed budget is provided as Annex 4.

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?	Yes ☒ No ☐
C.3.2. Does GCF funding finance technology development/transfer?	Yes ☒ No ☐

111. The project integrates technology transfer and capacity building directly within each activity to ensure immediate applicability and sustainability of results. Under Component 1, conservation and restoration activities (activity 1.1.1 and 1.1.2) include the transfer of geospatial monitoring tools and ecological assessment protocols, enabling local stakeholders to track land-use compliance, vegetation condition, and hydrological performance. Capacity building focuses on training community organizations and local institutions in monitoring, enforcement, and long-term management of conserved and restored areas.

112. Climate-resilient productive transformation (Activity 1.2.1) involves the transfer of sustainable agricultural practices, including soil conservation, water-efficient production systems, and agroecological approaches adapted to local conditions. Producers receive targeted training to support adoption, maintenance, and decision-making under climate variability. This is complemented by the transfer of market linkage tools, including commercialization strategies and supply chain integration, alongside capacity building for producers to access and negotiate in Bogotá markets (Activity 1.2.2)

113. Strengthening of community-run water systems (Activity 1.2.3) includes the introduction of basic water efficiency technologies, such as leak detection and improved distribution systems, combined with training in operation, maintenance, and climate-resilient water management.

114. Under Component 2, technology transfer focuses on developing financial and MRV systems linking hydrological performance (VWB) with investment-decision tools (Activity 2.1.2). Knowledge products and engagement with other Water Utility companies is also developed to facilitate that additional utilities incorporate environmental water components in their tariffs to catalyze investments in watershed-models in other regions of Colombia (Activity 2.1.1).

115. Overall, the project ensures that technology transfer and capacity building generate lasting institutional and technical capabilities to sustain and scale climate-resilient water management.

B. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's Initial Investment Framework.

D.1. Impact potential (max. 500 words, approximately 1 page)

123. The project is focused on adaptation in the Bogotá Region's strategic upper watersheds and will deliver strong adaptation impacts that align with the GCF results areas on ecosystems and ecosystem services, health and well-being, and food and water security. By combining ecosystem conservation, ecological restoration, climate-resilient production systems and strengthened community water supply management, the project addresses the climate-related drivers of water insecurity affecting both rural producers and downstream metropolitan water users. Its theory of change links upstream interventions to measurable hydrological improvements, expressed through Volumetric Water Benefits (VWBs), and to reduced vulnerability for people, livelihoods and water infrastructure.

124. The project's intended adaptation outcomes are significant in scale. Interventions across 12 prioritized upper watersheds are expected to improve watershed regulation through 4,756 ha under conservation, 2,032 ha under restoration and 2,409 ha under sustainable and climate-resilient production systems. These measures are designed to increase infiltration and soil moisture retention, stabilize baseflows during dry periods, reduce peak runoff during extreme rainfall, and lower sediment pressures on water treatment systems. Modelled results estimate approximately 2,940,584 m³ per year of avoided or reduced runoff (VWBs), quantified through the WRI VWB methodology, providing an initial basis for monitoring, reporting and demonstrating the link between ecosystem-based adaptation and downstream water security.

125. The project will benefit an estimated 3,013,383 direct beneficiaries through improved climate and water resilience, including users of community water supply systems and rural households adopting more climate resilient production practices. It will also indirectly benefit an estimated 7,083,799 people through improved enabling conditions for water security, institutional coordination and watershed management. The project also strengthens 40 community-run water supply systems through macro-metering, potable water treatment improvements and capacity building, thereby reducing exposure to climate-related service disruptions.

126. For vulnerable rural populations, the project will increase adaptive capacity by supporting 1,248 smallholder families to adopt silvopastoral, agroecological and diversified production systems that improve water-use efficiency, reduce land degradation and lower pressure on páramo, high-Andean forest and riparian ecosystems. Support to 30 producer associations will further strengthen commercialization and market access, helping to make climate-resilient livelihoods economically viable. These outcomes are particularly important under projected increases in rainfall variability, drought frequency and runoff intensity, which heighten risks to rural livelihoods and urban water reliability.

127. Although the project is primarily adaptation-oriented, it also contributes to low-emission sustainable development pathways through improved land and ecosystem management. Conservation and restoration of high-carbon Andean ecosystems, reduced degradation pressures, sustainable livestock and agroecological practices, and more efficient water management are expected to avoid emissions relative to business-as-usual land-use trends and to strengthen natural carbon sinks.

128. Overall, the project demonstrates high impact potential through its scale, quantified hydrological outcomes, and direct relevance to current and projected climate risks. By improving upstream watershed functions while strengthening community systems, productive livelihoods and institutional water management, the project will contribute to increased climate-resilient sustainable development for the Bogotá Region and provide a measurable, replicable model for watershed-based adaptation finance.

129. Additional details on the project's Impact Potential is provided in Annex 2, Chapter 10.2.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

130. The paradigm shift sought by the project is the transition from fragmented and project-based watershed interventions to an integrated watershed resilience model in which conservation, restoration, climate-resilient production systems and water management are implemented together to improve hydrological regulation, at the plot and watershed level, and strengthen climate resilience. In this model, management approaches across both productive and conserved lands explicitly consider their contribution to watershed resilience and water security. The project also seeks to establish sustainable financing pathways to support the maintenance, scaling, and continued implementation of watershed resilience interventions beyond the project lifetime. This contrasts with the current situation, where watershed management actions are often implemented in isolation, financed through short-term resources, and without a systematic focus on hydrological outcomes.

131. The project has strong paradigm shift potential because it is designed to demonstrate that integrated watershed interventions can generate measurable improvements in hydrological regulation at the watershed level while strengthening climate resilience and livelihoods. Through implementation across priority watersheds, the project will generate evidence on the hydrological benefits of ecosystem-based adaptation and provide practical experience that can inform future watershed planning and investment decisions in the Bogotá Region and beyond. The project establishes a framework for coordinated action and investment, as it brings together utilities, environmental authorities, municipalities, communities, producer organizations and private-sector actors around a shared watershed approach.

132. Through Component 2, the project moves beyond demonstrating hydrological benefits to testing approaches that can support continued investment in ecosystem-based adaptation. By supporting EAAB in operationalizing the Environmental Investment Component within the existing water tariff framework, the project will provide a practical example of how an existing regulatory instrument can support recurrent financing for the long-term implementation, maintenance, and expansion of watershed protection and hydrological regulation activities beyond the project period. In parallel, the project will develop a mechanism through which private-sector actors can contribute to the continued implementation, maintenance and expansion of watershed stewardship activities with resulting hydrological benefits being quantified and independently verified using Volumetric Water Benefits methodologies. These financing mechanisms build on existing institutional mandates, regulatory instruments and corporate water stewardship commitments, requiring no regulatory reform. The project will also develop the methodologies, reporting frameworks and guidance required to support the application of similar approaches by other utilities and watershed stakeholders in Colombia.

133. The project also contributes to paradigm shift through knowledge generation and learning. Hydrological monitoring, field measurements and modelling will strengthen the evidence base on the effectiveness of conservation, restoration and climate-resilient productive systems in improving water resilience. The methodologies, monitoring approaches and implementation tools developed through the project will support replication by other water utilities, environmental authorities and territorial governments, as well as additional private-sector investment in watershed resilience interventions supported by a proven implementation model, robust hydrological evidence, strong technical tools, and experienced implementing partners.

134. The project strengthens the enabling environment for climate adaptation by promoting collaboration among public institutions, communities and private actors and by approaching watershed resilience through a locally led adaptation lens. Participatory watershed visions, climate-resilient farm plans, conservation agreements and community monitoring systems will strengthen local ownership and support the long-term sustainability of project results.

D.3. Sustainable development (max. 500 words, approximately 1 page)

135. The project will deliver co-benefits across environmental, social, and economic dimensions, reinforcing multiple Sustainable Development Goals (SDGs), in particular SDG 1, 2, 3, 5, 6, 10, 12, 13, and 15. Through an integrated, watershed-based adaptation approach, the project enhances ecosystem integrity, supports resilient and diversified livelihoods, and advances gender responsive and socially inclusive development in the Bogotá Region.

136. Environmentally, co-benefits will be achieved by restoration and conservation of strategic high mountain ecosystems that are critical for Bogotá's water security, including páramos, high Andean forests and riparian corridors in priority supplying watersheds. These interventions improve carbon capture, ecological connectivity and habitat quality for native and endemic species, safeguard watershed functions such as baseflow regulation and water quality, and support conservation targets under SDG 15 on terrestrial ecosystems and SDG 6 on water-related ecosystems. Enhanced ecosystem integrity also contributes to climate regulation and microclimate stability, reinforcing SDG 13 on climate action by reducing climate related water and ecosystem risks in the Bogotá Region.

137. Socially, the project will strengthen rural livelihoods by promoting climate resilient production systems, sustainable agriculture and livestock practices, and nature based economic options such as differentiated agri-food products and other innovative alternatives in prioritized sub basins. These measures reduce poverty and economic vulnerability (SDG 1), improve food and water security (SDG 2 and SDG 6), and increase the adaptive capacity of communities whose incomes and well-being depend on climate sensitive ecosystems and water services. In urban and peri urban areas, reduced flood and drought risks, improved water quality, and

better-managed wetlands contribute to safer living conditions and health co-benefits, including lower exposure to flood related contamination and enhanced access to green spaces (SDG 3).

138. Economically, the project will enhance income stability and market access for smallholders and community associations by strengthening producer organizations, value chain linkages, and climate smart business models that reward sustainable land and water management. More efficient and climate resilient upstream land use, coupled with reduced sediment loads and improved water quality, is expected to lower downstream water treatment and infrastructure maintenance costs, supporting more efficient public spending and contributing to SDG 12 on sustainable consumption and production. By establishing methodologies to demonstrate the cost effectiveness of watershed investments and linking them to tariff and private investment pathways, the project also supports more rational, performance-based allocation of resources for water resilience.

139. The project places strong emphasis on gender equality and social inclusion. Women, youth, Indigenous Muisca communities, community-managed water providers, and other vulnerable groups are explicitly targeted for tailored capacity building, leadership roles in local governance arrangements, and access to climate resilient income opportunities. This strengthens SDG 5 on gender equality and SDG 10 on reduced inequalities, while improving the effectiveness and legitimacy of adaptation measures and water resilience investments in the Bogotá Region. By embedding safeguards, inclusive participation, and shared benefits throughout implementation, the project contributes to a more equitable and sustainable development trajectory that aligns climate resilience with broader social and economic objectives.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

140. Climate change is already amplifying water scarcity, floods, landslides, and socio-environmental tensions in the high mountain rural areas and supplying watersheds. Rapid urban growth, informal settlements, and degradation of strategic ecosystems have increased exposure to climate hazards for low- income populations, particularly in downstream urban and peri-urban areas and in upstream municipalities that depend heavily on climate sensitive agriculture and livestock. These dynamics disproportionately affect women, youth, and Indigenous Muisca communities, whose livelihoods and care responsibilities are closely tied to land, water, and local ecosystems, and who frequently have less access to information, finance, and decision-making spaces.

141. The project responds directly to these needs by targeting high risk rural watersheds where climate hazards, ecosystem degradation and poverty overlap. It has a strong focus on vulnerable groups, including women, smallholder farmers, Indigenous Muisca communities, community-managed water providers, and low-income residents. Through restoration and conservation of high mountain ecosystems, climate resilient production systems, and improved community water management, the project reduces exposure and sensitivity to droughts, while strengthening the adaptive capacity of households and communities in priority watersheds. Gender responsive approaches in capacity building, governance, and benefit sharing are embedded to address structural gaps in access to resources, services, and leadership roles.

142. Economically and socially, the intervention area includes high mountain and rural communities characterized by high dependence on conventional potato and dairy systems, which have low profitability, are high risk under changing climate conditions, and are often linked to ecosystem degradation. Many smallholders face poverty, restricted access to credit, limited diversification options, and weak integration into higher value markets, which heighten their vulnerability to climate shocks. The project addresses these constraints by promoting climate resilient production models and diversified economic alternatives, alongside better market access and business models for rural producers, thereby reducing income vulnerability and social inequality while lowering pressure on strategic headwaters.

143. There is also a pronounced gap in financing for adaptation and ecosystem restoration in the high mountain territories that supply Bogotá. While public and private investments flow to grey infrastructure and urban development, financing for watershed restoration, climate resilient rural transformation, and nature-based water resilience measures remain limited, fragmented, and largely inaccessible to smallholders and local governments. The project provides concessional grant resources where finance is scarce and risk is high, ensuring that vulnerable communities do not incur additional debt to meet basic adaptation and ecosystem conservation needs. At the same time, it invests in the methodologies and institutional arrangements needed to operationalize tariff based and private investment mechanisms for Volumetric Water Benefits, helping to close the structural adaptation finance gap over the medium term.

144. Finally, the project responds to a critical need to strengthen institutional capacity for integrated, climate resilient water and land management across jurisdictions and sectors. It builds capacities of local and regional authorities, watershed level actors, producer associations, and community groups to implement watershed interventions, use hydrological and climate information, and manage multi stakeholder processes, all of which are essential for sustaining and scaling adaptation benefits beyond the project's duration and for protecting the water security and development prospects of the Bogotá Region's most vulnerable populations.

D.5. Country ownership (max. 500 words, approximately 1 page)

145. The project is strongly country driven and anchored in Colombia's climate and development policy framework, which prioritizes water security, ecosystem conservation, and resilient territorial development. It aligns with Colombia's updated NDC, which includes ambitious mitigation and adaptation targets in water resources, agriculture, and ecosystems, and with the National Adaptation Plan, which identifies water resources and high mountain ecosystems as priority adaptation areas. The intervention is also consistent with the long-term climate strategy and with national water, biodiversity, and territorial development policies that emphasize integrated management of strategic ecosystems and climate resilient water governance.

146. The project responds directly to Colombia's GCF country programme, which prioritizes climate resilient water management, nature-based solutions, and integrated territorial approaches, and recognizes the Bogotá Region as a strategic landscape for climate action and economic competitiveness. It contributes to the implementation of national measures on water resources, ecosystem restoration, and climate smart rural development, and is aligned with priorities to reduce vulnerability in key economic hubs that generate a substantial share of GDP and host a large proportion of the population. By focusing on watershed restoration, climate resilient productive systems, and water resilience financing mechanisms in high mountain areas, the project complements and builds on other national and regional adaptation initiatives.

147. Country ownership is further demonstrated by the leadership and engagement of key national and regional public entities, including the Ministry of Environment and Sustainable Development, Empresa de Acueducto y Alcantarillado de Bogotá, regional environmental authorities, and district and municipal governments in the Bogotá Region. These institutions bring mandates and experience in water management, ecosystem conservation, agricultural innovation, territorial planning, and climate policy implementation, ensuring that project interventions are embedded in existing public programs and budgetary frameworks. The National Designated Authority plays a central role in endorsing the project, aligning it with Colombia's GCF strategy, and coordinating inter institutional arrangements to secure long-term ownership and sustainability.

148. The project builds on demonstrated national experience and lessons from prior investments in the Bogotá Region landscape, including initiatives on climate impacts in water regulation and supply implemented by the Ministry of Environment with Conservation International and other partners. National and local partners involved in the current proposal have proven capacity in ecosystem-based interventions, watershed restoration, and climate resilient production systems, with robust safeguards, gender responsive approaches, and participatory governance. Their track record, combined with the operational capacity of the Bogotá water utility and regional authorities, provides a solid basis for effective implementation and scale up.

149. Finally, the project has been shaped through engagement with civil society organizations, academia, and community-based actors, including women's associations, Indigenous Muisca communities, producer organizations, and NGOs active in water, climate, and green infrastructure agendas. These stakeholders will participate in implementation and governance arrangements, in co-design of watershed interventions, and in monitoring and learning processes, ensuring that the project reflects local knowledge, responds to the priorities of women and other vulnerable groups, and strengthens social ownership of climate resilient water management in the Bogotá Region.

D.6. Efficiency and effectiveness (max`. 500 words, approximately 1 page)

150. GCF grant resources are used strategically to finance those elements of the watershed transformation model that are essential for demonstrating climate impact but remain too risky or insufficiently remunerated to attract commercial or routine public finance. Grants primarily support large scale restoration and conservation of strategic high mountain ecosystems, farm level conversion to climate resilient production systems, and improvements in community run water systems under Outputs 1.1 and 1.2, as well as the development and testing of financing instruments and mechanisms under Output 2.1. This avoids crowding out existing

investments in grey infrastructure, which will continue to be funded through national and local budgets, while enabling a complementary portfolio of watershed-based adaptation measures that would otherwise remain under funded or unrealized.

151. The project design reflects strong cost effectiveness considerations. It concentrates interventions where hydrological benefits per unit of cost can be maximized during the implementation period, focusing on priority supplying watersheds with high potential for reductions in runoff, improved baseflow regulation, and reduced sediment loads. By targeting restoration and productive transformation in these areas, the project is expected to generate measurable improvements in water regulation and quality, which translate into avoided water treatment costs and lower stress on downstream infrastructure, as reflected in the project's co-benefit indicators for economic cost savings and carbon sequestration ($tCO2_e$) associated with ecosystem restoration.

152. Efficiency and effectiveness are further enhanced by the project's emphasis on verifiable hydrological outcomes. Avoided or reduced runoff is the main project indicator of strengthened water resilience and is expressed through Volumetric Water Benefits that capture the combined effects of ecosystem restoration, conservation, and climate resilient productive practices on infiltration, retention, and baseflow stability. This approach allows interventions to be spatially prioritized and calibrated based on expected hydrological returns and provides the evidence base needed to compare natural infrastructure portfolios with grey-only options in terms of lifecycle costs and resilience outcomes.

153. The project's efficiency is also reflected in its financing architecture. Component 2 uses limited GCF grant resources to define and validate methodologies for demonstrating the cost effectiveness of watershed investments, establish systematic reporting on hydrological outcomes, and operationalize tariff based and private investment mechanisms that support watershed interventions and rely on the quantification and verification of VWBs. Once demonstrated, these mechanisms are expected to mobilize recurrent public and private resources to continue and expand activities under the watershed transformation model, thereby increasing the ratio of climate benefits per unit of concessional finance over time and enhancing the project's leverage effect beyond the initial co-financing.

154. Technically, the project applies best available practices for watershed restoration, climate resilient productive systems, and community water efficiency measures, informed by prior experience in the Bogotá Region and by hydrological and economic analyses that support the selection and targeting of interventions. Implementation will be guided by monitoring systems and methodologies that quantify hydrological improvements through VWBs, ensuring that adaptive management can redirect resources toward the most cost-effective measures during the project and that decision makers have robust data to justify continued investment afterward.

155. Overall, the combination of spatially targeted interventions, evidence-based metrics, and a clear pathway from grant funded demonstration to sustainable long-term financing of future watershed interventions through tariff-supported investments and voluntary private-sector contributions provides a strong basis for efficiency and effectiveness in the use of GCF resources.

The Economic and Financial Analysis (EFA) demonstrates that the project delivers strong aggregate economic returns that significantly exceed Colombia's social discount rate (SDR) of 6.4% set by the Departamento Nacional de Planeación (DNP). The project, as a whole, generates sufficient economic benefits to justify investment, bringing sufficient benefits to Bogota's economy and it's society, and it also targets highly vulnerable people to climate change. The project lacks sufficient revenue streams to allow for financial solvency. However, with the support of the GCF concessional finance, the project demonstrates a cost-effective intervention for delivering results to farmers and the EAAB. *Table 2 Summary results from EFA (for details see Annex 3)*

Indicator	Output 1.1 Restoration & Conservation	Output 1.2 Agric. Transformation	Output 2.1 Financial Mechanism	Whole Project
EIRR	24.25%	18.50%	21.32%	19.84%
ENPV (at 6.4% SDR)	USD 47.6M	USD 37M	USD 11.65M	USD 91.7M
FIRR -Without GCF	3.93%	11.44%	10.83%	7.93%

FNPV (at 12.28% WACC) Without GCF	(USD 11.5M)	(USD 1.7M)	(USD 544,005)	(USD 17.5M)
FIRR -With GCF	8.81%	26.03%	19.06%	15.77%
FNPV – With GCF	(USD 3.5M)	USD 14.9M	USD 1.7M	USD 9.3M
Benchmark (SDR / WACC)	EIRR > 6.4% ✓ Econ FIRR < 12.28% **X** Fin	EIRR > 6.4% ✓ Econ FIRR >12.28% ✓Fin	EIRR > 6.4% ✓ Econ FIRR < 12.28% **X** Fin	EIRR > 6.4% ✓ Econ FIRR < 12.28% **X** Fin
Assessment	Economically viable; requires grant support	Economically viable; financially viable for farmers with support from GCF	Economically viable, with expected self-sustaining growth	Economically strong; grant required

C.

*This section refers to the project/programme's logical framework in accordance with the **GCF's Integrated Results Management Framework** to which the project/programme contributes as a whole, including in respect of any co-financing.*

E.1. Project/Programme Focus

Please indicate whether this proposal is for a mitigation or adaptation project/programme. For cross-cutting proposals, select both.

☐ Reduced emissions (mitigation)

☒ Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential (max 600 words, approximately 1-2 pages)

156. The project has strong paradigm shift potential because it changes how the Bogotá-Region designs, finances and manages water resilience, moving from fragmented, short-term projects to an integrated, ecosystem-based and finance-ready watershed transformation model that will lead to hydrological benefits that ultimately increase water resilience and benefit downstream populations in the Bogota Region and City, This model is built around verifiable Volumetric Water Benefits (VWBs) and combines strategic restoration and conservation of High Andean ecosystems, climate resilient productive systems and innovative financial instruments into a coherent package that can be demonstrated in 4 priority landscapes and then scaled up. The model has been designed to operate within existing Colombian regulatory frameworks and corporate water stewardship approaches, thereby enhancing its likelihood of successful implementation, as no legal or regulatory adjustments are required. The project functions as a catalyst, mobilizing both public and private finance within a structure that maximizes synergies and complementarities while opening the pathway for long-term systemic change.

157. Through Component 1 and Outputs 1.1 and 1.2, the project mainstreams ecosystem-based adaptation into watershed management by proving that targeted conservation and restoration in headwaters and riparian zones, together with climate resilient agroecological and silvopastoral systems and diversified agrifood systems, leads to more resilient livelihoods and local water supply systems. This shifts institutional practice away from isolated conservation and farm support projects towards basin scale, evidence-based management, supported by ecohydrological planning, systematic monitoring of avoided/reduced runoff (the core impact indicator) and producer associations and value chains that reward water friendly production.

158. At the same time, the project tackles some of the key structural financing barriers that have prevented such approaches from reaching scale, in line with Outcome 2 and Output 2.1. Component 2 operationalizes an environmental investment component in the Bogotá Water Utility tariff and a long-term continuity financing mechanism for watershed transformation and stewardship investments, supported by the quantification and verification of hydrological benefits through VWBs, and aligns them with existing obligations such as mandatory municipal allocations to strategic water areas and corporate compensation and stewardship targets, thereby creating clear financing pathways for investments the watersheds of the Bogota Region beyond GCF support.

159. The paradigm shift is reinforced by the project's focus on locally led climate action that drives ownership and social inclusion, as well as data driven decision making embedded in the theory of change. Landowners, communities, producer organizations and local water operators become co-implementers of restoration and productive transformations and key providers of monitoring data that feed into VWB-based hydrological assessment and systematic reporting to authorities, helping normalize community-based monitoring and shared stewardship as standard practice. Capacity building for landowners, associations, protected area

managers and utility staff, combined with the creation of tools and replication models, ensures that the watershed transformation model is not a one-off pilot but a new operating model for public and private actors in the Bogotá-Region.

160. Finally, impact, outcomes, outputs and activities are all defined and monitored in terms of their contribution to improving watershed resilience, generating measurable hydrological benefits quantified through VWBs, improving livelihoods, and operationalizing sustainable financing pathways, so that successful implementation in the initial watersheds provides a robust blueprint for other basins in Colombia and the wider Andean region.

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	Watershed NbS and productive transformation for water resilience are implemented through scattered, small pilots with limited proof of hydrological results, no standardized VWB metric, and fragmented, short-term public funding, leading to minimal replication or private sector engagement in the Bogotá-Region	Low	A tested watershed transformation model links quantified hydrological benefits to regulatory water-tariff fees and private stewardship/compensation commitments, enabling upscaling of the model approach across additional Bogotá-region watersheds and crowding-in long-term public and private finance that far exceeds the initial GCF grant	The project proves at scale that combined restoration, conservation and productive practice transformation generate hydrological benefits, these metrics are used to enable an environmental investment component in the water tariff and in a dedicated private investment mechanism. The project develops replication models and tools so that other utilities, municipalities and companies can finance and adopt the watershed transformation model beyond the initial intervention area.
Replicability	Existing NbS and watershed interventions are highly context-specific pilots, with no standardized VWBs metric, no replication models for other utilities, and	Low	A standardized watershed transformation model, built around VWBs, regulatory tariff instruments and a private investment mechanism, is packaged with replication models, tools and reporting protocols that can be readily adopted by other water utilities, municipalities and	The project generates robust VWB evidence, develops automatic tools for spatial prioritization and VWB monitoring, institutionalizes systematic reporting, and explicitly designs replication models for other water utilities and private investors, thereby lowering transaction costs and technical barriers for replication of the watershed transformation and financing model.

	limited institutional capacity to systematically replicate or scale investments in water resilience beyond the initial Bogotá-region sites		companies in additional Bogotá-region and Colombian watersheds.	
Sustainability	Watershed NbS and productive transformations depend on short-term, project grants, with no stable linkage to water tariffs or private stewardship finance, leaving conservation, restoration and resilient production measures vulnerable to funding gaps once external projects end in the Bogotá-Region	Low	A financially sustainable watershed transformation model is in place where additional investments are made through an environmental investment component embedded in the water tariff and a long-term private investment mechanism, enabling continued implementation, maintenance and expansion of ecosystem restoration, conservation and climate-resilient production beyond the GCF implementation period.	The project uses grant finance to generate robust evidence on hydrological outcomes quantified through Volumetric Water Benefits (VWBs), structure and test the tariff-based environmental investment component and the private VWBs mechanism and establish reporting protocols and tools needed to support long-term investment decisions. Following project completion, the continued operation, maintenance and expansion of the watershed transformation model are expected to be supported through future tariff-funded environmental investments and voluntary private-sector stewardship contributions, enabling the continuation and scaling of watershed interventions beyond the GCF project period.

E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

GCF Result Area	IRMF		Baseline	Target	Assumptions / Note

	Indicator	Means of Verification (MoV)		Mid-term	Final[17]	
Total project beneficiaries without overlap	Core 2: Direct and indirect beneficiaries reached	Vulnerability assessments, project beneficiary database, socioeconomic baseline and endline surveys; activity participation records; PES beneficiary registries; training attendance lists (all disaggregated by gender, age, ethnicity)	0	Direct: 602,677 (51% women) 301,338 women Indirect: 1,416,760 (51% women) 708,380 women	Direct: 3,013,383 (51% women) 1,536,825 women Indirect: 7,083,799 (51% women) 3,612,738 women	-Beneficiaries apply across all result areas (ARA 1, ARA 2, ARA 4) -See Annex 24 (Beneficiary calculation methodology)
ARA1 Most vulnerable people and communities	Core 2: Direct and indirect beneficiaries reached	Vulnerability assessments, population census, field surveys, project reports	0	Direct: 602,677 (51% women) 301,338 women Indirect: 1,416,760 (51% women) 708,380 women	Direct: 3,013,383 (51% women) 1,536,825 women Indirect: 7,083,799 (51% women) 3,612,738 women	Population that benefits from reduced/avoided runoff and less sediment in water (29% of population with water served by EAAB corresponding to North System) See Annex 24 (Beneficiary calculation methodology)
ARA1 Most vulnerable people and communities	Supplementary 2.1: Beneficiaries (female/male) adopting	Vulnerability assessments; project coverage analysis	0	Total: 998 Women: 500	Total: 4,992 Women: 2,496	Vulnerable populations are prioritized with livelihoods

[17] The final target means the target at the end of project/programme implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.

	improved and/or new climate-resilient livelihood options	(disaggregated by gender)				that include transformation of productive practices
ARA2 Health, well-being, food and water security	Core 2: Direct and indirect beneficiaries reached	Project beneficiary database, socioeconomic baseline and endline surveys; activity participation records; PES beneficiary registries; training attendance lists (all disaggregated by gender, age, ethnicity)	0	Direct: 998 (50% women) 500 women Indirect: 59,547 30,815 women	Direct: 4,992 (50% women) 2,496 women Indirect: 297,737 154,079 women	Communities maintain engagement; beneficiaries can be identified and tracked; disaggregation data is collected systematically (Assumption for direct beneficiaries: A total of 1,248 farms are considered, each with an average household size of four inhabitants, undergoing transformation of their productive practices) (Assumption for indirect beneficiaries: Population residing in prioritized watersheds where all the Activities are taking place.)
ARA2 Health, well-being, food and water security	Supplementary 2.3: Beneficiaries (female/male) with more climate-resilient water security	Reports from municipal water supply systems, project reports	0	Total: 33,415 17,041 women	Total: 167,078 85,518 women	Population residing in the main areas of selected municipalities, whose water supply is sourced from intakes located within prioritized watersheds.
ARA4 Ecosystems and ecosystem services	Core 2: Direct and indirect beneficiaries reached	Population census, field surveys, project reports	0	Direct: 15,895 7,948 women Indirect: 59,547	Direct: 79,475 39,738 women Indirect: 297,737	Direct: Volumetric Water Benefits can be conservatively translated into equivalent beneficiaries using a 37 m³/person/year benchmark for the Bogotá Region

				30,815 women	154,079 women	Indirect: Population residing in prioritized watersheds where all the Activities are taking place.
ARA4 Ecosystems and ecosystem services	Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice	Satellite imagery analysis; implementation reports; field verification surveys; restoration monitoring reports	0	482 ha	2,409 ha	All Activities 1.2.2 are implemented
ARA4 Ecosystems and ecosystem services	Supplementary 4.1: Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought under resoration and/or improved ecosystems	Management area mapping; implementation reports; field monitoring	0	2,500 ha	7,165 ha	All activities 1.1.1 and 1.1.2 are implemented

E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Core Indicator	Baseline context (description)	Rating for current state (baseline)	Target scenario (description)	How the project will contribute	Coverage
Core Indicator 5: Degree to which GCF investments contribute to strengthening institutional and	Existing Colombian regulations (e.g. CRA 907/2019, Law 99/1993 Art.111 as updated by Law 2320/2023, Law	medium	A tested, operational framework is in place in the Bogotá-Region where: the water utility incorporates an environmental investment	Through Outcome 2 and Output 2.1, the project designs, pilots and institutionalizes an environmental investment	Single sub-national area within a country

regulatory frameworks for low emission climate-resilient development pathways in a country-driven manner	2173/2021) allow environmental investment components and NbS investments, but they are under-utilized, not operationalized around VWBs, and there is no tested model for utilities and municipalities to systematically finance watershed NbS for climate resilience.		component in the water tariff for VWBs; municipalities program their mandatory environmental budgets into NbS in priority watersheds; and these instruments are governed by clear rules, MRV and reporting protocols that can be replicated nationally	component in the water tariff and public-budget pathways for VWBs, defines VWB-based MRV and reporting methodologies, and develops replication models for other utilities, thereby strengthening and “activating” existing institutional and regulatory frameworks for climate-resilient development	
Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation	Existing decision-making uses fragmented hydrological data and conventional engineering tools; there is no integrated, VWB-based digital toolkit for spatial prioritization, monitoring and reporting of watershed NbS investments that can support regulatory processes and private finance decisions	medium	An integrated set of digital tools and methodologies for VWB quantification, spatial prioritization, monitoring and reporting is deployed and used by the Bogotá Water Utility, public authorities and the VWBs mechanism, and packaged for dissemination to other basins and utilities.	The project develops and calibrates VWB methodologies and automatic tools for spatial prioritization and monitoring (Activities 2.1.1.1 and 2.1.2.1), deploys them in target watersheds, and embeds their use in tariff-setting, municipal planning and private investment decisions, thus enabling the systematic use and scaling of innovative climate-relevant decision-support technologies	Single sub-national area within a country
Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	Lessons from NbS and climate-resilient production in the Bogotá-Region are scattered across projects; there is no unified VWB-based knowledge framework, no standardized	medium	A coherent knowledge and learning system is in place, with standardized VWB methodologies and guidelines, documented watershed transformation models, and structured processes for sharing lessons, tools and	The project generates robust VWB and livelihood evidence under Outcome 1, codifies methodologies and tools into practical guidelines and replication models, and uses multi-stakeholder platforms, reporting to authorities and targeted outreach to utilities	Multiple sub-national areas within a country

	methodologies adopted by regulators and utilities, and limited mechanisms for systematic learning and dissemination at basin, regional or national levels.		standards with utilities, authorities and private actors in the Bogotá-Region and beyond.	and companies to disseminate good practices and standards, embedding learning into ongoing policy and investment processes.	

E.5. Project/programme specific indicators (project outcomes and outputs)						
Project/programme results (outcomes/ outputs)	**Project/programme specific Indicator**	**Means of Verification (MoV)**	**Baseline**	**Target**		**Assumptions / Note**
				Mid-term	**Final**	
Outcome 1. Watershed Transformation Model proved to achieve the highest Hydrological Benefits	Volume of avoided or reduced runoff (Volumetric Water Benefits – VWBs) generated annually in priority watersheds supplying the Bogotá Water Utility	Hydrological and ecohydrological modelling reports; VWB accounting system outputs; independent technical verification reports	0 m³/year of VWBs formally quantified and reported for the selected watersheds	0 (No change the VWB will be estimated upon completion of the project)	2,940,584 m³/year of VWBs generated[18] (disaggregated by watershed and intervention type See Annex 24)	Accounting methods are robust; verification is credible; outcomes are measurable (See Annex 2, Section 7.1.6 for methodology and disclaimers, and Annex2 Appendix 5 excel for VWB calculations)
Output 1.1 Strategic High Andean ecosystems restored and conserved to yield hydrological benefits	Hectares of High Andean ecosystems restored and conserved under VWB-oriented management in prioritized watersheds	Project monitoring system; GIS/remote sensing analyses; field verification reports; agreements with landholders and PAs	0 ha	3500 ha conserved, restored and transformed under VWB-oriented management	26,071 ha conserved, restored and transformed under VWB-oriented management	Activity 1.1.1 and 1.1.2. This includes all interventions in protected areas public, private, and farms.

[18] The guidelines used to quantify Volumetric Water Benefits (VWBs) for the activities proposed under this project are based on a modeling approach. As such, they are subject to inherent limitations in fully representing real-world hydrological conditions and outcomes. The VWB estimates presented at this proposal development stage are preliminary and are intended solely to provide an indicative range of potential benefits for the region of analysis. These estimates should be interpreted as illustrative rather than definitive. If the defined area of interest or underlying assumptions change, the estimated range of potential VWBs is also likely to change. Credible and realistic VWB estimations can only be generated once specific activities are implemented at clearly defined locations, using site-specific data. During project implementation, VWBs will be re-estimated to reflect actual implementation conditions. In addition, more precise and reliable VWB estimates can only be obtained through the deployment of hydrology-specific monitoring plots and field-based measurements, which allow modeled results to be validated and refined based on observed data. Conditional to dedicated investment on monitoring, VWBs can therefore be re-estimated once monitoring systems are in place during project implementation.

Output 1.2 Climate-resilient transformation of productive practices to yield hydrological benefits and resilient livelihoods.	Number of farms adopting at least one climate-resilient, transformation of production practices (e.g. agroecological, silvopastoral, efficient water use) in prioritized watersheds	Farm-level monitoring; producer association records; project surveys; technical assistance reports	0 farms	481 ha with climate resilient transformation of productive practices	1,248 farms adopting at least one climate resilient transformation of productive practices	Activity 1.2.1
Outcome 2. Finance to replicate and scale the watershed transformation model	Volume of private finance committed to and disbursed for water investments in the Bogotá-Region (USD)	VWBs mechanism records; co-financier reports	4 million USD of private sector finance	USD 4 million of private sector finance	USD 9 million of private finance committed	Baseline is calculated by the current cofinancing of private sector actors into the project. There is no intermediate target as additional funding will start flowing after the financial mechanism is operational in year 4. The target of USD 5 million represents the amount of additional private-sector financing expected to be mobilized and channeled through the mechanism during the GCF project implementation period. As the mechanism is designed to operate beyond the lifetime of the project, it is expected to continue

						mobilizing additional private-sector resources after project completion, further supporting watershed stewardship activities, landscape expansion, and the long-term sustainability of the Watershed Transformation Model.
Output 2.1 Financing instruments and mechanisms for scaling water volumetric benefits	Operationalization of an environmental investment component in the water tariff	Utility tariff schedules;	No tariff-based environmental investment component	No tariff-based environmental investment component implemented yet (year 4)	Environmental investment components in force and generating revenues	Tariff structure in final water user receipts includes an environmental investment component, collection mechanism function; investments are transparent.
Project/programme co-benefit indicators						
Co-benefit 1	Number of hectares with enhanced ecological connectivity and secure migratory pathways for endemic flora and fauna, evidenced by increased presence of stable populations of target endemic and migratory species in monitoring sites	Georeferenced maps of restored and conserved areas (GIS, remote sensing); project restoration and conservation implementation reports; biodiversity monitoring reports	0	2,500 ha of restored and/or conserved habitats contributing to ecological connectivity	7,165 ha of restored and/or conserved habitats contributing to ecological connectivity	Land tenure and use rights allow long-term conservation and restoration in priority areas; monitoring protocols and sampling effort are sufficient to detect meaningful changes in species populations and connectivity; no major external drivers (e.g. large new infrastructure) sever

						key corridors outside project control
Co-benefit 2	Annual value of avoided water treatment costs at drinking water treatment plants, attributable to the implementation of NbS measures	Water quality monitoring data upstream of drinking water treatment plants; treatment plant operational and financial records (energy use, chemical inputs, sludge disposal, O&M costs); cost–benefit/economic analysis reports quantifying avoided costs linked to observed water quality improvements in project-influenced catchments.	0	USD 382,703	USD 749,127 per year in avoided water treatment costs across priority drinking water treatment plants, attributable to project-supported NbS in the supplying sub-basins.	Treatment plants keep reliable cost and process records and are willing to share data for analysis; no major change in treatment standards or technologies occurs that would mask or dominate NbS-driven cost changes. (See Annex 3 for methodology)
Co-benefit 3	Total carbon sequestered in biomass and soils attributable to project-supported restoration and conservation of high Andean forests, *páramos* and wetlands	Field measurements (permanent plots, biomass inventories, soil sampling); allometric equations and carbon models applied to restored and conserved areas by ecosystem type; remote sensing and GIS data to track land-cover change and permanence of restoration/conservation ; documentation of methods and parameters consistent	0	0 (No change the carbon sequestered will be estimated upon completion of the project)	158,203 tCO_2e of carbon sequestered in biomass and soils attributable to restoration and conservation	Restoration and conservation areas are protected against major reversals (fire, deforestation, drainage) during and after the project; selected carbon accounting approach (activity data, emission factors) is approved by relevant national authorities and aligned with IPCC good practice; growth and soil carbon accumulation rates

		with IPCC or other recognized standards.				used are conservative and based on local or regionally appropriate data. (See Appendix in Annex 2 for methodology)

E.6. Project/programme activities and deliverables

Activities	Description	Sub-activities	Deliverables
Activity 1.1.1. Conserve high Andean ecosystems.	This activity will conserve native High Andean ecosystems to prevent degradation of natural ecosystems that are threatened with conversion to other land use in Protected Areas and private lands. Executing Entities and Partners **1.1.1.1.** EE: CI-Col Implementing partners: IaVH (Subgrantee), CAR (co-financier), CORPOGUAVIO (co-financier). Other: local consultants. **1.1.1.2.** EE: Fondo Acción. Implementing partners: SDA (co-financier), EAAB (co-financier) and Gobernación de Cudinamarca (co-financier). Other: local consultants.	**1.1.1.1.** Implement control and surveillance, monitoring and climate training in Protected Areas **1.1.1.2.** Reduce ecosystem loss through conservation agreements and payments for landowners	**1.1.1.1** Control and surveillance reports, monitoring reports and climate training certificates and RNCS registrations to achieve conservation of 26,071 ha. **1.1.1.2** Conservation payments made for a minimum of 650 landowners to achieve 4,756 ha conserved.
Activity 1.1.2 Restore high Andean ecosystems.	This activity will recover and rehabilitate native High Andean ecosystems that have been already impacted by land use changes and unsustainable productive activities and that require dedicated	**1.1.2.1** Implement passive restoration of moderately degraded lands allowing natural regenerative processes	**1.1.2.1** and **1.1.2.2.** Restoration plans and monitoring reports to achieve 2032 ha restored.

	treatments to reestablish infiltration, soil-water retention and baseflow regulation on which local and downstream water security depends. Executing Entities and Partners Same for both sub activities: EE: CI-Col Implementing partners: -SDA (co-financier), EAAB (co-financier), CAR (co-financier), CORPOGUAVIO (co-financier), Coca Cola Foundation (co financier), Ab Inbev (co-financier), -local organizations (subgrantees) and landowners will be identified according to eligibility criteria specified in Annex 26. Grants Manual. Other: local consultants.	**1.1.2.2.** Implement active restoration of highly degraded lands	
Activity 1.2.1 Implement climate-resilient production systems at farm level	This activity will focus on implementing farm level interventions that combine productivity with improved hydrological performance to increase infiltration, soil water retention, drought buffering and family wellbeing at the plot and farm scale. Executing Entities and Partners Same for both sub activities: EE: CI-Col Implementing partners: -EAAB (co-financier), Coca Cola Foundation (co financier), Ab Inbev (co-financier) -local organizations (subgrantees) and landowners will be identified according to	**1.2.1.1.** Implement silvopastoral systems in place of traditional dairy production **1.2.1.2.** Implement agroecological practices in traditional potato production systems **1.2.1.3.** Implement efficient use and water saving at farm level **1.2.1.4.** Implement and diversify agrifood systems	**1.2.1.1** Climate-Resilient Farm Agreements, Plans and monitoring reports to achieve 1248 farms under silvopastoral systems. **1.2.1.2** Climate-Resilient Farm Agreements, Plans and monitoring reports to achieve 1248 farms incorporating agroecological practices in their productive systems. **1.2.1.3** Climate-Resilient Farm Agreements, Plans and monitoring reports to achieve 1248 farms

	eligibility criteria specified in Annex 26. Grants Manual. Other: local consultants.		incorporating efficient use and water saving measures. **1.2.1.4** Climate-Resilient Farm Agreements, Plans and monitoring reports to achieve 1248 farms under climate resilient production systems implementing measures to diversify their production systems.
Activity 1.2.2 Commercialization and opening of markets that value rural products that contribute to water regulation	This activity will support producer associations and local organizations, whose affiliated producers are already implementing climate-resilient production practices in selected watersheds to commercialize rural products and access markets with the objective of creating new economic opportunities that enable producers to generate income while maintaining production practices that contribute to water regulation, climate adaptation, and landscape resilience. Executing Entities and Partners Same for both sub activities: EE: Fondo Acción Subgrantees: local organizations and producer associations will be identified according to eligibility criteria specified in Annex 26. Grants Manual. Other: local consultants.	**1.2.2.1.** Develop business models for climate-resilient production systems. **1.2.2.2.** Implement commercialization and market access initiatives through producer associations	**1.2.2.1** Business models in place with identified potential product opportunities to commercialize and bring to markets for 30 local organizations **1.2.2.2** Annual accounting reports from local producer associations' with at least 16% of income increase; new contracts with 20 new buyers
Activity 1.2.3. Implement efficient water use measures efficiency in community-run water supply systems in prioritized watersheds	This activity focuses on reducing Non-Revenue Water (NRW) and optimizing resource use within community-managed water systems to enhance both service reliability and drinking-water quality. By	**1.2.3.1.** Install macro-metering and upgrade community-run water supplies systems to cut losses.	**1.2.3.1** 40 community-run supply systems with macro-metering installed (reports)

	prioritizing the installation of macro-metering equipment alongside operational practices that increase water-use efficiency, the project enables the accurate quantification of water flows to generate measurable savings through NRW reduction, directly addressing climate-related variability in water availability. The expected outcome is a resilient water service that minimizes physical losses through rigorous NRW management and reduces health risks for rural populations. Executing Entities and Partners Same for both sub activities: EE: Fondo Acción Subgrantees: community-run water supply systems will be identified according to eligibility criteria specified in Annex 26. Grants Manual. Other: local consultants.	**1.2.3.2** Apply efficient water use practices in water supply community-run systems **1.2.3.3.** Implement drinking-water treatment in water supply community-run systems	**1.2.3.2** 40 community-run supply systems with systematic quality monitoring, and operational protocols for Non-Revenue Water (NRW) reduction reporting **1.2.3.3** 40 community-run supply systems with drinking-water treatment and systematic water quality monitoring (reports)
Activity 2.1.1 Incorporate an environmental investment component to the water tariff	The Bogotá Water Utility will operationalize and test the recovery of environmental investments in the protection of watersheds and headwaters that supply the city through the water tariff. The ultimate objective is converting one-off watershed investments into a recurrent, utility-anchored funding source tied to EAAB's service mission. Executing Entities and Partners Same for both sub activities: EE: CI-Col Implementing partners: EAAB (co-financier), TNC (subgrantee)	**2.1.1.1.** Define and validate indicators and methodologies to demonstrate the cost-effectiveness of water-resilience investments. **2.1.1.2.** Implement systematic reporting for authorities that measure investments effectiveness in hydrological outcomes. **2.1.1.3.** Develop replication models for other water utilities.	**2.1.1.1** Indicators and methodology framework, EAAB's investment portfolio, and cost-effectiveness report to achieve an environmental investment component reflected in the water tariff. **2.1.1.2** Annual reports on indicators that support the cost-effectiveness of the environmental investment component of the water tariff **2.1.1.3** A replication model package with (i) a regulatory and institutional roadmap (ii) a financial

	Other: local consultants.		model (iii) a methodological annex; and (iv) a monitoring and reporting framework aligned with CRA and SSPD requirements.
Activity 2.1.2 Operationalize a long-term financial mechanism for private investments	This activity will develop and operationalize a long-term financial mechanism to direct private-sector investments into the watershed transformation model, enabling companies to finance prioritized interventions that generate measurable and verified Volumetric Water Benefits (VWBs). Executing Entities and Partners EE: Fondo Acción for all sub activities. **2.1.2.1** Implementing partners: TNC (subgrantee). Other: WRI (consultancy). **2.1.2.2** Other: local consultants.	**2.1.2.1.** Develop automatic tools for spatial prioritization of investments, monitoring and quantification of water volumetric benefits **2.1.2.2.** Establish the operational and financial structure of the mechanism .	**2.1.2.1** Automatic for spatial prioritization of investments (Software, user manuals); automatic tool for estimation of VWB (Software, user manuals); prioritization maps and VWBs calculations. **2.1.2.2** Report on allocation of funds managed by the mechanism during the project's implementation period**;** signed commitments of at least USD 5 million and portfolio of interventions to be financed by end of the project implementation period.

E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

160. The project's Monitoring, Reporting and Evaluation (MRE) arrangements are detailed in the Monitoring and Evaluation Plan (Annex 11), which follows GCF IRMF templates and integrates GCF level impact and outcome indicators with project level outcomes, outputs and activities, including indicators on avoided/reduced runoff, Volumetric Water Benefits (VWBs), livelihoods, ecosystems, governance and finance mechanisms. For each indicator, the plan specifies data sources, collection methodologies, frequency, and indicative resource needs. Overall coordination of MRE will be led by a dedicated M&E specialist at CI Colombia, working with Fondo Acción, sub grantees, technical partners and relevant CI units, while partners will provide timely technical and financial reporting for aggregation into project level reporting and learning.

161. The key indicators presented in sections E2–E6, including the core impact indicator on avoided/reduced runoff and associated VWBs, will be monitored by the M&E specialist in coordination with partner organizations and specialized consultants, as needed. The specialist will be supported by experts on gender, safeguards and impact evaluation to ensure that data collection, analysis and reporting adequately capture gender differentiated and social inclusion outcomes and track the performance of the water resilience financing mechanisms developed under Output 2.1.

162. The monitoring system will combine geospatial, hydrological, technical, financial, and socioeconomic data. Territorial interventions will be tracked through georeferenced implementation records, field verification, and ecosystem and farm-level assessments. Water-system interventions will be monitored through operational indicators such as water saved through improved efficiency. Component 2 will be monitored through evidence on regulator-accepted reporting, structuring milestones, capitalization progress, and finance mobilized in USD. This approach follows Annex 2, Chapter 9, which emphasizes indicators that reflect real transformation in land, water, and finance rather than process proxies.

163. A central feature of the system is the use of Volumetric Water Benefits as the core hydrological performance metric linking the two components. As established in Annex 2, VWB functions as a measurement and decision-support tool that translates the effects of conservation, restoration, productive reconversion, and water-efficiency measures into volumetric hydrological outcomes. The VWB monitoring indicator will capture the modeled and progressively validated water benefits generated by Component 1 interventions, expressed in cubic meters per year, relative to a business-as-usual scenario. It will measure changes such as avoided runoff, improved infiltration, more stable baseflow, reduced sediment-related impacts, and water savings where relevant. The methodology combines baseline characterization, hydrological modeling, intervention-specific parameters, and field-based monitoring of key variables, while distinguishing project-driven changes from non-modifiable external factors such as climate variability. VWB will therefore serve both as an outcome indicator for Component 1 and as a core input for the reporting and financial justification required under Component 2.

164. Reporting will support both project management and external accountability. Implementing partners will submit periodic progress reports, while the consolidated MRE system will inform reporting to the GCF and, where relevant, to regulatory and supervisory authorities. Evaluation will be conducted through baseline, mid-term, and final assessments to determine progress, validate assumptions, assess sustainability, and confirm whether the project has demonstrated a replicable and financeable model for climate-resilient water security in the Bogotá Region. A Project Steering Committee, with participation of the NDA and key national and regional institutions, will meet at least annually to review progress reports and M&E findings, approve annual workplans and budgets, and address strategic implementation issues. Steering Committee discussions will be informed by consolidated monitoring data, including the performance of watershed interventions and financing pathways, and will guide adaptive management and corrective actions to ensure delivery of outcomes and contribution to the project's paradigm shift objectives.

165. CI GCF Agency staff, as Accredited Entity (AE), will continuously monitor the work of CI Colombia as Executing Entity (EE) through quarterly EE reports and regular coordination meetings to track progress against agreed deliverables. CI Colombia will prepare an Annual Performance Report summarizing annual results and progress for submission to the CI GCF Agency and will provide a final completion report at the end of the project.

166. The project will undergo an independent Interim Evaluation at mid-term, consistent with the GCF Evaluation Policy, to assess progress towards outcomes and outputs, identify course corrections, and examine the project's contribution to paradigm shift in enabling conditions using the IRMF three-point scale, with reference to expected changes described in section E4. An independent Final Evaluation at project completion will similarly assess delivery of planned results (including any adjustments after mid-term) and the project's contribution to paradigm shift in enabling conditions using the same IRMF scale.

D. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

Selected Risk Factor 1	**Delays in formalizing conservation arrangements and incentive mechanisms**	
Category	**Probability**	**Impact**
Legal	Medium	Medium
Description		
Delays in legal formalization of conservation agreements, reserve-related procedures and incentive mechanisms for priority ecosystems, especially under activities 1.1.1 and 1.1.2, may weaken permanence of restored and conserved areas and undermine the credibility of hydrological benefits needed to mobilize long-term finance.		
Mitigation Measure(s)		
Conduct early legal due diligence; develop standardized agreement and incentive templates; farm planning process and Grant Manual eligibility criteria, focusing initially on areas with clearer tenure and lower procedural complexity; establish a dedicated legal support function linked to activities 1.1.1 and 1.1.2; monitor both hectares intervened and status of agreements and procedures to demonstrate that VWBs are tied to durable management conditions.		

Selected Risk Factor 2	**Changes in political or regulatory priorities affecting water-resilience instruments**	
Category	**Probability**	**Impact**
Governance	Medium	High
Description		
Shifts in political priorities or institutional fragmentation may slow or block the implementation of the project's water resilience financing mechanisms, including the Environmental Investment Component and the Private Investment Mechanism, reducing approvals, co-financing and momentum for replication, even if technical evidence from Component 1 is strong.		
Mitigation Measure(s)		
Institutionalize the project´s water security rationale by emphasizing avoided treatment costs, hydrological benefits and long-term financing opportunities rather than relying on short-lived political sponsorship. Implement a structured engagement plan with water utilities, municipalities, the Water and Basic Sanitation Regulatory Commission (CRA), the Superintendence of Public Utilities (SSPD), business associations and other relevant authorities to strengthen institutional ownership across electoral cycles. Prioritize evidence generation, monitoring and reporting under Activity 2.1.1 to support implementation of the Environmental Investment Component through robust methodologies, accepted reporting protocols and credible hydrological evidence that informs regulatory decision-making and facilitates replication.		

Selected Risk Factor 3	**Insufficient financing for long-term sustainability and scale-up**	
Category	**Probability**	**Impact**
Financial	Medium	High
Description		
After GCF support, there is a risk that long-term financing for watershed transformation remains inadequate if the Environmental Investment Component and the Private Investment Mechanism do not materialize or underperform, leading to localized benefits without achieving the intended paradigm shift in water resilience finance.		
Mitigation Measure(s)		
Keep Component 2 at the center of implementation from the outset by advancing hydrological monitoring, cost-effectiveness analysis, replication models, investment prioritization tools, implementation of the Environmental Investment Component and operationalization of the Private Investment Mechanism in parallel with Component 1.		

Establish clear milestones and evidence thresholds for scale-up, including VWB evidence thresholds, tariff-readiness criteria, and milestones for operationalizing the Environmental Investment Component and the Private Investment Mechanism under Activity 2.1.2, to operationalize the exit strategy and support adaptive management.		
Selected Risk Factor 4 Weak social inclusion and unequal benefit distribution		
Category	**Probability**	**Impact**
Other	Low	Medium
Description		
Barriers to participation for women and vulnerable groups, and unequal access to benefits in rural landscapes, may reduce uptake of climate-resilient practices and ecosystem measures under activities 1.2.1–1.2.3, increase exposure to social risks (including GBV), and compromise both resilience outcomes and compliance with GCF standards.		
Mitigation Measure(s)		
Apply targeted beneficiary selection criteria and gender-responsive outreach; integrate practical measures to reduce participation barriers into productive transformation, market access and community water activities. Embed safeguards protocols in all community-facing work. Track not only participation numbers but also decision-making influence, access to assets/training and benefit uptake by women and vulnerable groups, and use this information to adjust implementation.		
Selected Risk Factor 5 Resistance to changing productive practices		
Category	**Probability**	**Impact**
Other	Medium	Medium
Description		
Farmers and producer organizations may be reluctant to adopt sustainable production practices and associated business models, limiting implementation of Activities 1.2.1 and 1.2.2 and weakening the proof of concept that productive transformation can generate both VWBs and sustainable livelihood benefits within the project period.		
Mitigation Measure(s)		
Combine tailored technical assistance, incentives, and strong demonstration effects with improved market linkages; operationalize the connection between farm-level changes (Activity 1.2.1) and commercialization and market access (Activity 1.2.2) to make behavior change economically viable; prioritize early engagement with producer organizations and producers showing higher readiness and stronger market opportunities; use demonstration farms and peer learning to gradually reduce perceived risk among later adopters.		
Selected Risk Factor 6 Limited uptake of nature-based solutions and restoration actions		
Category	**Probability**	**Impact**
Technical and operational	Medium	Medium
Description		
Low uptake of restoration and conservation measures, or perceptions that restoration is less rewarding than productive investments, could reduce the scale of ecosystem interventions needed to generate visible VWBs in prioritized watersheds.		
Mitigation Measure(s)		
Frame restoration as part of an integrated water-benefit and livelihood package that supports farm resilience, local water security and future finance opportunities; ensure consistent messaging and visible local demonstrations; assign practical community roles in restoration where feasible; use simple local reporting and feedback loops to show hydrological results and associated opportunities.		
Selected Risk Factor 7 Failure to consolidate local water governance and service ownership		
Category	**Probability**	**Impact**
Technical and operational	High	Medium

Description		
Weak governance and O&M capacities in community-run water systems and local watershed bodies may prevent efficiency, infrastructure and governance improvements under activity 1.2.3 from translating into durable service and resilience benefits.		
Mitigation Measure(s)		
Integrate governance strengthening, O&M practices, basic asset management and user-level arrangements into activity 1.2.3 alongside technical upgrades; design watershed-level planning and participation mechanisms that clearly connect service improvements, ecosystem measures and future financing pathways; monitor functionality, governance performance and user participation and adapt support accordingly.		
Selected Risk Factor 8 Limited capacity of local implementing partners		
Category	**Probability**	**Impact**
Technical and operational	Medium	Medium
Description		
Limited technical, fiduciary and organizational capacity among local implementing partners may affect implementation quality, grant management, safeguards compliance and timely delivery of project activities, particularly where multiple organizations are responsible for implementation under Component 1.		
Mitigation Measure(s)		
Undertake structured institutional capacity assessments; provide differentiated technical assistance and simplified compliance tools; phase implementation support according to partner capacity; provide enhanced fiduciary, procurement, safeguards and reporting support where needed; and use standardized implementation manuals, templates and supervision arrangements throughout project implementation.		
Selected Risk Factor 9 Climate and natural hazard risk		
Category	**Probability**	**Impact**
Technical and operational	Medium	Medium
Description		
Extreme climate events associated with climate variability, particularly **El Niño** and **La Niña** phenomena, may reduce the effectiveness of restoration and conservation interventions, delay implementation, and affect the generation of measurable hydrological benefits. Prolonged droughts, heat waves and wildfires during El Niño, as well as intense rainfall, floods and landslides during La Niña, may damage restored areas, disrupt field activities and increase implementation costs, reducing the project's ability to demonstrate timely VWBs within the implementation period.		
Mitigation Measure(s)		
Mitigation should incorporate climate risk considerations into site selection, restoration design and implementation planning. Restoration activities should prioritize native species and ecosystem management approaches adapted to local climate variability, while implementation schedules should remain flexible to accommodate seasonal climate conditions. Regular climate monitoring, adaptive work planning and coordination with local authorities and communities will support timely responses to extreme events. Adequate maintenance, replanting and post-restoration monitoring should also be incorporated to ensure recovery of restored areas affected by climate-related disturbances.		
Selected Risk Factor 10 Territorial security and access risks (armed conflict)		
Category	**Probability**	**Impact**
Prohibited practices	Low	Medium
Description		
The risk of criminal activity or socioeconomic instability is significant. Armed conflict and insecurity can disrupt field activities (C1 restoration, C2 livelihoods), lead to theft of uninsured equipment, and pose a catastrophic risk of injury or loss of life for staff and beneficiaries. The execution of field activities in high-vulnerability rural areas would be paralyzed.		
Mitigation Measure(s)		

A Safety and Security Plan has been developed (see Annex 6, Section 8.2.2), aligned with Conservation International (CI) standards and principles, based on three pillars: (i) acceptance strategy, prioritizing social legitimacy and community consent as the primary protective shield for field staff; (ii) institutional intelligence, utilizing inputs from official sources and NGO security networks (non-community based) to map risks without endangering local leaders; and (iii) 'traffic light' adaptive operation, establishing a mechanism for temporary suspension and rescheduling of activities in volatile zones (should they arise), rather than permanent relocation, ensuring that conflict volatility does not result in the permanent abandonment of the most vulnerable communities.		
Selected Risk Factor 11 Physical damage to investments from natural phenomena		
Category	**Probability**	**Impact**
Technical and operational	Medium	Medium
Description		
The risk of natural disasters negatively affecting project activities (such as floods, droughts, heat waves, and fires) is relevant. The project focuses on adaptation, but extreme climate events may still damage project investments and reduce the effectiveness of restoration activities. There are fire risks in the *páramo*, along with an increased risk of floods and landslides. A single extreme event (e.g., drought or fire) could destroy newly restored sites and restoration investments under Activity 1.1.2, reversing the achievements of Component 1 and increasing implementation costs.		
Mitigation Measure(s)		
To realistically safeguard investments, the project will apply: (i) Adapted Design, locating nurseries and restoration zones in sites with lower physical exposure and selecting hardy native species with high natural climate tolerance; (ii) Community Prevention, establishing agreements with communities and local authorities for surveillance and basic risk management (such as fire rounds), without relying on complex technological systems; and (iii) Maintenance Budget, ensuring the financial plan includes specific resources for replanting and minor infrastructure repair, assuming a manageable natural mortality rate as part of normal operations, rather than relying on external insurance schemes.		
Selected Risk Factor 12 Community Health, Safety, and Protection Risk		
Category	**Probability**	**Impact**
Technical and operational	Medium	Medium
Description		
The project involves field-based restoration, productive transformation and community engagement activities that may expose workers and local communities to occupational health, safety and social risks if not adequately managed.		
Mitigation Measure(s)		
To safeguard both workers and the community, the project will implement an Integrated Safety, and Security Plan (see Annex 6, Section 8.2.2) aligned with ARL regulations and GCF Standard 4. This entails strict physical protocols, including full-time HSE supervision, mandatory safety training, certified PPE use, and site exclusion zones, backed by third-party liability insurance; crucially, it integrates social protection through a mandatory Code of Conduct and SEAH Prevention mechanism (see Annex 6, Section 8.2.3) signed by all personnel, ensuring that field activities under Component 1 do not generate health, safety or social risks for workers or local communities.		
Selected Risk Factor 13 Reduction of the project's impact by excluding indigenous groups and minority communities		
Category	**Probability**	**Impact**
Governance	Low	Medium
Description		
Additional difficulties and opposition to the project may arise from conflicts stemming from mismanagement or the underrepresentation of cultural minorities. Some territories within the intervention area are the ancestral lands of the Muisca people, who, although small in number, continue to maintain ritual practices there. Failure to adequately engage these minority groups could halt project activities and even generate situations of violence or conflict that would lead to the dismissal of intervention areas currently included in the program.		

Mitigation Measure(s)
To ensure social legitimacy, the project will implement an Inclusive Engagement Strategy in line with Conservation International's (CI) Environmental and Social Management Framework (ESMF). This entails: (i) Indigenous Governance, strictly applying Standard 4 (Indigenous Peoples) to guarantee Free, Prior, and Informed Consent (FPIC) and the co-design of activities with Muisca cabildos to ensure cultural appropriateness utilizing trusted intermediaries and methodologies that guarantee their active and safe participation in project activities, without exposing them to discrimination risks. An Indigenous Peoples Plan is provided as part of Annex 6.

E. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

172. Annex 6 is the Limited-Environmental and Social Impact Assessment (ESIA) and the Environmental and Social Management Plan (ESMP) of the project. The document introduces the project, including the legal and institutional framework. The limited-ESIA identifies potential risks and impacts in line with applicable GCF standards. The proposed project is being classified as Category B based on the potential environmental and social risks identified. However, these risks are low to medium, site-specific, and manageable with the appropriate mitigation measures in place. The following is a summary of the environmental and social safeguards standards (ESS) triggered for the project.

173. ESS 2: Protection of natural habitats and biodiversity conservation. The project directly intervenes in ecosystems of high ecological sensitivity, such as high-Andean forests and *páramos*. Restoration actions prioritize the recovery of ecological functions while mitigating the risk of introducing invasive or non-native species through strict biosecurity protocols. The project addresses risks associated with high plant mortality by ensuring the use of suitable, high-quality species for each site. To protect local fauna, any support equipment—such as fencing—must follow connectivity criteria, strictly avoiding materials like barbed wire that pose a physical risk to wildlife. Also, under this standard, the potential impacts from supporting sustainable and resilient livelihood activities, such as installing Ecosystem-based Adaptation (EbA) equipment, like rainwater harvesting systems and poultry production modules, will be assessed to prevent habitat fragmentation, negative impacts on natural habitats, or alteration of local water dynamics.

174. ESS 3: Resettlement and physical and economic displacement. The project does not involve land acquisition or physical resettlement, and it will not alter land tenure arrangements. However, there is a precautionary risk of economic displacement if community decisions, the implementation of PES or conservation agreements result in new restrictions on access to land or natural resources currently used by smallholders (whether formal or informal users). The project developed a Process Framework whenever voluntary economic displacement materializes.

175. ESS 4: Indigenous Peoples. The project will maintain close, culturally appropriate collaboration with all affected stakeholders, including those who meet the GCF and CI definition of Indigenous Peoples. In limits of intervention area 3- Tominé, the Muisca Indigenous community maintain a presence ("Los Hijos del Maiz"). an Indigenous Peoples' Plan (IPP) has been developed in accordance with CI and GCF policies to safeguard the broader landscape. The IPP ensures that the project acknowledges potential impacts on ancestral territories, governance systems, and social structures. It guarantees the right to Free, Prior, and Informed Consent (FPIC) to prevent interference with sacred sites or the loss of traditional knowledge, ensuring that any intervention is co-created to promote balanced intercultural dialogue and prevent social tensions.

176. ESS 6: Cultural Heritage. This standard is triggered to protect the tangible and intangible cultural values in the intervention areas. The project will establish exclusion zones for sacred sites and ancestral paths identified by the Muisca community to prevent disturbances during EbA and restoration works. Additionally, a Chance Find Procedure will be implemented for all physical works, such as installing EbA equipment or performing restoration activities, to manage incidental archaeological discoveries.

177. ESS 5: Resource Efficiency and Pollution Prevention. The project aims to reduce pollution pressure rather than contribute to it supporting smallholders in minimizing harmful inputs and lowering climate impacts. The standard is triggered to manage agricultural inputs, waste, and water use, particularly in connection with restoration efforts and the support of livelihood activities. The project focuses on three critical areas of pollution prevention: a) Transitioning producers to Integrated Pest Management (IPM) to minimize reliance on chemical pesticides, as well as for restoration activities; b) Implementing strict protocols for the segregation, transport, and final disposal of solid waste and surplus materials generated by EbA equipment to prevent soil and water contamination; c) Mitigating the compromise of ecological flows due to excessive water extraction for climate resilience or restoration activities.

178. ESS 7: Labor and Working Conditions. Although the EEs indicated that they have the necessary policies, procedures, systems, and capabilities to meet the minimum requirements on labor and working conditions, the sectors and value chains in which the project works have considerable risks of informal labor, so additional measures were identified to mitigate these contextual risks. ESS8: Community, Health, Safety and Security. The

project presents some CHSS risks, including those related to fraud, public order risks, and the presence of criminal groups that might affect both the communities and project staff. Communities can also be involved in restoration or livelihood activities requiring training and personal protection equipment to avoid safety risks. GBV and SEAH are also prevalent in the project's landscapes, and the increased influx of workers for the restoration work and installation of EbA equipment can increase the risk for SEAH in this context. The project has identified mitigation measures in place to prevent accidents, security incidents, and to respond to emergencies as a result of project activities. ESS9: Private Sector Direct Investments and Financial Intermediaries. Some project activities will be developed through sub-grants provided to local organizations and by supporting Payments for Ecosystem Services. A primary focus is on preventing perverse incentives and environmental impact leakage, ensuring that financial incentives do not lead beneficiaries to expand the agricultural frontier elsewhere, or the risk that sub-grantees don't follow the CI-GEF/GCF ESMF requirements. Rules for resource use, excluded activities, and the ESS screening process will be detailed in the Grants Manual. Furthermore, the project addresses the risk of misalignment in third parties' safeguard commitments, ensuring that subcontractors and consultants adhere to CI's rigorous environmental and social standards to prevent gaps in human rights or biodiversity protection.

179. ESS10: Climate Risk and Related Disasters. Given that the páramo and high-Andean forest landscapes are highly vulnerable to climate change and related natural disasters, which can affect the project Outcomes, the project identified risks and planned for mitigation measures to ensure that the restoration and EbA interventions are adapted and resilient to this scenario, as well as responding to possible natural disasters.

180. The project ESMP, included as Annex 6, details mitigation measures for each risk and impact, together with indicators and targets for implementation monitoring. The ESMP includes specific chapters/sections for each of the standards presented above, except for the Indigenous Peoples Plan (IPP), which is presented as a separate document. The Environmental and Social Management Plan (ESMP) will be implemented by a dedicated set of project roles responsible for safeguards, gender, social management, and monitoring. The Safeguards Manager oversees overall compliance with GCF environmental and social standards and the proper application of the ESMP. The Gender Manager ensures the systematic integration of gender considerations across project activities. Social management at the territorial level is led by the Social Coordinator, supported by Social Leads who implement stakeholder engagement, grievance management, and social monitoring in the field. Environmental and results monitoring are supported by the Environmental Monitoring Specialist and the M&E Senior Manager and Coordinators, who integrate environmental and social indicators into the project's monitoring, reporting, and verification system, ensuring continuous oversight and adaptive management.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

181. The gender assessment (GA) and project-level Gender Action Plan (GAP) are presented as Annex 8.

182. The Gender Action Plan of the project 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 activities such as restoration and EbA for agricultural processes, ensuring their contributions to sustainable adaptation 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 area. By fostering gender equality and women's economic empowerment, the project envisions a more sustainable, resilient, and socially equitable response to climate change that aligns with the GCF's core principles and objectives.

183. The Gender Assessment and Gender Action Plan has been developed to identify key gender concerns to be considered and addressed, as well as opportunities to drive gender-responsive project delivery (Annex 08). Data were collected from primary and secondary sources across the Bogota region landscape. The gender assessment identified gender risks and barriers, including but not limited to:

- Lack of acknowledgement or consideration of women's roles and contributions to small-holder farming activities.
- Inadequate financial resources to address women's specific needs for training and developing businesses.
- Decision-making roles and local governance of *community-based water facilities* are often male-dominated

- Traditional household roles and norms for women and men that limit women's financial contribution to the family and restrict women from fully participating in economic activities.

184. The project-level Gender Action Plan has been developed to encourage women's participation, representation, and awareness in project activities. This will seek to discourage gender biases among project participants and beneficiaries and/or ensure gender inequalities are not exacerbated by the project. The GAP outlines gender-related activities, targets, sex-disaggregated data collection, gender-responsive project design features, and quantifiable performance indicators. Some activities that the GAP recommends include:

- Incorporation of traditional environmental knowledge (TEK) from all household members, including women, in the design, species selection, and management of restoration plans.
- Establish eligibility criteria for the regional PES program that recognize and reward conservation and restoration activities (e.g., labor) carried out by women, regardless of formal land tenure (within Colombian legal framework). Furthermore, ensure that all adult household members sign the PES agreements. Design "Climate Adaptation Agreements" at the household or family level, ensuring that women (as wives, daughters, or heads of household) are co-signatories to guarantee their direct access to and control over resources, inputs, and technical assistance, thus overcoming barriers to technology and finance.
- Develop business plans focused on strengthening the links in the value chain with high female participation, prioritizing their transition to roles in commercial decision-making, processing, and management, where greater value is added, and establishing clear goals to break occupational segregation.
- Implement "Farm to Farm" technical assistance with a gender perspective, replacing urban workshops with direct visits to the production plots of women and other groups, such as the elderly, to overcome mobility barriers.
- Develop a socio-economic valuation methodology that includes "time poverty" and family health variables and measures the economic savings for women from improved water regulation.
- Elaborate a "Gender-Responsive and Resilient Water Investment Guide" as part of the replication package, systematizing lessons learned on women's participation in environmental investment component design.
- Design and implement a targeted dissemination and promotion strategy and tailored capacity strengthening to ensure women (producers, entrepreneurs, and organizations) are aware of and can access the opportunities within the financial mechanism.

185. To support implementation of the GAP, CI will employ a full-time Gender Manager to ensure robust gender analysis and lead the mainstreaming of gender into the project. The Gender Manager will develop and deliver appropriate capacity building for colleagues and delivery partners that are well-designed, clear, tailored to the context, and practical. The Gender Manager will accompany project teams to the field to ground truth progress on gender outcomes: meet with women/women's groups, collect qualitative information, help project teams to problem solve, propose adaptive changes and participate in report preparation.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

186. CI, as Accredited Entity (AE), and CI-Colombia, as Executing Entity (EE), will apply financial management and procurement arrangements consistent with CI policies and procedures and with the Accreditation Master Agreement (AMA) between CI and the GCF. CI has assessed Fondo Acción and confirmed that it maintains robust financial management systems and controls that meet CI and GCF fiduciary standards; implementation conditions proportionate to the size and scope of the award will ensure appropriate oversight, risk management and compliance during execution.

Financial management

187. CI uses Unit4 Business World as its enterprise resource planning system for financial accounting, budgeting and monitoring across all projects and donors. The system supports general ledger, project and sub-award tracking, and allows disbursements, income and expenditure for this GCF project to be coded and monitored by donor, project and budget line. Fondo Acción uses Apotheosys financial software with coded accounts to track project income and expenditures, supported by formal financial management policies and procedures.

188. CI-Colombia, Fondo Acción and sub-grantees will submit quarterly financial reports using AE-cleared templates, which the AE and EEs will review for accuracy, eligibility and variance against budgets. An annual audit of the project's financial statements will be conducted by an independent external audit firm in accordance with U.S. GAAP and the AMA and submitted to the GCF; specific annual audits will be required for grantees with annual expenditures above USD 250,000. Disbursements from the GCF to CI will be recorded in a dedicated ledger for this project, and disbursements from EEs to sub-grantees will follow each EE's approved financial policies and grant agreements.

189. CI and Fondo Acción have controls to prevent prohibited practices, including money laundering and financing of terrorism (PP). CI applies AML/CFT screening to all funding recipients, assesses PP risks, and incorporates mitigation measures and PP clauses in grant and service agreements; Fondo Acción applies analogous measures. EE staff and sub-grantees receive training on PP, red flags and reporting mechanisms, and monitoring for PP compliance includes desk reviews and site visits. Allegations of fraud, PP violations or financial misuse can be reported anonymously to the GCF's IIU, CI's Ethics Hotline, CI-Colombia grievance mechanism or Fondo Acción's grievance mechanism and are investigated and addressed according to CI and Fondo Acción's anti-fraud and grievance policies. CI's grants management and sub-recipient monitoring systems integrate donor management, accounting and budgeting to track disbursements, expenditures, milestones and audit findings and to flag project-level financial risks.

Procurement

190. All procurement financed by the project will follow CI's Procurement Process Standards, which ensure best value for money, integrity, transparency, and compliance with donor terms, as well as alignment with CI's Code of Conduct and anti-fraud policies and GCF fiduciary standards. Subsidiary agreements and grant contracts will contain appropriate flow-down clauses to ensure that EEs and sub-grantees comply with AE procurement controls and risk-mitigation measures, including procurement planning, multi-level approvals (with AE approval above defined thresholds), quarterly reporting, periodic inventories and post-award reviews.

191. EEs will assess the procurement policies of sub-grantees that undertake procurement. Sub-grantees whose procedures meet CI's standards may use their own systems; others must apply CI's procedures or contractual flow-downs as specified in grant agreements. CI will oversee all procurement for the project, approve annual procurement plans and higher-value procurements, and provide training on procurement requirements and prohibited practices to EE staff and key sub-grantees. Quarterly reports and periodic site visits will monitor procurement performance and use of equipment; an indicative plan for operation, maintenance and disposition of GCF-funded equipment procured by CI-Colombia and Fondo Acción is provided in Annex 21.

G.4. Disclosure of funding proposal

☐ No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.

☒ With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

F. ANNEXES

H.1. Mandatory annexes

☒	Annex 1	NDA no-objection letter(s) **(template provided)**
☒	Annex 2	Feasibility study - and a market study, if applicable
☒	Annex 3	Economic and/or financial analyses in spreadsheet format
☒	Annex 4	Detailed budget plan **(template provided)**
☒	Annex 5	Implementation timetable including key project/programme milestones **(template provided)**
☒	Annex 6	E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3): **(ESS disclosure form provided)** ☐ Environmental and Social Impact Assessment (ESIA) or ☒ Environmental and Social Management Plan (ESMP) or ☐ Environmental and Social Management System (ESMS) ☒ Indigenous People's Plan, Land Acquisition Plan, etc.)
☒	Annex 7	Summary of consultations and stakeholder engagement plan
☒	Annex 8	Gender assessment and project/programme-level action plan **(template provided)**
☒	Annex 9	Legal due diligence (regulation, taxation and insurance)
☒	Annex 10	Procurement plan **(template provided)**
☒	Annex 11	Monitoring and evaluation plan **(template provided)**
☒	Annex 12	AE fee request **(template provided)**
☒	Annex 13	Co-financing commitment letter, if applicable **(template provided)**
☒	Annex 14	Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

☒	Annex 15	Evidence of internal approval **(template provided)**
☒	Annex 16	Map(s) indicating the location of proposed interventions
☐	Annex 17	Multi-country project/programme information **(template provided)**
☐	Annex 18	Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
☐	Annex 19	Procedures for controlling procurement by third parties/ EEs undertaking projects financed by the entity
☒	Annex 20	First level AML/CFT (KYC) assessment
☒	Annex 21	Operations manual (Operations and maintenance)
☐	Annex 22	Assessment of GHG ERs and their monitoring and reporting (for mitigation and cross cutting-projects)[19]
☒	Annex 23	Implementation Arrangements
☒	Annex 24	Adaptation Beneficiary calculations
☒	Annex 25	USP2 targets
☒	Annex 26	Grants Manual
☒	Annex 27	Capacity Assessment for Sub-Grantees-IAVH and TNC

[19] Annex 22 is mandatory for mitigation and cross-cutting projects.

H

Departamento
Nacional de Planeación

Bogotá D.C., jueves, 18 de junio de 2026

20265100571661

Al responder cite este Nro.
20265100571661

SGPDN

To: The Green Climate Fund ("GCF")
executive-office@gcfund.org

Re: No-objection letter in respect of the funding proposal titled "Building a Water-Resilient BogotáRegion Landscape" by Conservation International Foundation

Dear Madam, Sir,

We refer to the funding proposal titled "Building a Water-Resilient BogotáRegion Landscape" submitted by Conservation International Foundation to us on February 28,2026 and adjusted on May 04, 2026 (the "**Proposal**").

The undersigned is the duly authorized representative of National Planning Department, the national designated authority of Colombia.

Pursuant to GCF Decisions B.08/10, B.37/22, and B.41/02, the content of which we acknowledge to have reviewed, in my capacity as representative of the national designated authority, we hereby communicate our no-objection to the Proposal.

By communicating our no-objection, it is implied that:

(a) The government of Colombia has no-objection to the Proposal; and
(b) The Proposal is in conformity with the national priorities, strategies and plans of Colombia.

We also confirm that our national process for ascertaining no-objection to the Proposal has been duly followed.

Notwithstanding the foregoing, we expect Conservation International Foundation to take the necessary measures to ensure that the project as described in the Proposal is implemented in a manner consistent with applicable national laws.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Rovitzon Ortiz Olaya
Deputy Director General, Foresight and National Development
National Planning Department
Colombia

Cc:spanfil@conservation.org; ccosta@conservation.org; vgarcia@conservation.org; melrodriguez@dnp.gov.co; davicruz@dnp.gov.co

Prepared: Melissa Rodriguez; David Cruz
Review: Liliana Merchán

Environmental and Social Safeguards (ESS) Report Disclosure Form

Basic project or programme information	
Project or programme title	Building Water Resilience in Bogotá and the Region
Potential sub-project(s) anticipated after GCF Board approval	Yes
Sector (public or private)	Public
Accredited entity/Project-specific Assessment Approach (PSAA) applicant	Conservation International
Environmental and social safeguards (ESS) category	Category B
Location – specific location(s) of project or target country or location(s) of programme	Colombia (prioritized areas in the following landscapes: Guandoque, Villapinzón, Tominé and Tunjuelo) Municipalities: Villa Pinzón, Cogua, Zipaquirá, Tausa, Chocontá, Guatavita, Sesquilé, Guasca
Safeguard Documents: Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plans (ESMPs), Environmental and Social Management System (ESMS), Environmental and Social Management Framework (ESMF), Environmental and Social Due-Diligence (ESDD) report, Land Acquisition and/or Resettlement Action Plan (LARAP), Indigenous Peoples Plan (IPP), Indigenous Peoples Planning Framework (IPPF), Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF) etc. (as applicable)	
Date of disclosure on entity's website	Wednesday, September 16, 2026
Language(s) of disclosure	English and Spanish
Explanation on language	Spanish is the official language of Colombia
Link(s) to disclosure	**Environmental and Social Impact Assessment (ESIA)** English: ESIA Spanish: ESIA **Environmental and Social Management Plan (ESMP)** English: ESMP Spanish: ESMP **Indigenous Peoples Plan (IPP)** English: IPP Spanish: IPP
Other link(s)	***Project website containing all ESS-related documents*** English: CI-GCF Project website Spanish: CI-Colombia website
Remarks on compliance with GCF policies	ESS reports consistent with the requirements for a Category B project are contained in the documents above.
Disclosure in locations convenient to affected peoples (stakeholders)	
Date(s)	Tuesday, September 22, 2026
Place(s)	The ESIA/ESMP and the IPP are published on CI-Colombia website in Spanish. Copies of the documents are also available in the CI-Colombia office at: Carrera 13 # 71 - 41 Bogotá, Colombia

	All stakeholders who participated in the stakeholder consultations in the prioritized landscapes have been informed by email or WhatsApp about the current state of the project and received information about where they can consult the documents. The documents are available at the local Mayor offices of: Municipality of Villa Pinzón Municipality of Cogua Municipality of Zipaquirá Municipality of Tausa Municipality of Chocontá Municipality of Guatavita Municipality of Sesquilé Municipality of Guasca
Date of Board meeting in which the FP is intended to be considered	
Date of entity's Board meeting	N/A
Date of GCF's Board meeting	Monday, October 26, 2026

Note: This form was prepared by the entity stated above.

Secretariat's assessment of FP323

Proposal name:	Building Water Resilience in Bogotá and the Region
Accredited entity:	Conservation International Foundation
Country/(ies):	Colombia
Project/programme size:	Medium

I. Overall assessment of the Secretariat

1. The funding proposal is presented to the Board for consideration with the following remarks:

Strengths	Points of caution
The project will focus on preserving water resources in nature as the most efficient approach.	A reinvestment system for additional funding raised by this project extends beyond the project implementation timeline.
The project has created an integrated watershed transformation model to maximize water benefits. The intervention areas have been selected directly via climate vulnerability analysis.	As local co-financing commitments may be subject to official processes conducted by each co-financier, there is a residual risk regarding the co-financing commitment. This may impact implementation of the project.
The project rests on three viable exit strategies to ensure sustainability and scale up: (a) market access for agri-producers, (b) a water tariff covering the environmental investment component and (c) a financial mechanism to mobilize private finance.	

2. The Board may wish to consider approving this funding proposal in accordance with the term sheet agreed between the Secretariat and the accredited entity (AE) and, if considered appropriate, subject to the conditions set out in annex II of document GCF/B.46/02.

II. Summary of the Secretariat's assessment

2.1 Project background

3. The Bogotá region is increasingly water insecure as a result of climate change. Approximately 10 million people in Bogotá and 33 surrounding municipalities depend on water supply systems that are highly sensitive to changing rainfall patterns, heat extremes, prolonged dry periods and compound climate variability, including the influence of the El Niño/Southern Oscillation. These pressures are compounded by the degradation of the region's high-Andean ecosystems – páramos, high-Andean forests, wetlands and upper-watershed agricultural lands – which regulate run-off, sustain dry-season baseflows, retain sediment and protect water quality. As their ecological functions decline, the landscape's capacity to capture, regulate and store water is reduced, raising water supply risk for a region that concentrates close to 27 per cent of national gross domestic product (GDP). Ecosystem restoration and improved land-use practices

are known to reverse these trends. However, in the Bogotá region, their implementation has to date remained limited in scale and unsupported by durable financing.

4. The objective of the project is to improve water resilience at scale in the Bogotá region and to establish a credible, self-sustaining basis for continued public and private watershed investment. The project is organized around two connected components. Component 1 will deliver watershed transformation through the conservation and restoration of strategic high-Andean ecosystems; the adoption of climate-resilient productive systems on agricultural land (silvopastoral systems, agroecological practices and diversified agrifood systems); and strengthened community and municipal water management. Its results will be measured through the Volumetric Water Benefit Accounting (VWBA) methodology[1], from the World Resources Institute. Component 2 will develop a long-term financing and monitoring architecture to generate the flows needed to maintain and scale up component 1. It will operationalize existing regulation, allowing the Bogotá water utility, Empresa de Acueducto y Alcantarillado de Bogotá (EAAB), to recover eligible environmental investment costs through a water tariff, and it will establish a financial mechanism to channel public and private water-stewardship contributions. Component 1 aims to generate verifiable hydrological performance, while component 2 aims to package that performance into an investable proposition. The project is public in nature; its interventions are concentrated in 12 prioritized upper watersheds of the Bogotá region, an area of national significance.

5. The project is expected to directly benefit 3,013,383 people – farmers, landowners, producer associations and community water organizations – of whom 51 per cent are women. This figure corresponds to 29 per cent of the Bogotá region population. The project is furthermore expected to reach 7,083,799 people indirectly (71 per cent of the regional population). It will improve watershed regulation across approximately 9,197 hectares – comprising 4,756 hectares under conservation, 2,032 hectares under restoration, and 2,409 hectares under sustainable and climate-resilient production systems – distributed across the 12 prioritized upper watersheds spanning Bogotá Capital District and 33 surrounding municipalities. Adaptation is the project's primary objective; greenhouse gas sequestration from restoration and conservation is treated as a co-benefit and is not reported as a committed core mitigation outcome in the funding proposal, being deferred for estimation upon project completion.

6. The total project financing is USD 76,738,917, with a request for GCF financing of USD 45,717,002 provided entirely as a grant; no loan, guarantee or equity is requested. Co-financing of USD 31,021,915 will be contributed by the entities involved in the project, comprising public partners – notably EAAB, the district environmental secretariat (Secretaría Distrital de Ambiente; SDA) and the regional environmental authority (Corporación Autónoma Regional de Cundinamarca; CAR) – and private sector water-stewardship partners, including the Coca-Cola Foundation and AB InBev. There will also be in-kind contributions from the accredited entity, Conservation International Foundation (CI), and the executing entities, CI Colombia and Fondo Acción. The project is submitted under environmental and social (E&S) risk category B, with a five-year implementation period (2027–2032) and a 20-year lifespan.

2.2 Component-by-component analysis

Component 1: Watershed transformation (total cost: USD 63.61 million; GCF cost: USD 35.07 million, or 55 per cent)

7. Component 1 will deliver the project's physical adaptation results through two outputs measured using VWBA. Output 1.1 will finance the conservation of native high-Andean

[1] WRI: Volumetric Water Benefit Accounting (VWBA): A Method For Implementing and Valuing Water Stewardship Activities | World Resources Institute.

ecosystems – páramos, high-Andean forests, wetlands and recharge zones (activity 1.1.1) – and the passive and active restoration of degraded lands (activity 1.1.2), across a headline 4,756 hectares under conservation and 2,032 hectares under restoration. Output 1.2 will finance the transformation of 2,409 hectares of productive land to silvopastoral and agroecological systems and aims to improve on-farm water use efficiency, agrifood diversification and market access (activities 1.2.1–1.2.2). It also seeks to deliver water loss reduction in 40 community-run water supply systems (activity 1.2.3).

8. The proposed interventions are recognized no-regret adaptation practices, and the balance of instruments is broadly appropriate at the output level. Output 1.1 is grant-light: as a public-good component generating ecosystem services with no direct revenue, it is majority co-financed (66 per cent) by public authorities (EAAB, SDA, and CAR) and corporate water-stewardship partners (Coca-Cola Foundation and AB InBev), with GCF grant funding used where cost recovery is not available. Approximately USD 28.96 million of component 1 (38 per cent of the total project cost) will be delivered as beneficiary and implementing partner grants, which is a reasonable delivery mechanism for smallholder and community-level adaptation.

Component 2: Long-term financing and monitoring architecture (total cost: USD 7.64 million; GCF cost: USD 6.95 million, or 91 per cent)

9. Component 2 (output 2.1) will finance the enabling architecture intended to sustain and scale component 1. Activity 2.1.1 will establish the technical conditions required to incorporate an environmental investment component into the EAAB water tariff, and activity 2.1.2 will operationalize a financial mechanism to channel public and private water-stewardship contributions. As this is a technical assistance, regulatory and mechanism design component with no direct revenue for the project, use of full grant funding is appropriate.

10. However, two caveats are material. Component 2 sustainability rationale is based substantial assumptions. First, the regulatory basis for activity 2.1.1 requires verification: the tariff framework permitting utilities to recover eligible environmental investment costs appears to have been superseded (Resolución CRA 1032 de 2026 replacing CRA 907 de 2019), with EAAB reportedly having already filed new tariffs. These changes may have narrowed or closed the investment window the activity depends on. Second, the mechanism's self-sustainability is unverified: the projected water-stewardship revenues are backloaded, the operating costs of the mechanism are not fully reflected in the model, and the durability of the corporate commitments is not yet substantiated. These points should be closely monitored throughout project implementation, and specific conditions should be included in the funded activity agreement (FAA) to ensure missing details are developed before project implementation starts on the ground.

Monitoring and evaluation (USD 1.80 million; GCF USD 1.59 million) and project management (USD 3.69 million; GCF USD 2.11 million)

11. Monitoring and evaluation is budgeted at USD 1,798,297, equivalent to 2.3 per cent of the total project cost, which falls within and is compliant with the Evaluation Policy for the GCF (2–5 per cent of total cost). The GCF portion of the project management costs is USD 2,105,882, equivalent to 4.6 per cent of the total requested GCF funding (4.8 per cent of the total project cost), and is within the range considered reasonable and compliant with the GCF Policy on Fees.

III. Assessment against investment criteria

3.1 Impact potential *Scale: High*

12. The proposed project is entirely grounded in climate vulnerability analysis, ensuring a strong climate rationale for the interventions proposed. As part of the climate vulnerability

analysis, watersheds and inhabitants' vulnerabilities were assessed based on level of environmental degradation, types and strengths of climate threats, number of people depending on water from the various ecosystems, and socioeconomic situation of affected communities. Consequently, the activities proposed in this project tackle directly water stress and incorporate future projections. To ensure that the proposed actions will have the highest impact, the selection of watersheds and interventions target savings of cubic metres of water in the natural ecosystems based on the reduced run-off and natural high-Andean ecosystems' capacity to accumulate water.

13. The interventions across the 12 prioritized upper watersheds are expected to improve watershed regulation by placing 4,756 hectares under conservation, 2,032 hectares under restoration, and 2,409 hectares within sustainable and climate-resilient production systems. These measures are designed to increase infiltration and soil moisture retention, stabilize baseflows during dry periods, reduce peak run-off during extreme rainfall, and lower sediment pressure on water treatment systems. Modelled results estimate approximately 2,940,584 m3 per year of avoided or reduced run-off based on the VWBA.

3.2 Paradigm shift potential *Scale: High*

14. The project has strong paradigm shift potential because it is designed to demonstrate that integrated watershed interventions can generate measurable improvements in hydrological regulation at the watershed level while strengthening climate resilience and livelihoods. Through implementation across priority watersheds, the project will generate evidence on the hydrological benefits of ecosystem-based adaptation (EbA) and provide practical experience that can inform future watershed planning and investment decisions in the Bogotá region and beyond. The project will establish a framework for coordinated action and investment, as it will bring together utilities, environmental authorities, municipalities, communities, producer organizations and private sector actors around a shared watershed approach.

15. Through component 2, the project seeks to move beyond demonstrating hydrological benefits to testing approaches that can support continued investment in EbA. By supporting EAAB in operationalizing the environmental investment component within the existing water tariff framework, the project will provide a practical example of how an existing regulatory instrument can support recurrent financing for the long-term implementation, maintenance and expansion of watershed protection and hydrological regulation activities beyond the project period. In parallel, the project will develop a mechanism through which private sector actors can contribute to the continued implementation, maintenance and expansion of watershed stewardship activities, with resulting hydrological benefits being quantified and independently verified using the VWBA. These financing mechanisms build on existing institutional mandates, regulatory instruments and corporate water-stewardship commitments, requiring no regulatory reform. The project will also develop the methodologies, reporting frameworks and guidance required to support the application of similar approaches by other utilities and watershed stakeholders in Colombia.

3.3 Sustainable development potential *Scale: High*

16. The project will deliver co-benefits across environmental, social and economic dimensions, reinforcing multiple Sustainable Development Goals (SDGs), in particular SDGs 1, 2, 3, 5, 6, 10, 12, 13 and 15. These SDGs will be delivered via integrated actions performed in the selected watersheds. SDG 13 is directly embedded in the structure of the project, given that the project is based on a detailed climate vulnerability assessment and aims to directly tackle water stress issues induced by climate change.

17. From the environmental perspective, the interventions will improve carbon capture, ecological connectivity and habitat quality for native and endemic species; safeguard watershed functions such as baseflow regulation and water quality; and support conservation targets under SDG 15 on terrestrial ecosystems and SDG 6 on water-related ecosystems.

18. The project's sustainable agriculture activities will reduce poverty and economic vulnerability (SDG 1) and improve both food and water security (SDG 2 and SDG 6).

19. The project will contribute to SDG 12 (on sustainable consumption and production) via its promotion of market access for diversified agriproducts and its provision of broader support for production by vulnerable women-led communities.

20. SDG 5 (on gender equality) and SDG 10 (on reduced inequalities) are embedded in the project's support for the most vulnerable communities, both rural and peri-urban, and its strong focus on women-led initiatives related to water and food security.

3.4 Needs of the recipient *Scale: High*

21. The project aims to respond directly to the needs of the recipient by targeting high-risk rural watersheds where climate hazards, ecosystem degradation and poverty overlap. It has a strong focus on vulnerable groups, including women, smallholder farmers, Indigenous Muisca communities, community-managed water providers and low-income residents.

22. The project aims to address constraints on the most vulnerable groups related to poverty, restricted access to credit, limited diversification options, and weak integration into higher-value markets. Specifically, it seeks to promote climate-resilient production models and diversified economic alternatives alongside better market access and business models for rural producers. In this way, it aims to reduce income vulnerability and social inequality while lowering pressure on strategic headwaters.

23. While many public and private investments are flowing to grey infrastructure and urban development in the Bogotá region, financing of watershed restoration, climate-resilient rural transformation, and nature-based water resilience measures remains limited and fragmented. This project seeks to address these issues and strengthen the best water retention solutions, which rely on natural ecosystems.

3.5 Country ownership *Scale: High*

24. This project directly targets key priorities of Colombia related to climate change: adaptation, water security, ecosystems restoration and support for the most vulnerable groups.

25. Country ownership is also demonstrated by the leadership and engagement of key national and regional public entities, including the Ministerio de Ambiente y Desarrollo Sostenible (Ministry of Environment and Sustainable Development), EAAB, regional environmental authorities, and district and municipal governments in the Bogotá region. This engagement also encompasses co-financing commitments from the city of Bogotá, utilities and local authorities.

26. This project seeks to build on other projects tackling water safety and ecosystem services. It was shaped through engagement with civil society organizations, academia, and community-based actors, including women's associations, Indigenous Muisca communities, producer organizations, and non-governmental organizations active in water, climate and green infrastructure.

3.6 Efficiency and effectiveness *Scale: Medium to high*

27. Strong elements of this proposal related to this investment criteria rely on innovative (for the Colombian market) and carefully crafted exit strategies that should enable real ownership and continuity of action on the ground:

(a) Creation of market access for community-led and smallholder farmers' diversified production will lead to a sustainable flow of revenue resulting from sales of ecological local products. It will also demonstrate to others that diversification from traditional monocultural agricultural activities can create sustainable livelihoods;

(b) The creation of an environmental investment component within the water tariff for the Bogotá region has particularly strong value for scale-up and replication in Colombia beyond the metropolitan region; and

(c) The creation of a financial mechanism should mobilize the private sector and lead to sustainable private sector funding for nature-based solutions. The comparative advantage of this project is an innovative approach to its integrated watershed water-saving activities and its use of the VWBA (already recognized globally by the private sector).

28. On the other hand, the proposal demonstrates moderate efficiency and effectiveness in terms of its economic and financial analysis and its rationale for GCF concessionality. Unlike many grant requests, the financial model evidences a project-level financing gap: the project is not financially viable on a stand-alone basis and becomes viable only with GCF support. However, the justification for a 100 per cent grant is not fully supported by the quantitative model and relies substantially on the qualitative public-good narrative within the funding proposal.

29. The cost-effectiveness against the GCF core indicators is high. The adaptation cost per beneficiary stands at USD 7.60 per beneficiary (total cost / total beneficiaries), reflecting the large served population of approximately 10 million people. The project will mobilize approximately USD 31 million in co-financing, for a co-financing ratio of 1:0.68.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

30. **Project overview.** The proposed project, Building Water Resilience in Bogotá and the Region, seeks to strengthen climate resilience and long-term water security for the Bogotá region by addressing climate change impacts on critical watershed ecosystems that support more than 10 million people. To be implemented by CI and local stakeholders, the project is based on a watershed-scale approach that combines ecosystem conservation and restoration, climate-resilient agricultural practices, strengthened community and institutional capacity, and sustainable financing mechanisms to improve watershed management and hydrological outcomes. The project is designed to address key adaptation barriers – including insufficient financing, fragmented governance, limited technical capacity and weak monitoring systems – while generating measurable adaptation benefits through improved water availability, enhanced ecosystem resilience and strengthened livelihoods. The intervention is expected to create a replicable model for climate-resilient watershed management that can be scaled across Colombia and beyond.

31. **E&S Risk Category and Safeguard Instrument.** The project has been classified as Category B (Medium Risk) under the GCF Revised Environmental and Social Policy (RESP), reflecting the presence of site-specific environmental and social risks and impacts that are limited in scale, largely reversible, and can be effectively managed through established mitigation measures. To manage these risks, CI has prepared an Environmental and Social

Impact Assessment and Environmental and Social Management Plan (ESIA and ESMP) that establishes impact mitigation, monitoring, institutional responsibilities, capacity-building measures, and adaptive management procedures for project activities. The project is further supported by a Stakeholder Engagement Plan (SEP), Grievance Redress Mechanism (GRM), Together, these instruments provide a framework for identifying, mitigating, monitoring, and managing E&S risks throughout project implementation while supporting compliance with GCF policies.

32. The proposed environmental and social management instruments are consistent and compliant with the requirements of the GCF RESP. They provide a reasonable basis for managing residual risks in a manner commensurate with the project's classification as E&S risk category B.

33. **Compliance with the GCF environmental and social safeguards (ESS) standards.** The paragraphs below summarize how the project seeks to comply with the GCF ESS standards and requirements.

34. **ESS 1: Assessment and management of E&S risks and impacts.** The funding proposal demonstrates compliance with the GCF RESP through an ESIA and ESMP and supported by complementary instruments, including an Indigenous Peoples plan; a cultural heritage management plan; labour management procedures; a community health, safety and security plan; a stakeholder engagement plan; a project-level GRM; sub-grantee environmental and social management system provisions; and climate risk management measures. Consistent with its category B classification, the project applies an exclusion list and has assessed site-specific E&S risks associated with ecosystem restoration, conservation agreements, payments for ecosystem services, climate-resilient agriculture and community water interventions. Appropriate mitigation, monitoring, stakeholder engagement and accountability measures have been incorporated to ensure risks remain manageable and aligned with the project's category B risk profile throughout implementation.

35. **ESS 2: Labour and working conditions.** The project relies substantially on community-based restoration and conservation activities within a context characterized by informal labour arrangements. The ESMP include labour management measures designed to promote fair treatment, non-discrimination, equal remuneration for work of equal value, and safe working conditions. The project will establish mandatory labour requirements for contractors, implementing partners and sub-grantees, including contractual obligations related to labour standards, occupational health and safety, worker grievance redress mechanisms, compliance monitoring, and reporting. The project activities include restoration works, installation of EbA infrastructure and implementation of climate-resilient livelihood activities in agricultural value chains where appraisal has identified elevated contextual risks of informal labour. In response, the proposal incorporates additional labour management provisions and oversight measures to address these sector-specific risks during implementation.

36. **ESS 3: Resource efficiency and pollution prevention.** The project interventions are expected to improve water resource management and operational efficiency through the installation of macro-metering systems at the comunity level. These systems are intended to strengthen water accounting, improve detection of water losses and support sustainable resource management without introducing modifications to water tariff structures. The project also includes a disaster risk management fund to address unforeseen climate-related damage to project-supported infrastructure and activities. The associated E&S risks and mitigation measures are integrated into the ESMP implementation budget and monitoring framework.

37. The proposal identifies potential pollution-prevention and resource-efficiency risks associated with the use of pesticides in restoration and agricultural activities, poultry production modules, production of organic fertilizers, and installation of EbA infrastructure (such as rainwater-harvesting systems). The ESMP establishes mitigation measures governing

pesticide use, waste management, water resource protection and pollution prevention to ensure that these activities are implemented in accordance with applicable standards and regulations.

38. **ESS 4: Community health, safety and security.** The proposal includes payments-for-conservation activities and grants to support climate-resilient value chains. The payments for conservation will be financed through Colombian public sector resources rather than GCF proceeds. Project grants will be administered in accordance with a dedicated grants manual that incorporates environmental and social screening (and associated disclosure requirements for activities rated E&S risk category B) and management requirements consistent with the GCF RESP, including provisions on stakeholder engagement, Indigenous Peoples, gender equality, and prevention of sexual exploitation, abuse and harassment (SEAH).

39. The project will be implemented in rural areas where residual security risks remain. In response, the ESMP has been strengthened to include context-specific assessment and mitigation measures (including screening, awareness and referral procedures where relevant) addressing community health and safety risks associated with the presence of landmines and explosive remnants of conflict.

40. In association with the influx of workers supporting restoration activities and installation of EbA equipment, the funding appraisal identifies community health and safety risks associated with fraud, public order disturbances and criminal group activity; occupational hazards linked to restoration activities; and elevated risks of gender-based violence (GBV) and SEAH. The ESMP therefore includes community health, safety, security and SEAH mitigation measures proportionate to the project context and risk profile.

41. **ESS 5: Land acquisition and involuntary resettlement.** The proposal does not envisage physical or economic displacement; however, the project may support restrictions on access to natural resources as part of ecosystem restoration and conservation measures. The proposal indicates that any such restrictions will be implemented on a voluntary basis and accompanied, where applicable, by compensation and livelihood restoration measures. These activities will be guided by a process framework that establishes procedures for consultation, participation, mitigation and monitoring concerning any impacts arising from restrictions on access to natural resources. The project will also support improved water management measures that could indirectly affect water users.

42. The proposal identifies conservation agreements and payments for ecosystem services as project activities that may result in voluntary restrictions on the use of natural resources. The process framework establishes procedures to ensure that affected stakeholders participate in decision-making processes and that any livelihood impacts associated with such restrictions are appropriately addressed through mitigation and benefit-sharing measures.

43. **ESS 6: Biodiversity conservation and sustainable management of living natural resources.** The proposal supports ecosystem restoration, water resource conservation and sustainable landscape management in areas that may be located near or within ecologically sensitive environments. The project's exclusion criteria prohibit activities that could adversely affect critical habitats, ecological corridors or areas of high biodiversity value. Accordingly, no project-financed activities will be undertaken in locations where significant adverse impacts on critical biodiversity or protected conservation assets may occur.

44. The proposal also incorporates design measures to minimize environmental impacts associated with supported productive activities. For example, the project will implement ecosystem restoration activities in and around protected areas, including connectivity corridors, and will support EbA investments in buffer zones to enhance biodiversity conservation while supporting climate-resilient livelihoods. The appraisal confirms that the intervention area includes strategic high-Andean forests and páramos, key biodiversity areas, Chingaza National Natural Park and its surroundings, and habitats of restricted-range species including the Bogotá

rail and black inca. The proposal emphasizes the importance of applying strict biodiversity safeguards and habitat protection measures.

45. Rainwater-harvesting systems have been designed to avoid significant alterations to natural run-off patterns, drainage systems or ecological flows. Similarly, poultry production modules will incorporate siting, waste management and pollution control measures to prevent contamination of surface water resources. The ESMP further requires compliance with applicable international conventions and Colombian regulations governing pesticides, hazardous materials, waste management and pollution prevention, supported by monitoring and mitigation measures throughout implementation.

46. **GCF Indigenous Peoples Policy and ESS 7: Indigenous Peoples.** The proposal meets the requirements of the GCF Indigenous Peoples Policy and includes an Indigenous Peoples plan developed through consultation with the affected Indigenous Peoples of the Resguardo Indígena Mhuysqa Chuta Fa Aba – Los Hijos del Maíz. While the legally recognized resguardo does not overlap with the project footprint, the community's broader ancestral territory intersects with project intervention areas. The Indigenous Peoples Plan is informed by community consultations, participatory social cartography and the community's Plan de Vida Güeta. The proposal commits to undertaking a formal free, prior and informed consent process prior to implementation of any activities that may affect Indigenous territories, sacred sites, ceremonial routes or other culturally significant areas. In the event consent is not granted or withdrawn, the relevant activities will immediately be suspended. Potential risks and mitigation measures have been identified in consultation with affected Indigenous Peoples and build on culturally appropriate approaches, in alignment with Indigenous governance structures and cultural protocols. Project co-benefits include strengthening of traditional productive practices, recovery of medicinal plant species, recognition of women's knowledge and leadership roles, and reinforcement of Indigenous governance and territorial stewardship. The project will support the protection and promotion of Indigenous knowledge systems, including through the incorporation of traditional ecological knowledge into restoration and livelihood activities, and the conservation of traditional seed and medicinal plant practices. In line with their roles and functions, the Indigenous Peoples Advisory Group is available to provide advice to the accredited entity and executing entities. In line with the GCF Indigenous Peoples Policy, the GCF Indigenous Peoples Focal Point will be available for assistance at any stage, including before a claim has been made.

47. **ESS 8: Cultural heritage.** The proposal includes chance find procedures consistent with Colombian legal requirements and good international practice. These procedures establish clear responsibilities and response measures in the event that tangible or intangible cultural heritage resources are identified during project implementation.

48. **Implementation arrangements.** The project will be implemented by CI as the accredited entity, working closely with national and local partners responsible for ecosystem restoration, sustainable agriculture, water governance and community engagement. Implementation is organized around a watershed-scale model that combines on-the-ground conservation and livelihood interventions with institutional strengthening and the development of long-term financing mechanisms for water resilience. Oversight and coordination will be provided through established project governance structures, including technical and decision-making bodies responsible for implementation planning, monitoring, safeguards oversight and adaptive management. E&S risk management responsibilities are integrated into project implementation arrangements through the ESIA, the ESMP, stakeholder engagement processes, grievance mechanisms, and environmental and social management system requirements for sub-grantees, ensuring compliance with GCF and accredited entity policies throughout project execution.

49. **Stakeholder engagement.** The project's stakeholder engagement approach is guided by a dedicated stakeholder engagement plan that promotes inclusive, culturally appropriate and

gender-responsive consultation throughout the project cycle. Stakeholder engagement focuses on Indigenous Peoples, local communities, landowners, producer associations, government institutions, civil society organizations, and other actors affected by or involved in project activities. The stakeholder engagement plan establishes processes for ongoing information disclosure, participation in project planning and implementation, feedback collection, and grievance resolution through a project-level GRM, with the objective of strengthening local ownership, transparency and the sustainability of the project outcomes.

50. **Grievance redress mechanism.** The project's GRM will be implemented by CI and CI Colombia, building on existing institutional accountability mechanisms and project-level complaints channels to provide an accessible, transparent and survivor-centred process for addressing concerns related to project implementation. The GRM includes procedures for receiving, assessing, resolving and monitoring grievances, as well as provisions for confidentiality, non-retaliation, anonymous reporting and differentiated handling of SEAH-related complaints. The mechanism is designed to be accessible to Indigenous Peoples and other vulnerable or disadvantaged groups and will be integrated within ongoing stakeholder engagement activities. The proposal indicates that the project-level GRM will be operational within the first three months of project approval.

51. **Sexual exploitation, abuse and harassment**. The proposal demonstrates contextual SEAH risks, which are elevated by entrenched gender inequalities, high levels of GBV, and the underreporting of protection-related incidents in remote rural areas. The gender assessment identifies women's limited agency, mobility constraints, and economic dependence as factors that may increase vulnerability to exploitation and abuse. The proposal also recognizes that climate-related shocks can exacerbate existing protection risks, while field-based technical assistance, restoration brigades, and community engagement activities may increase interactions between project personnel and community members. These risks have been appropriately identified and assessed in accordance with the GCF RESP and good international safeguarding practice.

52. To address these risks, the proposal includes mandatory prevention of sexual exploitation and abuse (PSEA) training, codes of conduct, gender-sensitive implementation approaches, and measures to reduce barriers to women's participation, such as childcare support, safe transportation, and tailored consultations. The project will also engage men and community leaders to address harmful social norms and reduce potential backlash. SEAH-related complaints will be managed through a dedicated GRM focal point and Gender Specialist, supported by confidential reporting channels, survivor-centred referral pathways, and existing national services.

53. The grievance redress mechanism is designed to be survivor-centred and SEAH-sensitive, providing multiple, confidential, and accessible reporting channels linked to referral pathways and existing national support services. Roles and responsibilities are clearly defined, safeguarding requirements are integrated into implementation arrangements, and ongoing monitoring and stakeholder engagement will support the effective identification, reporting, and management of SEAH risks throughout project implementation.

54. Overall, the project's approach is consistent with the GCF RESP and good international practice, incorporating proportionate measures to prevent, identify, and respond to SEAH incidents while supporting the safe, inclusive, and meaningful participation of women and vulnerable groups throughout implementation.

4.2 Gender policy

55. The proposal demonstrates alignment with the GCF Gender Policy through the preparation of a project-specific gender assessment and a comprehensive gender action plan

(GAP) that are appropriately integrated into the project design and implementation arrangements.

56. The gender assessment identifies persistent gender inequalities affecting women in Colombia, particularly in rural areas, including limited access to land ownership, finance, productive resources, leadership positions and decision-making processes. It further recognizes GBV as a significant contextual risk. The assessment demonstrates that climate change impacts in the Bogotá River Basin are differentiated by gender and exacerbated by existing inequalities in access to resources, livelihood opportunities and adaptive capacity. Women face disproportionate climate-related burdens due to their responsibilities for water collection, household food security and caregiving, while structural barriers to land, credit, technical assistance and productive assets constrain their ability to adopt adaptation measures.

57. The findings of the gender assessment have informed project design and are reflected in the GAP objectives and activities. The project seeks to ensure that women and marginalized groups equitably access and benefit from adaptation, restoration and value-chain interventions, while strengthening women's agency, decision-making power, and control over resources within households, productive systems and water governance structures. Project activities – including climate-resilient production systems, ecosystem restoration, conservation measures and payment for ecosystem services mechanisms – incorporate measures to promote equitable participation and benefit-sharing.

58. The proposal identifies key gender-related risks, including the potential exclusion of women from project benefits due to unequal land tenure arrangements, barriers to accessing finance and gender-blind incentive mechanisms. It also identifies risks of GBV and SEAH during implementation. To address these risks, the project incorporates targeted mitigation measures, including gender-responsive financing mechanisms that are not solely linked to land ownership, co-signed adaptation agreements to strengthen women's control over project-supported resources, participation targets and leadership support for women in governance structures, and measures to address time and mobility constraints, including childcare and safe transportation support. The project further includes GBV and SEAH prevention and response measures, including referral pathways and awareness-raising activities consistent with a survivor-centred approach.

59. The implementation arrangements include dedicated gender expertise to support GAP delivery and monitoring, as well as a specific budget allocation for GAP implementation. The GAP includes actions, indicators and targets designed to monitor progress towards gender equality outcomes and women's empowerment throughout the project's lifecycle.

60. Overall, the proposal adequately identifies and addresses gender-differentiated vulnerabilities, barriers and risks; it also demonstrates compliance with the requirements of the GCF Gender Policy.

4.3 Risks

4.3.1. Overall project assessment (medium risk)

61. The project is assessed as medium risk for two reasons. First, the GCF contribution is provided entirely as a grant, so GCF bears no credit or repayment risk, and the accredited entity, CI, is an experienced GCF-accredited organization with a long-standing presence in Colombia and full fiduciary oversight of the executing entities. Second, the E&S risk category is B, which is manageable. The rating is not lower because delivery is subject to several material execution risks that cluster around timing and external conditions: a compressed political window, with the national Administration changing in August 2026 and the Bogotá district contracting authority lapsing ahead of the 2027 territorial elections; a weakened macro-fiscal environment

and heavy reliance on largely in-kind public co-financing, of which 41 per cent (SDA) rests on a non-binding letter of intent; and a regulatory transition in the water tariff framework that underpins the component 2 revenue pathway. These are substantially mitigated to low or medium residual levels through FAA structuring, per-tranche co-financing conditions precedent and the reallocation provision.

4.3.2. Accredited entity/executing entity's capability to execute the current project (medium risk)

62. CI (the accredited entity through its CI–GCF Agency), established in 2000, is a private non-profit organization with a long-standing track record in environmental and sustainable development programming in Colombia. CI will sign and administer all grant agreements and will retain fiduciary oversight of both executing entities. Delivery will be channelled through the two executing entities – CI Colombia, responsible for component 1 and the tariff sub-activities under activity 2.1.1, and Fondo Acción, responsible for component 2 – with technical support from The Nature Conservancy (TNC) and Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (IAvH). Two points of caution emerge from the capability assessment. First, the structure is grant-intensive and multi-entity: roughly USD 22.77 million of the GCF grant (close to half) will be disbursed onward as grants to technical partners and to numerous community organizations and smallholder beneficiaries, many in remote areas with limited financial management capacity. This raises the risk of weak audit trails and expenditure that cannot be tied to verified delivery. Second, Fondo Acción will manage approximately USD 13.2 million under the project, materially above the USD 10 million ceiling attached to its GCF accreditation. However, several factors mitigate these exposures: the retained oversight of CI, its administration of all sub-grant agreements, and monitoring through annual performance reports and audited financial statements. The Secretariat will confirm that appropriate accredited entity supervision is provided for in the FAA and accreditation master agreement (AMA).

4.3.3. Project-specific execution risks (medium risk)

63. **Political and administrative transition risk.** The national Administration of Colombia changed in August 2026, shortly before B.46, with an accompanying turnover of the national designated authority. At district level, the incoming Bogotá Administration takes office in January 2028. A delay to FAA execution during the national transition could result in a delay to disbursements and implementation. Mitigation rests on finalizing the FAA for signature at B.46 and converting the SDA letter of intent into a binding commitment instrument through legal contract.

64. **Macro-fiscal and co-financing risk.** Colombia enters implementation from a weakened macro-fiscal position, with the national fiscal rule suspended through 2027, central Government deficits above 6 per cent of GDP, sovereign ratings at speculative grade at S&P and Fitch, and inflation and the policy rate elevated. This exposes the fiscal capacity of the public co-financiers to sustain their contributions. Co-financing is concentrated in in-kind contributions and depends in particular on SDA, whose USD 12.78 million (41 per cent of co-financing) rests on a non-binding letter of intent with enabling conditions. A covenant is proposed in the legal contract regarding proportional disbursements between GCF and SDA co-financing.

65. **Climate and natural hazard risk.** A strong El Niño is forecast to peak in late 2026 and early 2027, coinciding with project inception; the 2023–2024 event reduced the Chingaza reservoir system by roughly 15 per cent and triggered city-wide rationing. Seedling mortality and delayed ecosystem establishment would reduce hectares effectively restored, extend timelines and increase costs. The project's mitigation efforts rest on adaptation-oriented siting of nurseries and restoration areas, selection of climate-tolerant native species, a budgeted ESMP

climate-contingency fund, and a reallocation provision in the term sheet permitting redirection of budget to replanting and repair.

4.3.4. Project viability and concessionality

66. The GCF contribution is requested entirely as a grant. The justification for a grant instrument rests on the public-good nature of the interventions: watershed conservation, ecosystem restoration and hydrological benefits that are not owned by, and do not generate direct returns to, the beneficiaries who undertake them. Two features warrant attention relating to the minimum-concessionality principle. First, output 1.2 will be approximately 77 per cent funded by GCF and will support activities that generate private revenue, so roughly USD 13.8 million of the GCF grant would fund revenue-generating activity. Second, and most significantly, the EFA models a financial mechanism under component 2 in which corporate stewardship contributions generate revenues during and after the project period, and treats a portion of these as reinvestment for expansion of restoration.

4.3.5. GCF portfolio concentration risk (low risk)

67. In case of approval, the impact of this proposal on the GCF portfolio concentration in terms of results areas and single proposal would not be material.

4.3.6. Compliance risk (medium risk)

68. The project will be implemented through a multi-tiered delivery model under which CI, as the accredited entity, retains overall fiduciary oversight while CI Colombia and Fondo Acción manage implementation through sub-grants to local organizations, producer associations, community water utilities and other delivery partners. Although the centralized oversight and established fiduciary framework of CI provide a strong control environment, the extensive use of sub-grants, multiple implementing entities, procurement activities and direct transfers to numerous downstream beneficiaries increase inherent risks relating to money-laundering, terrorist financing, fraud, sanctions and prohibited practices.

69. The mitigation measures are comprehensive and embedded throughout the project lifecycle. CI has applied a risk-based compliance framework incorporating anti-money-laundering and countering the financing of terrorism (AML/CFT) screening, sanctions and beneficial ownership verification, counterparty due diligence, periodic reassessments, and enhanced due diligence where elevated risks are identified. The executing entities and sub-grantees are subject to financial capacity assessments, contractual compliance obligations, quarterly financial reporting, independent audits, procurement oversight, site visits, compliance training, confidential grievance mechanisms and spot-check reviews by the CI–GCF Agency. No sub-grant agreements, disbursements or transfers of in-kind goods may occur until AML/CFT screening requirements have been completed and recipients cleared.

70. Residual compliance risks remain due to the scale of downstream implementation, the number of counterparties and reliance on multiple sub-grantees across diverse activities. Nevertheless, the layered due diligence, centralized fiduciary oversight, structured procurement and financial controls, ongoing monitoring, and established escalation and audit mechanisms of CI substantially mitigate these risks. On balance, the residual compliance risk is assessed as medium and considered acceptable given the strength of the accredited entity's control framework and oversight arrangements.

4.3.7. Summary risk assessment and recommendation

Summary risk assessment	Risk assessment

Overall project	Medium	Medium risk classification as a result of the experience of the accredited entity in the country and the lack of a credit risk due to the request for a full grant, notwithstanding the existence of a compressed political window, with the national Administration changing in August 2026 and the Bogotá district contracting authority lapsing ahead of the 2027 territorial elections.
Accredited entity/executing entity capability to implement the project	Medium	
Project-specific execution	Medium	
GCF portfolio concentration	Low	
Compliance	Medium	

4.4 Fiduciary

71. CI, through its CI–GCF Agency, is the accredited entity; CI Colombia is the coordinating executing entity and Fondo Acción the second executing entity, with TNC and IAvH as technical partners. Under the AMA, the CI–GCF Agency holds overall fiduciary oversight – covering monitoring and supervision through progress reporting, audits and site visits, and the review and approval of the executing entities' annual workplans and budgets – and applies the CI certified financial management and procurement systems. CI enters into an internal grant agreement with CI Colombia and a subsidiary agreement with Fondo Acción, each defining the respective fiduciary, reporting, procurement and safeguards obligations.

72. The GCF grant of USD 45.72 million will flow from GCF to CI and onward to the two executing entities and their sub-grantees – IAvH, TNC and numerous community organizations and beneficiaries – with roughly USD 22.77 million (close to half of the grant) disbursed onward as grants. No GCF funds will finance the payments-for-conservation incentive scheme, which will be funded entirely from co-financing (by SDA, the Gobernación de Cundinamarca and EAAB). The direct fiduciary exposure of GCF is therefore confined to restoration and implementation sub-grants rather than to individual incentive payments. Strategic guidance will be provided by a project steering committee, chaired by SDA and supported by a project management unit, with technical and private sector advisory committees serving in an advisory capacity only.

73. The principal fiduciary exposure arises from the grant-intensive, multi-entity structure: the high transaction volume across the two executing entities and downstream recipients raises the risk of weak audit trails. Furthermore, Fondo Acción will manage approximately USD 13.2 million, above the USD 10 million ceiling of its GCF accreditation. These exposures are mitigated by the accredited entity's retained oversight and administration of all sub-grant agreements, its certified systems, the exclusion of GCF funds from beneficiary incentives, and monitoring through annual performance reports and audited financial statements.

4.5 Results monitoring and reporting

74. Overall, the proposal is assessed to be aligned with the GCF results monitoring and reporting requirements. As an adaptation project, Building Water Resilience in Bogotá and the Region aims to reach 3,013,383 direct beneficiaries and 7,083,799 indirect beneficiaries across three GCF adaptation results areas. The methodologies and assumptions applied to estimate the numbers of beneficiaries appear to be firm as the scope of the beneficiaries is closely bound to the project's intervention areas.

75. While the outcome in the theory of change is framed in relatively broad terms rather than as specific and measurable changes, the overall intervention logic linking the identified

barriers to activities, outputs and outcomes is considered to be coherent. The causal pathways are clearly articulated and provide a sound basis for explaining how the project's interventions are expected to contribute to the intended outcomes. Specific adaptation benefits embedded within the project outcomes are captured in the logical framework with relevant GCF core and supplementary indicators. The logical framework also identifies several co-benefits along with direct adaptation results.

76. The logical framework includes relevant GCF core and supplementary indicators, together with appropriate project-specific indicators, to measure the project's expected results. The monitoring and evaluation plan (in annex 11 of the funding proposal) has been found to follow the appropriate requirements as it includes the entire list of the logical framework indicators while ensuring consistency between the data (with sources) and set means of verification. The monitoring and evaluation budget provided is generally aligned with the requirements of the Evaluation Policy for the GCF.

4.6 Legal assessment

77. The legal arrangements for the project will be based on the amended and restated accreditation master agreement between GCF and the Accredited Entity which has been signed and is effective (the "AMA"). Consequently, they will consist of a project-specific funded activity agreement which incorporates the AMA.

78. The Accredited Entity has not provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

79. The proposed project will be implemented in the Republic of Colombia (the "Host Country"), country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this Host Country, which risks need to be further assessed. Moreover, the ability of GCF to undertake redress activities and/or investigations in the Host Country may be hindered due to the absence of privileges and immunities for relevant GCF personnel.

80. Therefore, it is recommended that the Board considers whether disbursements of GCF proceeds should only be made after GCF has obtained satisfactory protection against litigation and expropriation in the Host Country, or has been provided with appropriate privileges and immunities for GCF and its personnel.

81. GCF does not hold industrial property protection for its combined logo (sphere with the words "Green Climate Fund") in the Host Country. This means that, while industrial property protection is pending, (i) GCF's combined logo could be used by other entities or individuals (including those seeking to impersonate GCF) and (ii) there could be legal claims by entities or individuals asserting their protected trademark, opposing GCF using its combined logo in the country. In both cases, this may lead to reputational risk.

82. To address the matters raised in this section and facilitate prompt implementation of the project, it is recommended that any approval by the Board is made subject to the following conditions:

(a) Submission by the Accredited Entity to GCF of a certificate or legal opinion, in form and substance satisfactory to the GCF Secretariat, within 120 days after Board approval, confirming that the Accredited Entity has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed project;

(b) Signature of the funded activity agreement in a form and substance satisfactory to the GCF Secretariat within 180 days from the date of Board approval, or the date the Accredited Entity has provided a certificate or legal opinion confirming that it has obtained all final internal approvals, whichever is later; and

(c) Completion of the legal due diligence to the satisfaction of the GCF Secretariat prior to the signature of the funded activity agreement.

Independent Technical Advisory Panel's assessment of FP323

Proposal name:	Building Water Resilience in Bogotá and the Region
Accredited entity:	Conservation International Foundation
Country/(ies):	Colombia
Project/programme size:	Medium

I. Assessment of the independent Technical Advisory Panel

1.1 Overview

1. The ten million people living in Bogotá and surrounding municipalities (hereinafter referred to as the Bogotá Region) are experiencing increasing water insecurity because of growing climate variability, including intense rainfall, heatwaves and prolonged dry periods, compounded by the gradual degradation of native high Andean ecosystems by unsustainable land-use practices in the region's upstream catchments. These changes have reduced the capacity of the landscape to capture, regulate and store water for livelihood uses and urban water supplies.

2. Ecosystem restoration and improved land-use practices can ameliorate or reverse these trends; however, there is a need to scale up and monitor their implementation and impact. To this end, Component 1 proposes a "watershed transformation model" that combines ecosystem conservation and restoration, climate-resilient productive systems, and strengthened water management and monitoring. Component 2 seeks to generate the necessary financial flows to sustain the protection and productive use of the watershed.

3. The proposed project has a total budget of USD 77.7 million, with a USD 45.7 million grant requested from the GCF and co-finance amounting to USD 31 million from various public and private sources (see section 1.6 below for detailed breakdown). The budget distribution across the three main outputs is shown in table 1.

Table 1: Budget by output

Budget by output	Project total		GCF grant	
	Amount (USD)	%	Amount (USD)	%
Output 1.1. Strategic high Andean ecosystems restored and conserved to yield hydrological benefits	32,558,134	42%	11,077,163	24%
Output 1.2 Climate-resilient transformation of productive practices to yield hydrological benefits and resilient livelihoods	31,053,631	40%	23,993,683	52%
Output 2.1 Financing instruments and mechanisms for scaling water volumetric benefits	7,640,452	10%	6,953,356	15%
Monitoring and evaluation	1,798,297	2%	1,586,918	3%
Project management costs	3,688,404	5%	2,105,882	5%
Total:	**76,738,917**	100%	**45,717,002**	100%

Source: Budget summaries (annex 4: Project budget).

4. The Bogotá Region is already water-stressed, with rapid urbanization, intensive agriculture and industrial development converging to cause complex water management challenges. In 2024, Bogotá faced one of the worst droughts in its history, when the city's main reservoir dropped to just over ten per cent of its capacity due to an intense El Niño event. According to the World Bank, "The year 2024 became one of the driest on record for the city's potable water supply systems since the 1960s. The fear of 'Day Zero' – the moment when taps would run dry – became an unsettling and uncommon reality."[1] Moreover, for the 2026–2027 season, increasing temperatures and reduced rainfall are projected in Colombia as the world faces a super El Niño. Anticipating the major effects this may have on water supplies and energy generation, the Government of Colombia has already declared an emergency.[2]

5. The project's interventions will concentrate on 12 prioritized watersheds in four selected landscape areas of the Bogotá Region where hydrological outcomes are expected to be maximized within the implementation period. The selected areas are (1) the Upper Bogotá River watershed and in Villapinzón; (2) Guandoque-Salitre-Susagua in Guandoque; (3) San Francisco-Aves-Chipata in Tominé; and (4) Curubital-Quebrada Yomasa-Quebrada Aguadulce-Quebrada Paso Colorado in Tunjuelo.

6. The two executing entities (EEs) are Conservation International Colombia (CI-Col) and Fondo para la Acción Ambiental y la Niñez (Fondo Acción). CI-Col is the Colombian branch of Conservation International Foundation (CI) which, through its CI-GCF Agency, is an accredited entity (AE) with the GCF. Fondo Acción, established in 2000 as a private, non-profit organization, is accredited by the GCF as a national direct access entity.

1.2 Impact potential *Scale: High*

7. The Bogotá Region, home to over 10 million inhabitants, includes Bogotá city and 33 surrounding municipalities. Socioeconomic conditions vary significantly. Rural poverty is widespread: although Bogotá accounts for almost a third of the national GDP, more than half of the municipalities in its area of influence have fewer than 20,000 inhabitants, and they depend largely on subsistence agriculture and monoculture. However, across the region, municipal water supply systems, community-managed aqueducts and rural livelihoods are highly dependent on the local hydrology.

8. The water system depends greatly upon the highly exposed Andean *páramos* (high-altitude grass and shrublands with wetland functions) and high Andean forests that regulate run-off, sustain dryseason baseflows, retain sediments and protect water quality. Climate change is affecting these landscapes through increasing temperatures and greater precipitation variability, including more intense rainfall events and longer dry periods. Both business-as-usual and high-emission scenarios imply reduced nocturnal cooling and increasing heat stress across both highland and lowland areas, and rainfall changes are equally significant. These changes stand to raise the likelihood of both flash-flood conditions and dry-season water stress.

9. Moreover, the *páramos* continue to face pressures from coal mining, quarrying, livestock pastures, potato cultivation and rural housing development, which together with climate pressures contribute to soil degradation, stream sedimentation and water pollution. At the same time, water infrastructures are stressed by rapid urban growth and ageing systems, along with recurring droughts and climate variability.

[1] Source: https://blogs.worldbank.org/en/latinamerica/mantenerse-unidos-tiempos-crisis-lecciones-gestion-sequias-bogota.
[2] See https://portal.gestiondelriesgo.gov.co/Paginas/Noticias/2026/Gobierno-declara-situaci%C3%B3n-de-desastre-nacional-para-anticipar-los-efectos-de-El-Ni%C3%B1o-2026-2027.aspx and https://www.ideam.gov.co/fenomeno-del-nino.

10. The project addresses a complex of problems relating to water security, ecosystems, livelihoods and the region's economy. Pressures from both climate (summarized in table 2) and non-climate hazards are expected to intensify over the coming decades.

Table 2: Overview of climate hazards, impact pathways and proposed solutions

Climate hazard	Impact pathway	Exposed/vulnerable system	Why risk increases	Solutions
Increased temperature and heat extremes	Higher evapo-transpiration, soil moisture loss, ecosystem stress and reduced water-regulation capacity	*Páramos*, high Andean forests, wetlands and upper-basin soils	Strategic ecosystems become less able to regulate run-off and sustain baseflows, affecting downstream water security	Conservation and restoration of the high Andean ecosystems, including active and passive restoration, soil recovery and ecological connectivity
More irregular precipitation and shorter wet periods	Reduced sustained rainfall, lower infiltration, greater seasonal water variability and increased dry-period stress	Water supply watersheds, rural communities, productive systems and urban water users	Water availability becomes less reliable, especially where demand is high and regulation capacity is degraded	Nature-based solutions to increase infiltration, soil-water retention and hydrological regulation at the plot, landscape and watershed scale
Extreme rainfall events	Increased surface run-off, erosion, sediment transportation, flooding and water-quality deterioration	Upper watersheds, community water systems, reservoirs and downstream users	Degraded landscapes generate higher run-off peaks and sediment loads, increasing treatment needs and infrastructure stress	Restoration, revegetation, sustainable productive systems and on-farm water management to reduce run-off and erosion
Drought and prolonged dry periods	Reduced baseflows, water scarcity, pressure on reservoirs and higher competition for water	Bogotá's water supply system, rural aqueducts, smallholder producers and ecosystems	Existing water systems and rural municipalities have limited technical, financial and institutional capacity to buffer prolonged deficits	Climate-resilient productive practices, water-use efficiency in community-run water systems and improved watershed management
Increased wildfire conditions	Loss of vegetation cover, soil degradation, biodiversity loss and reduced hydrological regulation	*Páramos*, high Andean forests and productive landscapes	Fire-prone and degraded areas lose ecological functionality, increasing downstream hydrological risk	Ecosystem protection, restoration, sustainable land management and community-based prevention measures
Compound climate variability, including El Niño–Southern Oscillation-related extremes	Alternating drought, intense rainfall, landslides and hydrological instability	Regional water supply systems and intervention landscapes	Climate variability interacts with ecosystem degradation, urban demand and institutional constraints, producing systemic water security risk	Integrated watershed resilience model combining nature-based solutions, livelihoods, governance and sustainable financing

Source: IDOM, 2025 (annex 2; feasibility study, p.55).

11. The priority intervention landscapes that are the focus of this project were identified on the basis of an analysis of climate risk and of non-climate drivers such as land-use dynamics, ecosystem degradation, socioeconomic pressures and institutional conditions. The landscapes' role in supporting reservoirs and local urban water supplies was given high priority in the selection process, along with the anticipated demonstration effect by including ecosystems where protection, restoration and agricultural transformation is needed.

12. The proposed project interventions aimed at improving water security in the region involve:

(a) Surveillance, monitoring and training in protected areas to prevent ecosystem degradation and land-use conversion. The Colombian regional environmental

authorities, namely the Regional Autonomous Corporation of Cundinamarca and parts of the Boyacá region (Corporación Autónoma Regional de Cundinamarca; CAR) and the Regional Autonomous Corporation of Guavio(Corporación Autónoma Regional del Guavio; CORPOGUAVIO) will implement and co-finance the monitoring, surveillance and control activities in protected areas of their jurisdiction (activity 1.1.1.1);

(b) Conservation agreements and payments to landowners to reduce ecosystem loss. Fondo Acción coordinates the conservation payments which are provided by the Bogotá District Secretariat of Environment (Secretaría Distrital de Ambiente; SDA) the Government of Cundinamarca and the Bogotá Water and Sewage Company (Empresa de Acueducto y Alcantarillado de Bogotá; EAAB) (activity 1.1.1.2); [3]

(c) High Andean ecosystem restoration to recover hydrological functions in areas already eroded, compacted, grazed upon or cultivated. The capacity of the systems to capture, store and gradually release water is to be restored by passive (natural regenerative processes) and active restoration (e.g. planting of native species and soil stabilization works). Co-financing will be provided by SDA, EAAB and private sources (Coca-Cola Foundation and AB InBev) (activities 1.1.2.1 and 1.1.2.2);

(d) Climate-resilient farm plans will be developed to change the production landscape, turning dairy production into silvopastoral systems (activity 1.2.1.1), bringing agroecological practices into potato production (activity 1.2.1.2) and fostering diversification (activity 1.2.1.4) along with efficient water use and water-saving measures (activity 1.2.1.3) across agricultural lands. This is co-financed by EAAB, Coca-Cola Foundation and AB InBev.

13. The land area to be put under restoration or sustainable management through the proposed project amounts to nearly 10,000 hectares. The funding proposal states (para. 124) that the expected performance against investment criteria is: "Interventions across 12 prioritized upper watersheds are expected to improve watershed regulation through 4,756 ha under conservation, 2,032 ha under restoration and 2,409 ha under sustainable and climate-resilient production systems". This is consistent with the anticipated results to be reported under Adaptation Result Area 4 (ARA4), ecosystems and ecosystem services, in section E.3 (p.47) of the funding proposal, and the numbers indicated in annex 24 (on beneficiaries calculations).[4]

14. The impact of the project interventions on the hydrological functioning of the system has been assessed using volumetric water benefit accounting (VWBA), which was developed by the World Resources Institute (WRI) and partners.[5] VWBA 2.0 is a framework for quantifying, tracking and communicating the benefits of water stewardship activities in terms of resulting increased water availability and, according to the WRI website, is the "unofficial industry standard for companies that invest in water stewardship activities."[6]

15. Results of this model suggest that the project interventions could avoid or reduce run-off by nearly three million cubic metres annually. This provides an initial basis for monitoring, reporting and demonstrating the link between ecosystem-based adaptation and downstream water security. Using the modelling, outcome 1 (the watershed transformation model) achieved the highest hydrological benefits, and targets 2,940,584 m^3 of water benefits per year

[3] No GCF funding will be used for the conservation payments.
[4] However, in the initial activity description in the funding proposal, activity 1.1.1 "aims to conserve 26,071 ha of native high Andean ecosystems" (para. 64). The independent Technical Advisory Panel (iTAP) has not been able to reconcile these figures.
[5] See https://www.wri.org/research/volumetric-water-benefit-accounting-2-0.
[6] Available at https://www.wri.org/update/new-wqba-vwba-guidebooks-launched.

(disaggregated by watershed and intervention type) by the final (fifth) year of the project (funding proposal, section E.5 and annex 24).

16. Regarding beneficiaries, the proposed project is to directly benefit over 3 million people, including farmers, landowners, producer associations and community water organizations in the prioritized watersheds. The benefits include restored and conserved ecosystems, climate-resilient productive practices, better access to markets that value water-friendly products and, ultimately, improved water services despite the evolving impacts of climate change.

17. A further 7 million indirect beneficiaries include the urban and peri-urban population supplied by EAAB and other users of the Bogotá Region's water resources. These people are expected to benefit from a more reliable water supply even in the face of a changing climate.

18. Institutional beneficiaries include the water utility, municipal and regional authorities, environmental regulators and private companies, which are to gain access to new methodologies for verifying hydrological outcomes for planning, reporting and investment decision-making, along with decision support tools and investment frameworks that include integrating climate risk management.

19. In summary, the proposed interventions are timely and needed as Colombia and the Bogotá Region brace to manage compounding socioeconomic and climatic pressures. The impact potential is assessed to be High.

1.3 Paradigm shift potential *Scale: Medium to high*

20. Component 2 seeks to generate the financial flows needed to maintain and scale up the interventions in component 1. To do this, the project seeks to activate mechanisms that are already enabled by existing laws and regulatory frameworks, as summarized below:

(a) Activity 2.1.1 aims for the incorporation of an environmental investment component (EIC) into EAAB's water tariff, creating a sustainable financing mechanism for watershed protection and climate adaptation investments in the Bogotá Region,[7] noting that although "regulation allows utilities to incorporate an EIC, neither EAAB nor any other major utility in Colombia has operationalized it yet" (funding proposal, para. 71). The funding proposal and the question-and-answer exchanges between the iTAP and the AE suggest that the non-application (to date) of the EIC into water tariffs is due to technical shortcomings.[8] Project activities are to address those gaps, activate the EIC component in the tariff through EAAB as a demonstration, and build a path for replication and scalability across Colombia;

(b) Activity 2.1.2 seeks to operationalize a long-term financial mechanism for private investment; namely, a watershed-scale vehicle through which companies can support conservation agreements and climate-resilient farm plans; monitoring and expansion of interventions in priority watersheds that are relevant to their operations; and supply

[7] "The EIC means that utilities can recover the costs of eligible environmental investments linked to source-water protection and hydrological regulation. Eligible investments include ecosystem restoration, conservation of strategic ecosystems, riparian restoration, aquifer recharge protection, water-resource monitoring, land acquisition for conservation, and Payments for Environmental Services" (funding proposal, para. 71). The new regulation incorporates nature-based solutions/payments for ecosystem services into the tariff model, whereas previous regulation had "green spending" as an optional add-on.

[8] The identified gaps include "the absence of hydrological baselines, trend analyses, and scenario-modelling capacities for watershed regulation services; the lack of a prioritized and costed investment portfolio aligned with eligible environmental investment and regulated cost categories; insufficient evidence on the cost-effectiveness of watershed investments; and the absence of a reporting architecture capable of generating the indicators, regulatory reports, and supporting cost records required by CRA [Comisión de Regulación de Agua Potable y Saneamiento Básico] and SSPD [Superintendencia de Servicios Públicos Domiciliarios]" (funding proposal, para. 71).

chains and water stewardship commitments. In response to a question from the iTAP, the AE confirmed that key existing actors in this space, particularly the Fondo de Agua/Corporación AguaSomos, had been consulted and would be involved.

21. Not all activities of component 1, however, should need external financial support to continue to function. The following activities could, at least in principle, be able to become self-financing:

(a) Commercialization and market access for water-regulating products (activity 1.2.2). This involves developing business models for climate-resilient production systems along with commercialization and market access initiatives through producer associations. The iTAP notes that this activity could potentially look more into the demand side and consumers' willingness to pay a premium for (certified) water-positive or ecologically friendly products;[9]

(b) Water-use efficiency measures in water supply systems. This activity supports macro-metering; reduction of leakage and water loss; pressure management and the application of efficient water-use practices and water treatment in pressure management; and the application of efficient water-use practices and water treatment in 40 community-run water supply systems (activity 1.2.3). To the extent that service quality and reliability can be enhanced, such measures would be associated with increasing willingness to pay for services and the potential for improving financial performance of the systems, by reducing the level of non-revenue water.

22. The support to these potentially self-financing activities suggests a very high paradigm shift potential in terms of catalysing impact beyond a one-off investment and its inherent potential for replication and scaling up. Notwithstanding, in terms of paradigm shift potential the iTAP also assesses the potential for knowledge and learning and contributions to the enabling environment and the regulatory framework and policies. The project proposal is very clear that it seeks to operate within the existing regulatory framework, which indeed is already highly conducive to watershed conservation activities.

23. The funding proposal indicates that "The paradigm shift sought by the project is the transition from fragmented and project-based watershed interventions to an integrated watershed resilience model in which conservation, restoration, climate-resilient production systems and water management are implemented together to improve hydrological regulation, at the plot and watershed level, and strengthen climate resilience" (para. 130). Although the model of combining conservation with resilient production seems very sensible, the iTAP notes the inherent limitations of any (externally financed) project in helping transition from fragmented project-based interventions to integrated ones, since such a project is in some senses part of the problem it seeks to solve. The possible contribution to more coherent integrated watershed management is discussed further in section 1.5 (below) on country ownership.

24. One way in which the proposed project seeks to overcome fragmentation is by helping to establish sustainable financing pathways to support the maintenance, scaling and continued implementation of watershed resilience interventions beyond the project lifetime, from both private and public sources. The operationalization of the EIC into tariffs seems timely and should solidify the EAAB commitment to financing water-source and environmental protection. The initial regulation enabling utilities to voluntarily add an environmental surcharge to the

[9] In the written question-and-answer exchange, the AE referred to a follow-up assessment of the Alta Montaña GEF Project (2015–2021), which found that many of the practices introduced during that project, including silvopastoral systems, water-source protection, restoration activities, household gardens, beekeeping and ecotourism-related activities, were still being maintained and, in many cases, expanded by participating families. The study found that these practices contributed to improved household income, food security and resilience, suggesting that adoption is more likely to be sustained when interventions create clear economic and social benefits.

customer tariff in 2019 coincided with the Covid-19 pandemic, and EAAB did not change the tariff then. With the 2024 drought and 2026 El Niño drought emergency, public awareness is high and there is likely to be a solid understanding of the need to contribute to watershed investment also through tariffs. Although the EEAB has not yet activated the EIC in the transition to the new tariff framework, it could do so through upcoming annual tariff renewals. As noted in the draft Secretariat assessment, this is a point for close project monitoring.

25. Regarding knowledge management, the iTAP posed several questions to the AE regarding what could be learned from other similar initiatives, such as the many water funds across Latin America. The AE confirmed that "During the design stage, CI developed a mapping exercise of past and ongoing local, national and international efforts. However, due to limitations in space, the information was not included in annex 2, but rather selected information was mentioned when relevant." Probing this further, iTAP understood that the major lesson learned from other initiatives (e.g. the Water Fund in Quito, Ecuador[10]) was the importance of having an overarching coordinating mechanism. Regarding existing initiatives in Colombia, the iTAP notes that the funding proposal package contains little discussion of lessons learned from other initiatives in the Bogotá Region, such as the Fondo de Agua/Corporación AguaSomos, or from the several other water funds existing in Colombia and related broader water security (action) plans.[11] It is noted, nonetheless, that many, though not all, of the actors related to other initiatives are involved in the project governance structure.[12]

26. The iTAP notes that the proposed project would stand to benefit greatly from a more explicit gathering of insights and lessons learned from other prior and ongoing initiatives in this very actively developing area. The iTAP advises the AE to ensure that the project and its guiding committees engage actively in both national and international learning exchanges on ecosystem conservation and restoration, payments for ecosystem services, water funds management, monitoring and benchmarking, and especially their overarching governance.

27. The iTAP notes that it is not easy to counteract the governance fragmentation that comes with project-based development from within the framework of implementing a project. Nevertheless, the proposed project's work to generate the financial flows needed to maintain and scale up watershed interventions improves its chances of having a sustainable impact, and this could be replicated in other regions. Overall, the iTAP assesses the impact potential to be Medium to high.

1.4 Sustainable development potential *Scale: High*

28. The iTAP considers that the project would solidly contribute to sustainable development in Colombia. In particular, it would contribute to Sustainable Development Goals 6 (ensure availability and sustainable management of water and sanitation for all), 13 (take urgent action to combat climate change and its impacts) and 15 (protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss).

29. Co-benefits across environmental, social and economic dimensions will reinforce many other Sustainable Development Goals. The three main co-benefits are:

[10] See https://www.fonag.org.ec/web/wp-content/uploads/2024/06/Sistematizacion-FONAG-Ingles-Web.pdf.
[11] See https://fondoaguasomos.com/, https://plandeaccionsh.fondoaguasomos.com/ and https://regioncentralrape.gov.co/wp-content/uploads/2021/12/PHS_Libro-compilado.pdf.
[12] At the continental level, water sector regulators engage with benchmarking of watershed investments (e.g. through the Association of Water and Sanitation Regulators of the Americas to which the Colombian Water and Basic Sanitation Regulatory Commission (CRA) is affiliated (source: https://www.forest-trends.org/blog/a-new-partnership-with-aderasa-why-water-utility-regulators-are-strategic-levers-for-scaling-nature-based-solutions/).

(a) Co-benefit 1: Strengthened biodiversity conservation – the enhanced hydrological functioning of watersheds bring environmental co-benefits such as biodiversity conservation, improved ecological connectivity, reduced erosion and sediment transport, and protection of the ecosystems that support endemic and threatened species (categorized as "environmental");

(b) Co-benefit 2: Reduced economic costs of water treatment attributable to nature-based solutions measures – the better watershed conditions, including reduced erosion and sediment transport, reduce the need for filtration which reduces water treatment costs in downstream water supplies (categorized as "economic"). The improved water-regulation capacity of watersheds, counteracting the increasing variability of water flows, may also help farmers to plan better and stabilize their incomes;

(c) Co-benefit 3: Reduced greenhouse gas emissions – carbon sequestration is achieved in passive and active restoration and conservation of ecosystems, to the extent to that vegetation cover and biomass increase (categorized as "mitigation").

30. Other important co-benefits may include more reliable rural water services, whose reliable functioning may be additionally important to women and girls who traditionally carry a disproportionate responsibility for ensuring household-level water security.

31. The gender assessment and action plan (annex 8) describes disparities in Colombia and identifies a set of specific gender gaps in relation to project implementation and water governance more broadly. The gender action plan suggests, among other things, that the project should:

(a) Incorporate traditional ecological knowledge in the design and management of restoration plans;

(b) Arrange knowledge exchange sessions;

(c) Establish participatory mapping and monitoring;

(d) Develop eligibility criteria for women without formal land tenure to be rewarded for conservation and restoration activities.

32. The feasibility study (annex 2, section 8.1.1.2) outlines the functioning of conservation agreements and payments for landowners. It includes a reference to "verified land tenure rights" (p.144) as a condition for participating in the conservation agreements and payments. As noted in annex 8 (and reiterated in para. 31.d just above), it would be important to find ways to also benefit women or other social groups that may face discrimination or are less likely to own land.

33. The environmental and social safeguards (ESS) screening report classifies the project as category B, suggesting that its potential adverse environmental and social impacts are few, site-specific, reversible and manageable through mitigation measures. However, as indicated in the environmental and social impact assessment and management plan (annex 6), the project directly intervenes in sensitive ecologies, so most of the ESS standards will be activated to manage project activities.

34. Annex 6.1 (p. 3) outlines the Indigenous Peoples Plan, which is to "guarantee alignment of project activities with the worldview, priorities, and governance structures of the Resguardo Indígena Mhuysqa Chuta Fa Aba – Los Hijos del Maíz, thereby reinforcing their active engagement throughout all phases of the project cycle". The formal process for free, prior and informed consent will be completed before any activities begin in the areas neighbouring Indigenous Peoples.

35. The iTAP finds that CI-Col, through IDOM,[13] has complied with the necessary social investigations and identified important issues relating to traditional knowledge and sacred sites. However, the iTAP did not note those important insights having had any decisive impact on the project design or implementation methodologies. It is therefore recommended that the project go beyond fact-finding and devise ways to incorporate traditional knowledge and Indigenous worldviews into all aspects of implementation and knowledge management. For example, could the project identify ways of not only respecting sacred sites, but also ensuring that the watershed transformation models and corporate stewardship tally better with Indigenous worldviews? How could the VWBA methodology be improved locally through ancient wisdom?

36. Overall, the iTAP assesses the sustainable development potential to be High.

1.5 Needs of the recipient *Scale: Medium to high*

37. Climate change is amplifying water scarcity, flood risks, landslides and socio-environmental tensions in the high mountain areas and their watersheds. These impacts are felt mostly in rural communities where poverty among smallholders heightens their vulnerability to climate shocks.

38. As a country, Colombia is ranked 64 out of 180 countries in terms of vulnerability by the ND-GAIN Country Index and 87 out of 192 in terms of readiness. Despite its status as an upper-middle income country, Colombia is ranked as having relatively low preparedness to address its comparably moderate exposure.[14]

39. Further, Colombia as a nation is very committed to addressing climate change and protecting the environment. It stands out as a forerunner in many areas, for example in its leadership of "the coalition of the willing" to break the deadlock on the energy transition globally. However, in relation to watershed management, the government's responses seem to fall short of the needs. The funding proposal (e.g. paras. 89–90) refers to highly fragmented watershed investment, and the feasibility study (annex 2, p. 58) suggests the need for coordinated watershed financing architecture.

40. The funding proposal highlights that there is a pronounced gap in financing for adaptation and ecosystem restoration in the high mountain territories that supply Bogotá. It suggests that although public and private investments flow into grey infrastructure and urban development, financing for watershed restoration, climate-resilient rural transformation, and nature-based water resilience measures remains limited, fragmented and largely inaccessible to smallholders and local governments. Moreover, where utilities invest in watersheds it has often been through land acquisition; but without active land and ecosystem management these lands may at times be left to deteriorate.

41. The project therefore channels concessional grant resources towards public goods whose future financing will rely on public tariff support and corporate water stewardship and social/sustainability responsibility, as monitored and reported through mechanisms for VWBA.

42. The iTAP assesses the needs of the recipient as Medium to high.

[13] Most annexes have been prepared by IDOM consultants, who were also present in the question-and-answer session between the AE and iTAP. IDOM (from the Spanish: Ingeniería y Dirección de Obras y Montaje) is a global company with headquarters in Spain (https://www.idom.com/en/).

[14] ND-GAIN Country Index rankings, available at https://gain-new.crc.nd.edu/ranking.

1.6 Country ownership *Scale: Medium to high*

43. The project is aligned with national strategies and policies that prioritize water security, ecosystem conservation and regional development. The project has been aligned with Colombia's updated nationally determined contribution, as it includes ambitious mitigation and adaptation targets in water resources, agriculture and ecosystems, and with the national adaptation plan, which identifies water resources and high mountain ecosystems as priority adaptation areas.

44. The no-objection letter, signed by the national planning department (Departamento Nacional de Planeación), confirms that the Government of Colombia has no-objection to the proposal and that the proposal is in conformity with the national priorities, strategies and plans.

45. The AE will be responsible for project oversight, including technical, financial and administrative monitoring and supervision through progress reporting, audits and periodic site visits, as well as the review and approval of the EEs' workplans and budgets. The AE will also provide implementation support, monitor progress and ensure compliance with GCF policies and requirements and oversee project evaluation and closure.

46. The project has two executing agencies, CI-Col and Fondo Acción. CI-Col will enter into a variety of agreements (sub-grant agreements, services agreements, and memoranda of understanding) for the implementation of the activities. (Through the question-and-answer exchange iTAP understands that in the initial discussions with the GCF Secretariat there were more potential executing entities, but to simplify the arrangements it was decided to turn several of them into implementing partners who will receive sub-grants from the EEs.)

47. Strategic guidance and oversight will be provided by the project steering committee (PSC), "which will serve in an advisory capacity only and will not exercise any decision-making authority over project implementation" (funding proposal, para. 85). The iTAP notes that although a PSC should not be involved in everyday management, it would nevertheless be important to acknowledge its authority over the project. The same paragraph also notes that the "PSC will provide strategic direction and alignment with national and local policy priorities, review annual work plans, monitor implementation progress, address inter-institutional coordination challenges, and support adaptive management decisions." It is important that the senior representatives of the authorities that participate in the PSC are indeed to have a decisive influence over both strategic and operational implementation arrangements.

48. The PSC will initially be chaired by the SDA and will include senior representatives from the Ministry of Environment and Sustainable Development (MinAmbiente), the EAAB, the Government of Cundinamarca, the administrative planning region (Región Central), CAR, CORPOGUAVIO and the national planning department. CRA could also have a presence in the PSC but is nonetheless in an oversight position owing to its role of making the fundamental decisions as the regulator of the water sector.

49. In addition to the PSC there will be two further committees: the technical advisory committee, composed of many of the same entities as the PSC, is to provide expert, strategic and technical guidance to the project; and a private sector advisory committee, whose members are yet to be determined. The composition of the three committees may be modified during project implementation.

50. The iTAP has expressed concerns about the insufficiently articulated linkages between the project pursuits and the overarching policy environment, including the water security plan for the region (Plan de Seguridad Hídrica, PSH). During the question-and-answer exchanges, the AE explained that the PSH does not feature more centrally as a guiding document because it is at a very high level, for the whole central Andean region. However, the written responses from the AE point to how strategic the PSC can be in this regard: "Among the PSC's explicit functions is

providing strategic direction and ensuring alignment with national and local policy priorities, which for this proposal means, concretely, ensuring that our catchment-level interventions remain articulated with the region's broader planning instruments, including the PSH. In this sense, the same actors who co-govern the PSH also co-govern our project, which ensures articulation throughout implementation rather than only at the design stage" (extracted from the response to iTAP's question number 10).

51. The funding proposal suggests: "Addressing water supply challenges in the Bogotá Region requires unified watershed-scale intervention supported by coordinated public and private action. To date, the absence of such a strategy has resulted in fragmented interventions, varying methodologies, and inconclusive evidence regarding hydrological benefits that underpin long-term sustainability investments" (para. 89).

52. The iTAP suggests that – to the extent possible – the steering committee deliberations could look beyond the project and see what steps can be made towards devising a coordinated umbrella architecture for public and private watershed investment in the Bogotá Region, the Central Region and Colombia at large.

53. The iTAP assesses the country ownership to be Medium to high.

1.7 Efficiency and effectiveness *Scale: High*

54. The iTAP notes that, although more coordination and decisive powers among the Colombian national and Bogotá regional authorities and agencies would have been desirable from a sustainability point of view, it is likely that the "NGO-implemented" modality selected in this project will be the most efficient manner of reaching the stated goals. CI-Col and Fondo Acción have long-term presences in the project area and proven experience in the activities pursued by the proposed project.

55. According to the funding proposal (para. 155), the economic and financial analysis demonstrates that the project delivers strong aggregate economic returns (close to 20 per cent on the whole project), which significantly exceeds Colombia's social discount rate of 6.4 per cent set by the national planning department. The project is therefore deemed to generate sufficient economic benefits to justify investment.

56. The GCF financing is designed to be catalytic rather than substitutive, and in this case the requested USD 45.72 million generates a co-financing of USD 31.02 million from public and private actors, as detailed in table 3. With a co-financing ratio of 1:0.68 the co-financing amounts to over 40 per cent of the total budget.

Table 3: Overview of co-financing

Name of institution	Financial instrument	Amount (millions of USD)
Bogotá District Environment Secretariat (SDA)	In kind	12.78
Gobernación de Cundinamarca (CUND)	In kind	1.00
Bogotá Water and Sewerage Company (EAAB)	Cash	5.84
AB InBev	Cash	1.50
Regional Autonomous Corporation of Cundinamarca (CAR)	In kind	0.72
Regional Autonomous Corporation of Guavio-CORPOGUAVIO	In kind	0.34
Coca-Cola Foundation	Cash	2.50
Conservation International (CI)	Cash	1.15
Conservation International (CI)	In kind	5.19

Source: Funding proposal, section C.1.(b) Co-financing information (pp.33–34).

57. Given the investment is mainly into public goods, grant financing is also well justified.

58. The iTAP assesses efficiency and effectiveness as High.

II. Overall remarks from the independent Technical Advisory Panel

59. The proposed project, Building Water Resilience in Bogotá and the Region, presented by Conservation International Foundation addresses key adaptation priorities for Bogotá, the Bogotá Region and Colombia's urbanizing mountainous areas at large.

60. The proposed project tests a watershed transformation model in which ecosystem conservation and restoration, along with productive reconversion of agrosilvicultural practices and access to markets, are combined with improvements to local water systems to enhance hydrological regulation in the watershed. The project uses quantified hydrological evidence to underpin a financing structure to scale and sustain the model beyond the lifetime of GCF support. Public funding streams will be operationalized by the Bogotá water utility's application of the environmental investment tariff, and a private financing mechanism should direct funding to watershed interventions linked to measurable outcomes. The project operates within existing legal frameworks that already enable environmental investments.

61. The funding proposal package is well-structured, logical and transparent, and stands to be effectively implemented. Within the assessment, the iTAP has made some specific recommendations to strengthen knowledge management and social inclusion and to work with the steering committee towards building a coordinated Colombian watershed protection financing architecture. The long-term success of the project endeavours would be greatly enhanced by a more conducive governance structure for environmental investment in Bogotá, the Central Region and the whole country.

62. The iTAP recommends that the Board approve this funding proposal.

Response from the accredited entity to the independent Technical Advisory Panel's assessment (FP323)

Proposal name:	Building Water Resilience in Bogotá and the Region
Accredited entity:	Conservation International Foundation
Country/(ies):	Colombia
Project/programme size:	Medium

Impact potential
Thank you. CI welcomes ITAP's assessment.
Paradigm shift potential
CI agrees with the ITAP reviewers that the financial mechanism is expected to channel additional funding flows to sustain, scale up, and replicate some project activities. At the same time, activities supported by the project are expected to consolidate without requiring additional funding. The AE also agrees that achieving an integrated watershed resilience model through a single project is challenging. Accordingly, the project engages key public, private, and civil society stakeholders as co-financiers, implementing partners, and participants in the governance structure. CI recognizes the importance of learning from national and international experiences and will incorporate lessons into the financial mechanism's design.
Sustainable development potential
Thanks for your comments. CI will look for further opportunities to incorporate traditional knowledge and Indigenous worldviews into all aspects of implementation and knowledge management, additional to those already outlined in the IPP, throughout the FPIC process. CI will ensure that engagement and benefit-sharing approaches consider barriers faced by women and other groups with limited formal land tenure security by Implementing the actions proposed in the GMP and identifying any additional actions that might be needed during project implementation.
Needs of the recipient
ITAP's assessment is noted with thanks.
Country ownership

CI values your observations. A key value proposition of the project is its ability to bring together public, private and civil society efforts within the same landscapes, ensuring that investments align with national and regional policy priorities on water security. Through the participation of institutions responsible for these planning processes in the PSC, the project will maintain articulation with the broader policy environment throughout implementation. Fostering greater alignment and coordination of public and private investments at the watershed scale during and beyond project implementation is a core objective. Both the governance structure and proposed interventions have been designed to advance this objective over time.
Efficiency and effectiveness
Thank you for these observations and for recognizing the project's economic rationale, co-financing, and implementation arrangements. CI appreciates ITAP's recognition that the selected implementation modality is well suited to achieving the project's objectives.
Overall remarks from the independent Technical Advisory Panel: CI appreciates ITAP's thorough review and positive feedback.

CI-GEF/GCF AGENCIES
CI-GCF GENDER ASSESSMENT AND ACTION PLAN (GAAP)

SECTION I: Executive Summary and Methodology

PROJECT TITLE:	"Building Water Resilience in Bogotá and the Region"		
PROJECT COUNTY(IES):	Colombia		
GCF PROJECT ID:	**TBD**	**PROJECT DURATION:**	60 months
EXECUTING ENTITY:	Conservation International		
GAAP PREPARED BY:	Diana Lahoz / Gender Specialist IDOM		
DATE OF (RE)SUBMISSION TO CI-GCF:	10/01/25; 02/24/26; 03/27/26; 04/28/26; 02/05/26; 20/07/2026		
GAAP APPROVED BY:	*Ian Kissoon, Senior Director, CI-GEF/GCF Agencies*		
DATE OF CI-GCF APPROVAL:	*May 08, 2026*		
PERSON RESPONSIBLE FOR IMPLEMENTING AND MONITORING THE GAAP:	*Gender Specialist*		
DATE OF GAAP DISCLOSURE[1]:	*At least 30 days before Council*		
WHERE GAAP WAS DISCLOSED:	*E.g. via the project's website, at the inception meeting with stakeholders, printed and posted on notice board in community centre, etc.*		

[1] The GAAP is to be disclosed to stakeholders at least 30 days before the GCF Board meeting. This should be done in a manner and form that is culturally appropriate and may require translation of the document into local languages.

a) Executive Summary

The “Building a Water Resilient Bogotá Region Landscape” project aims to trigger a paradigm shift in consolidating water resilience across the Bogotá region. Facing high watershed vulnerability due to climate-induced shifts in temperature and precipitation patterns, the strategy proposes an innovative model to mobilize public and private finance at scale. The approach is grounded in generating verifiable Volumetric Water Benefits (VWBs), starting at the plot level and scaling up to the watershed level. This will be achieved through high-Andean ecosystem restoration and the transition to climate-resilient production practices—such as agroecology in traditional potato farming and silvopastoral systems in dairy production—in prioritized areas, including Guandoque, Villapinzón, Tominé and Tunjuelo. These direct actions are designed to mitigate runoff peaks, sustain baseflows, and optimize rural livelihoods in the face of extreme climate scenarios.

To meet the GCF’s strict investment criteria and "exit strategy" requirements, the project’s scalability will not rely on long-term grant funding. Instead, it will deploy financial solutions enabled by current Colombian regulations. The project entails operationalizing an environmental fee within Bogotá's water tariff to recover investment costs, alongside establishing a long-term mechanism for the private sector to finance VWBs in alignment with their corporate sustainability and compensation goals. In this way, the initial GCF investment will serve as a proof of concept that catalyzes an autonomous, self-sustaining model where water utilities, municipalities, and private entities assume the ongoing financing of the territory’s water resilience.

In strict alignment with the GCF’s Gender Policy—which mandates that climate finance must actively promote equity rather than merely avoid exacerbating inequalities—the project design is deeply rooted in the findings of a rigorous Gender Analysis. The territorial assessment, with a specific focus on prioritized municipalities such as Villapinzón and the surrounding upper watershed areas, revealed structural barriers that severely limit these communities' adaptive capacity. Key findings demonstrated profound gender gaps characterized by stark inequalities in formal land tenure, which directly restrict women's access to credit, technical assistance, and conservation incentive programs. Furthermore, the analysis identified highly asymmetrical participation in technical and leadership roles: rural women hold minimal representation in formal decision-making spaces, such as producer associations and community-run water supply boards, despite bearing a disproportionate burden of unpaid care and agricultural labor.

Given this reality, implementing a mainstreamed Gender Action Plan is a non-negotiable pillar for ensuring the project's success. Because plot-level interventions directly impact the labor dynamics of rural households, the project will integrate structured, participatory methodologies to deconstruct these historical asymmetries from the ground up. This approach will ensure that women overcome the identified barriers and take on a leading role as central agents of change in the adoption of climate adaptation measures and efficient water management. Finally, the social viability of the resource mobilization model requires integrating clear social safeguards to prevent rural producers and female community leaders from being excluded from new business models or from the commercialization of products that favor water regulation. Ultimately, this guarantees that the capital flow catalyzed by the GCF will not only restore the watershed's hydrology but also act as a decisive engine for women's economic empowerment and the definitive closing of inequality gaps in the territory.

b) Methodology Summary

The gender analysis followed a participatory, mixed-methods approach designed to capture structural disparities and the territorial realities of communities in the upper Bogotá River basin. This methodology integrated desktop research with an exhaustive review of secondary sources from the National Administrative Department of Statistics (DANE) and the Colombian Women's Observatory (OCM) to establish a baseline for gaps in education, health, and economic autonomy. Community participatory workshops were held with Community Action Boards (JAC), productive and environmental associations, and women's groups to identify gender roles in water and land management. These workshops utilized social cartography and qualitative dialogues to map local perceptions of natural resource use and livelihoods through a gender lens. Additionally, field surveys were administered to landowners and key stakeholders to identify technical needs and climate adaptation barriers. The importance of this specific methodology from a gender perspective lies in its capacity to transform invisible social dynamics into actionable technical data. By prioritizing qualitative tools such as social cartography and direct dialogues, the assessment moved beyond generic statistics to uncover how power structures and traditional roles shape access to resources in rural households.

This approach is vital for identifying "time poverty"—the disproportionate burden of unpaid care and domestic work—and how it limits women's ability to participate in formal conservation activities or technical training. Furthermore, triangulating official data with on-the-ground perceptions ensured that the identified gaps in land tenure and leadership were not merely theoretical but reflected the lived obstacles women faced in the territory. This depth of analysis is essential to ensure that the project's climate interventions do not inadvertently reinforce existing inequalities but rather provide a tailored platform for women's agency and economic inclusion.

Primary data collection focused on four priority areas, engaging diverse social actors, civil society organizations, and local public entities. Workshop attendance was disaggregated by gender as follows: Intervention landscape 1 (Guandoque) reached 41 attendees, including 23 women and 18 men; Intervention landscape 2 (Villapinzón) had 18 attendees, consisting of 6 women and 12 men; Intervention landscape 3 (Tominé) involved 66 attendees, with 17 women and 49 men; and Intervention landscape 4 (Tunjuelo) 54 attendees with 34 women and 20 men.

Furthermore, complementary surveys on adaptation and needs were conducted, involving 29 respondents in Intervention landscape 2 (13 women and 16 men), 48 respondents in Intervention landscape 3 (10 women and 38 men), and 34 respondents (11 women, 23 men) in Intervention landscape 4. In conclusion, this methodological framework ensures that the gender diagnosis serves as the fundamental technical basis for project interventions landscapes.

By using disaggregated data and direct community perceptions, the project has the evidence needed to design a Gender Action Plan that mitigates risks of exclusion and enhances women's role in managing Volumetric Water Benefits (VWBs). This methodological rigor ensures that the GCF investment fulfills its mandate to promote equity, enabling climate finance to drive women's economic empowerment and narrow social gaps in the region.

CONSERVATION INTERNATIONAL

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SECTION II. Gender Analysis/Assessment

A. Context of the gender situation

1. Main Gender Gaps

According to the 2025 Global Gender Gap Index, the world will take 123 years at the current rate to achieve gender parity. The report, which analyzes 148 countries, reveals that the global gap has narrowed by 68.8%, representing a 0.3% improvement over the 2024 assessment[2]. In this context, Colombia ranks 41st worldwide and 7th in Latin America and the Caribbean.

Figure 1. Colombia's position in the Global Gender Gap Index 2024

The country shows outstanding performance in the educational achievement pillar; however, this advantage does not translate into equality in the labor market or in political leadership. Colombia's most significant weaknesses lie in low female political participation and limited economic opportunities for women.

Source: World Economic Forum, 2025

At the national level, data from the OCM (Colombian Observatory for Women) and DANE (National Administrative Department of Statistics), show progress in education and health. Still, gaps persist in women's economic and political participation, as well as in gender-based violence.
Analyzing gender gaps in Colombia requires a multidimensional approach that goes beyond national averages. Intersectionality guides this analysis, recognizing that gender barriers are exacerbated by age and geographic location, where the lack of land titles in rural areas limits women's access to credit for resilient technologies. While the country shows significant progress in closing educational gaps, territorial realities reveal critical disparities in economic autonomy and the right to a life free from violence. In this context, Gender-Based Violence (GBV) represents a systematic and persistent violation of human rights in Colombia. Despite robust regulatory frameworks, such as Law 1257 of 2008, the alarming rates of femicide, sexual violence, and domestic violence evidence a profound gap between legislative intent and its effective implementation on the ground.

At the national level, an analysis of domestic violence crimes between 2016 and 2023 reflects an upward trend in records from the National Police. This trajectory peaked in 2021 at 250.9 cases per 100,000 inhabitants, then stabilized at 228.8 cases per 100,000 inhabitants in 2023, a figure that remains substantially higher than the 207.4 cases reported at the start of the period in 2016. Within this context, women remain the primary victims, accounting for 70% to 77% of all cases recorded during this seven-year period. For a detailed territorial analysis, the following table presents data, including the domestic violence rate per 100,000 inhabitants, for Cundinamarca, where the project's intervention landscapes are located[3].

[2]https://www.weforum.org/publications/global-gender-gap-report-2025/

[3] The Ministry of Justice presents a relevant report on the phenomenon of domestic violence in Colombia (2016-2023), accessed: September 10, 2025, https://www.minjusticia.gov.co/Sala-de-prensa/Paginas/MinJusticia-presenta-relevante-informe-sobre-fenomeno-de-violencia-intrafamiliar-en-Colombia-(2016-2023).aspx

Table 1. Gender gaps and sociodemographic status of women in Cundinamarca

Dimension	Indicator	National	Cundinamarca	Description	Source
Population	Female population (%)	**51.2**	50.6	*The percentage of the female population in Cundinamarca (50.6%) is slightly lower than the national average (51.2%), indicating a marginally higher proportion of males in the department.*	DANE - Census and Demography 2018
Health	Adolescent fertility (births per 1,000 women aged 15–19)	**66**	61	*The adolescent fertility rate in Cundinamarca (61 per 1,000) is lower than the national rate. This suggests better control or a lower incidence of pregnancies among young women aged 15–19 in the department.*	DANE – Vital Statistics
	Maternal mortality (deaths per 100,000 newborns)	**66.7**	2.8	*The maternal mortality ratio in Cundinamarca (2.8) is significantly lower than the national average (66.7 per 100,000 newborns). This indicates the department has a notably superior performance in the care, monitoring, and prevention of maternal deaths.*	
Economic autonomy	Unemployment rate gap. *The difference between the unemployment rate for men and the unemployment rate for women.*	**7.2**	8.7	*The gender gap in unemployment is wider in Cundinamarca (8.7 p.p.) compared to the national average (7.2 p.p.). This indicates that women in the department face greater disparities and structural barriers to accessing the labor market relative to men than in the rest of the country.*	OCM 2020
	Average daily time spent on Unpaid Domestic and Care Work (hours)	**National M: 1.8 F: 3.8**	Cundinamarca M:1.7 F: 3.6	*Although the absolute time spent is slightly lower than the national average, gender disparity persists. Women in Cundinamarca spend more than twice as much time (3.6 hours) on unpaid domestic and care work as men (1.7 hours), reflecting the continued unequal distribution of care responsibilities.*	OCM 2020-2021
Poverty	Multidimensional Poverty Index 2019. *% of the female population living with multiple simultaneous deprivations across education, health, housing, and work.*	**18.1**	12.0	*The percentage of women living in multidimensional poverty in Cundinamarca is significantly lower than the national average. This suggests that women in Cundinamarca experience fewer simultaneous deprivations across key areas (education, health, housing, etc.) compared to women in the rest of the country.*	(GEIH), DANE (2018)

	Femininity index of poverty. *Shows the disparities in the incidence of monetary poverty between women and men. A value greater than 100 indicates that monetary poverty affects women more intensely than men.*	**113.8**	115.4	*The index in Cundinamarca is slightly higher than the national average. This implies that monetary poverty affects women in Cundinamarca more severely than in the rest of Colombia.*	OCM 2020
Gender-based violence	Domestic violence rate per 100,000 inhabitants	**228.8**	205.96	*The reported rate of domestic violence in Cundinamarca (205.96) is lower than the national average (228.8). However, the figure remains substantial, indicating that despite performing better than the national aggregate, intrafamily violence continues to be a critical issue affecting the safety of women in the department.*	DNP-Terridata
	Total of Femicides (2021)	210	4	*Cundinamarca accounts for approximately 1.9% of the total femicides reported nationally (4 out of 210). While the absolute number is lower compared to other regions with higher critical rates, the presence of these cases highlights the persistence of the most extreme form of gender-based violence in the territory.*	OCM (2021)

The analysis for Cundinamarca reveals a persistent 8.7 percentage-point unemployment gap, even though women's educational attainment is comparable to that of other regions. This lack of economic autonomy is driven by structural barriers, including an unpaid care burden of over 3.5 hours per day. This 'time poverty' severely restricts women's participation in water and agricultural governance, confirming that inequality in the territory is a structural issue linked to time constraints and a lack of physical security rather than just income levels.

2. Legal and Regulatory Framework on Gender Equality.

Colombia has a robust legal framework that guarantees equality and non-discrimination, serving as a "legal floor" for the project.

1991 Constitution. Its articles establish the prohibition of sex discrimination (Article 13), equal rights within the family (Article 42), and the obligation to provide women with special protection during pregnancy and maternity (Article 43). It also recognizes the effective participation of women in public bodies (Article 40).

Legislative development. Among the most relevant regulations are:

- Law 82 of 1993: Support for female heads of household in accessing credit, housing, education, and employment.
- Law 100 of 1993, which creates the General Social Security System, which guarantees health and social security without discrimination, with special attention to pregnant women, prenatal care, childbirth, postpartum, and breastfeeding.
- Law 248 of 1995: through which the Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women is ratified.
- Law 294 of 1996: by which domestic violence is punished.
- Law 581 of 2000 ("Quota Law"): minimum participation of 30% of women in decision-making positions in the public sector.
- Law 731 of 2002: special measures for rural women in access to land, credit, and technical assistance.
- Law 823 of 2003: regulations on equal opportunities for women.
- Law 1009 of 2006: The gender issues observatory is created permanently
- Law 1257 of 2008: prevention and punishment of violence against women.
- Law 1413 of 2010: inclusion of the care economy in national accounts.
- Law 1761 of 2015: classification of femicide as an autonomous crime.
- Law 1900 of 2018: incorporation of equity criteria in the allocation of rural lands.
- Law 2137 of 2021: The objective of which is to create the National Early Warning System to prevent sexual violence against minors, amend Law 1146 of 2007, and establish measures for the identification, care, and reduction of risk factors.
- Law 2281 of 2023 elevated the institution to the rank of Vice Ministry of Women, within the ministerial cabinet.

Rights of the LGBTI population

The rights of the LGBTI population in Colombia have been principally and overwhelmingly achieved through judicial rulings (vía jurisprudencial). This means that the Constitutional Court has been the primary actor in guaranteeing these rights, surpassing Congress in this role.

Key rulings and decrees that transformed these rights include:

- Partnership recognition (Ruling C-075 of 2007): The Court granted patrimonial (property) and social security rights to same-sex couples.
- Marriage equality (Ruling SU-214 of 2016): The Court fully legalized civil marriage.
- Adoption (Ruling C-683 of 2015): The Court permitted adoption by homoparental couples.
- Gender identity (Decree 1227 of 2015): A decree that allows trans individuals to correct their name and the "sex" component on their identity documents through a simple notarial process.
- Anti-discrimination law (Law 1482 of 2011): A key law from Congress that criminally penalizes acts of discrimination based on sexual orientation or gender identity.

At the program level, the most relevant instruments are:

- Decree 762 of 2018: Adopts the National LGBTI Public Policy, establishing the State's objectives and responsibilities.
- NDP 2022-2026: The current National Development Plan (PND) includes the LGBTIQ+ population as "differentiated actors" to reduce gaps.
- Territorial Programs: Actions at the local level, where cities like Bogotá have pioneered their own policies and support centers.

a. Legislative development and institutional response to Gender-Based Violence (GBV)

Complementing the general framework of equality and non-discrimination, Colombia has experienced a significant evolution in the typification and addressing of Gender-Based Violence (GBV). This evolution is backed by institutional strengthening, with the Ministry of Equality and Equity serving as the new central governing body. This synergy between legislative development and lead agencies integrates international standards that position the eradication of violence as a prerequisite for sustainable development and community resilience. This dynamism has enabled a transition toward a coordinated response model through mechanisms such as the National System for Registration, Attention, Follow-up, and Monitoring (SINARASMO-VBG), which is fundamental for operationalizing the social safeguards and comprehensive protection protocols that this project seeks to implement on the ground.

Key recent regulatory advances and response mechanisms include:

- **Law 1719 of 2014:** Establishes measures to guarantee access to justice for victims of sexual violence, with a special emphasis on the context of the internal armed conflict.
- **Law 2326 of 2023:** Provides guidelines for the prevention and punishment of sexual harassment and other forms of violence in the workplace and educational settings.
- **Decree 1476 of 2024:** Regulates the operation of the SINARASMO-VBG system for data centralization and inter-institutional response to violence cases.
- **Law 2453 of 2025:** Defines specific measures to prevent, attend to, and punish violence against women in political life, ensuring their safe participation in leadership spaces.
- **Resolution 362 of 2026:** Adopts the new Femicide Risk Assessment Guide, which is mandatory for Family Commissariats and interdisciplinary teams in the territory.

Altogether, this robust legal and institutional architecture, reinforced by the creation of unified monitoring systems and comprehensive care pathways—including the **SALVIA Line** and updated forensic protocols—provides the necessary legal foundation to shield project activities against risks of revictimization or exclusion. Effective coordination with these pathways and justice authorities will be the guiding principle to ensure that the transition toward resilient water management is, above all, just and safe for all women, in their diversity. This ensures that economic empowerment and participation in water governance are not hindered by structural violence, fulfilling the state's mandate of protection and equity.

b. Framework for rural women and access to land

Colombia's current public policy framework (2022-2026) integrates a gender perspective not as an add-on component, but as a structural axis of rural development. This strategic architecture is based on the National Development Plan (PND), operationalized through CONPES documents, and quantified in the specific sectoral plan.

National Development Plan (NDP) 2022-2026

The National Development Plan (PND) 2022-2026[4] and its agricultural component, the Strategic Agricultural Sector Plan (PESA)[5], establish the vision of an "inclusive rural society with social and economic justice." Its central gender mechanism is the adoption of the cross-cutting theme of "differential actors

[4] National Development Plan 2022-2026, https://www.dnp.gov.co/plan-nacional-desarrollo/pnd-2022-2026

[5] Sectoral Plan for Agriculture, Fisheries and Rural Development 2022 https://www.minagricultura.gov.co/planeacion-control-gestion/Gestin/PLANEACION/Planes_Estrategicos_Sectoriales_Institucionales/Planes%20Estrategicos%202022%20-%202026/20231030_PlanEstrat%C3%A9gicoSectorial_consolidado_cambios_ajustes_%20pagfinal.pdf

for change," which explicitly includes "women." This conceptual framework represents a significant break with previous paradigms that categorized rural women as a "vulnerable population" and, therefore, passive "beneficiaries." By redefining them as "differential actors," the PND recognizes their active agency and their essential role in driving economic transformation. This necessitates a shift in public policy from a "protection" model to one that guarantees participation and economic autonomy.

CONPES 4080

CONPES 4080[6] serves as the inter-institutional action plan that implements the vision of the National Development Plan (PND). Its objective is to "Increase opportunities for women's economic autonomy," with an "emphasis on rural women[7]," and it translates this vision into concrete goals with a 2030 horizon. It assigns specific responsibilities to sector entities, such as mandating the National Land Agency (ANT) to promote access to land, the Rural Development Agency (ADR) to guarantee 30% female participation in development services, and the Agricultural Bank and FINAGRO to increase credit (up to 44% in memorable credit lines). A fundamental mandate is assigned to the Colombian Agricultural Institute (ICA): "to implement... the variables that allow for the disaggregation of gender data," to overcome statistical invisibility and build the information infrastructure necessary for an evidence-based gender policy[8].

Strategic Sectoral Plan for Agriculture (PESA)

The 2022-2026 National Rural Development Program (PESA) formally adopts a "Gender Approach" to identify gender gaps and promote the "economic autonomy of rural women."[9] The most concrete manifestation of this approach is found in its outcome indicators, which establish key metrics for women's autonomy. The leading indicator is: "Hectares granted to rural women through the Land Fund (individual title)," with the National Land Agency (ANT) responsible, and targets that reflect a significant increase (e.g., from 3,850 in 2022 to 19,250 in 2023). The specificity of the "individual title" is crucial, as it seeks to correct the historical flaw of "household" land titling[10] (which benefited men). This ensures that the property is a legal and personal asset of the woman, enabling her to use it as collateral for credit[11] and guaranteeing her economic autonomy.

This current strategic architecture (PND, CONPES, PESA) does not exist in a vacuum. It is the result of a legal evolution spanning almost three decades and is based on three foundational laws that recognized rural women as subjects of rights.

Law 160 of 1994 (Agrarian Reform)

Law 160 of 1994, which established the National Agrarian Reform System[12], was foundational. Although progressive for its time in explicitly naming women as beneficiaries[13], its overall approach, when analyzed

[6]National Planning Department [DNP]. (2025). *Public Policies for Women and Gender Equity* . https://www.dnp.gov.co/LaEntidad_/subdireccion-general-prospectiva-desarrollo-nacional/direccion-desarrollo-social/Paginas/politicas-publicas-mujeres.aspx

[7]Ideas for Peace Foundation [FIP]. (2022). *Booklet. Multi-Year Plan for the Eradication of the Causes of Violence against Women 2022–2030: Generating Equity* . https://multimedia.ideaspaz.org/especiales/generando-equidad/docs/Cartilla-ppeg-mujeres-2022-2030.pdf

[8]National Council for Economic and Social Policy (CONPES). (2022). *CONPES Document 4080: Gender Equity Policy for Women* . National Planning Department (DNP). https://colaboracion.dnp.gov.co/cdt/Conpes/Econ%C3%B3micos/4080.pdf

[9]Ministry of Agriculture and Rural Development. (2023). *Sectoral Strategic Plan 2022-2026: A Shared Vision for Rural Transformation* . https://www.minagricultura.gov.co/planeacion-control-gestion/Gestin/PLANEACION/Planes_Estrategicos_Sectoriales_Institucionales/Planes%20Estrategicos%202022%20-%202026/20231030_PlanEstrat%C3%A9gicoSectorial_consolidado_cambios_ajustes_%20pagfinal.pdf

[10]Congress of the Republic of Colombia. (August 5, 1994). *Law 160 of 1994.* United Nations High Commissioner for Refugees (UNHCR). https://www.acnur.org/fileadmin/Documentos/Pueblos_indigenas/ley_160_1994_col.pdf

[11]National Council for Economic and Social Policy (CONPES). (2022). *CONPES Document 4080: Gender Equity Policy for Women* . National Planning Department (DNP) https://colaboracion.dnp.gov.co/cdt/Conpes/Econ%C3%B3micos/4080.pdf

[12]Congress of the Republic of Colombia. (2018, January 15). *Law 1882 of 2018.* Public Service. https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=66789

[13]Congress of the Republic of Colombia. (August 5, 1994). *Law 160 of 1994.* United Nations High Commissioner for Refugees (UNHCR). https://www.acnur.org/fileadmin/Documentos/Pueblos_indigenas/ley_160_1994_col.pdf

in detail[14], was based on a paternalistic concept of vulnerability. Its mechanisms focused on providing land to "female peasant heads of household" (Art. 1) and those in a "state of vulnerability" (Art. 17). The conceptual framework[15] did not recognize rural women as independent economic agents, but rather as subjects who required protection only in the absence of men (widows, abandoned women). This perspective ignored household inequalities and failed to address structural problems in land tenure.[16]

Law 731 of 2002 (Rural Women)

Promulgated as "establishing regulations to benefit rural women[17]," this law was a direct response to the shortcomings of prior policies and to the demands of women's organizations. It is considered the cornerstone of the current rural gender framework. Its most significant contribution was the legal definition (Art. 2) of "rural woman," which explicitly recognizes "unpaid work" (the care economy).[18] This legalized invisible labor and enabled millions of women engaged in domestic work or subsistence gardening to be recognized as subjects of public policy. Furthermore, it established the Rural Women's Development Fund (FOMMUR) (Art. 10) and a 30% quota for women in reforestation projects (Art. 28).[19]

Law 1900 of 2018 (Implementation of Affirmative Action). This law functions as a corrective and affirmative action mechanism, amending Law 160[20] to establish "gender equity criteria in land allocation." It abandons the idea of "equal conditions" and adopts preferential treatment to correct historical discrimination. It implements precise administrative mechanisms: it mandates that the National Land Agency (ANT) grant "double the score" (Art. 2) in the classification for land access[21] and the "maximum rating value" (Art. 6) in rural housing subsidies[22] to female-headed households. It also requires a training program (Art. 3).[23] Its effectiveness, however, depends on the regulations defining "poverty and marginalization" issued by the Ministry of Agriculture[24]. Additionally, the Colombian forestry sector stands in stark contrast to the agricultural sector, as its foundational legal framework remains gender-blind. The sector's legal cornerstone is Decree-Law 2811 of 1974, the National Natural Resources Code. An analysis of this law confirms its complete absence of provisions on gender equity or differential approaches, as it was drafted within a technical-scientific paradigm centered on biophysical resources that ignores social

[14]Congress of the Republic of Colombia. (2018, January 15). *Law 1882 of 2018.* Public Service. https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=66789
[15]Congress of the Republic of Colombia. (2018, January 15). *Law 1882 of 2018.* Public Service. https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=66789
[16]Parada Hernández, MM (2018). Between progress and barriers. Gender equality approaches in public policy for rural women in Colombia. *Revista Estudios Socio-Jurídicos* , *20* (2), 129–154. https://revistas.urosario.edu.co/index.php/sociojuridicos/article/view/6612/6209
[17]Congress of the Republic of Colombia. (2002, January 14). National Environmental Licensing Authority (ANLA). https://www.anla.gov.co/07rediseureka2024/normativa/leyes/ley-731-de-2002-ruralidad-mujeres-rurales-calidad-de-vida-de-las-mujeres-rurales
[18]Parada Hernández, MM (2018). Between progress and barriers. Gender equality approaches in public policy for rural women in Colombia. *Revista Estudios Socio-Jurídicos* , *20* (2), 129–154. https://revistas.urosario.edu.co/index.php/sociojuridicos/article/view/6612/6209
[19]Parada Hernández, MM (2018). Between progress and barriers. Gender equality approaches in public policy for rural women in Colombia. *Revista Estudios Socio-Jurídicos* , *20* (2), 129–154. https://revistas.urosario.edu.co/index.php/sociojuridicos/article/view/6612/6209
[20]Presidency of the Republic of Colombia. (December 16, 2021). *Decree 1731 of 2021.* Public Service. https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=86981
[21]Congress of the Republic of Colombia. (2018, June 18). *Law 1900 of 2018.* District Legal Secretariat of the Mayor's Office of Bogotá. https://www.alcaldiabogota.gov.co/sisjur/normas/Norma1.jsp?i=146157
[22]Congress of the Republic of Colombia. (2018, June 18). *Law 1900 of 2018.* FAOLEX. https://faolex.fao.org/docs/pdf/col191541.pdf
[23]University of Rosario. (2018). *Summary: Law No. 1900 of June 18, 2018.* https://urosario.edu.co/sites/default/files/2022-10/resumen-ley-1900.pdf
[24]Ministry of Agriculture and Rural Development. (2019). *Gender equity criteria in the allocation of vacant lands, rural housing and productive projects* https://www.minagricultura.gov.co/Normatividad/Proyectos%20Normativos/Criterios%20de%20Equidad%20de%20G%C3%A9nero%20en%20la%20Adjudicaci%C3%B3n%20de%20las%20Tierras%20Bald%C3%ADas,%20Vivienda%20Rural%20y%20Proyectos%20Productivos.pdf

dimensions.[25] The attempt to modernize this regime through Law 1021 of 2006 [26]failed when it was declared unconstitutional[27], leaving the sector mired in a fundamental legal vacuum regarding gender. The incorporation of a gender perspective in this sector has not stemmed from internal legal reform, but rather from two external sources. The first is a legal framework established by the Agrarian Law (Article 28 of Law 731 of 2002), which mandates that reforestation projects employ at least 30% female rural workers. [28]The second, and primary, driving force is the programmatic impetus of the National REDD+ Strategy, which, to comply with the social and gender safeguards required by international climate finance, has adopted a gender approach as a guiding principle. This has led to programs like Community Forestry becoming catalysts for creating practical tools (guides, checklists) that the 1974 law did not include.[29]

c. Regulatory framework on gender and climate change

In less than a decade, Colombia transformed its climate policy, moving from a legal omission of the gender perspective to mandatory integration and a proactive international stance. This progress is reflected in its commitments and reports to the United Nations Framework Convention on Climate Change (UNFCCC). Evolution becomes evident when contrasting two key laws:

1. **Law 1931 of 2018** created the country's climate governance architecture, establishing the National Climate Change System (SISCLIMA) and the planning plans (PIGCCS and PIGCCT).[30] However, the law omitted a "gender perspective" from its principles, defining climate management solely as a technical and economic challenge rather than a social or human rights issue.[31] This "neutrality" generated a public policy gap, allowing for plans that could ignore or exacerbate gender inequalities[32],[33].
2. **Law 2169 of 2021,** known as the "Climate Action Law[34]," established goals (such as carbon neutrality by 2050)[35] and, crucially, explicitly incorporated a gender perspective.[36] The law recognizes the "central role played by women" and the "differentiated impacts" (Art. 3). Furthermore, Article 6 mandates the integration of "human rights and gender approaches" in the implementation of sectoral goals. This mandate is now obligatory in key areas, including water management, education, and, fundamentally, the design and implementation of all planning schemes (PIGCCT and PIGCCS). This gives the Ministry of Environment an explicit legal mandate

[25]Presidency of the Republic of Colombia. (December 18, 1974). National Environmental Licensing Authority (ANLA). https://www.anla.gov.co/07rediseureka2024/normativa/leyes/decreto-ley-2811-de-1974-codigo-nacional-de-recursos-naturales-renovables-y-de-proteccion-al-medio-ambiente
[26]Congress of the Republic of Colombia. (2006, April 20). *Law 1021 of 2006. By which the General Forestry Law is issued* . Public Function. https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=20126
[27]Congress of the Republic of Colombia. (August 5, 1994). *Law 160 of 1994* National Environmental Licensing Authority (ANLA). https://www.anla.gov.co/07rediseureka2024/normativa/leyes/ley-160-de-1994-sistema-nacional-de-reforma-agraria-y-desarrollo-rural-campesino-ley-de-reforma-agraria
[28]Congress of the Republic of Colombia. (January 14, 2002). *Law 731 of 2002.* National Environmental Licensing Authority (ANLA). https://www.anla.gov.co/07rediseureka2024/normativa/leyes/ley-731-de-2002-ruralidad-mujeres-rurales-calidad-de-vida-de-las-mujeres-rurales
[29]Food and Agriculture Organization of the United Nations [FAO]. (2020). *Women and forests: mainstreaming gender in community forestry in Colombia.* https://www.fao.org/colombia/noticias/detail-events/zh/c/1364452/
[30]Congress of the Republic of Colombia. (2018, July 27). *Law 1931 of 2018.* National Environmental Licensing Authority (ANLA). https://www.anla.gov.co/07rediseureka2024/normativa/leyes/ley-1931-de-2018-directrices-para-la-gestion-del-cambio-climatico
[31]Congress of the Republic of Colombia. (2018, July 27). *Law 1931 of 2018.* Public Service. https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=87765
[32]Clima Posible. (2021). *Gender gaps and climate change: inequality as a vulnerability factor* . https://climaposible.org/wp-content/uploads/2021/12/211130-2-Brechas-de-genero.pdf
[33]Congress of the Republic of Colombia. (December 22, 2021). *Law 2169 of 2021.* SUIN-JURISCOL https://www.suin-juriscol.gov.co/viewDocument.asp?id=30043747
[34]Ministry of Environment and Sustainable Development, National Planning Department [DNP], and German Agency for International Cooperation [GIZ]. (2024, June). National Association of Businessmen of Colombia (ANDI). https://www.andi.com.co/Uploads/guia_638614736385242950.pdf
[35]United Nations Office for Disaster Risk Reduction. (2021). Presentation of Colombia's Nationally Determined Contributions under Law 2169 of 2021. https://www.undrr.org/media/98994/download
[36]Congress of the Republic of Colombia. (December 22, 2021). *Law 2169 of 2021.* SUIN-JURISCOL. https://www.suin-juriscol.gov.co/viewDocument.asp?id=30043747

to require and monitor gender mainstreaming, creating a new basis for accountability.

The Gender and Climate Change Action Plan (PAGCC-CO)

To implement Law 2169 and comply with international commitments, such as the UNFCCC Lima Programme of Work, Colombia developed the Gender and Climate Change Action Plan (PAGCC-CO).[37] This plan is described as a "pioneering instrument" that links gender equality and climate change, recognizing that the latter "is not gender-neutral" and disproportionately affects women and girls. [38]Its objective is to "promote progress towards gender equality" in climate management and "recognize the actions developed by women's organizations... as vital agents of change." To operate, the plan is structured around priority lines of action, including capacity building, knowledge management, and communication (with a focus on rural women's organizations), as well as women's participation and leadership (to ensure their influence on the formulation and monitoring of climate action). The plan's language is notably progressive: by adopting the term "climate justice," it moves beyond mere vulnerability towards redress. By focusing on "women's organizations" as "vital agents of change", it adopts an empowerment approach. Functionally, the PAGCC-CO serves as the "instruction manual" that links the abstract legal mandate of Law 2169 to its concrete implementation, indicating to entities how they should apply the gender approach in their PIGCCS (sectoral) and PIGCCT (territorial). The effectiveness of the PAGCC-CO and Law 2169 depends on their integration into the national climate architecture, such as the long-term strategy (E2050) and adaptation plans.

Long-Term Climate Strategy (E2050)

The E2050 is Colombia's roadmap to fulfill the Paris Agreement and achieve carbon neutrality.[39] This strategy was developed in conjunction with the PAGCC. The E2050 was constructed with a "territorial approach" that includes PDET municipalities (areas affected by poverty and violence) [18]. This contextualized appropriation is consistent with the PAGCC's principle of "Climate Justice." Thus, the PAGCC establishes a gender-justice framework to ensure that "carbon neutrality" is achieved through a "just transition."

National Adaptation Plan (PNACC)

The Ministry of Environment integrates its "Gender and Climate Change Tools" (including the PAGCC) with the National Adaptation Plan (PNACC).[40] Law 2169 had already established this link by requiring a gender perspective in the PIGCCS and PIGCCT.[41] However, this is where the central tension arises: although the legal framework (de jure) is advanced, implementation (de facto) faces barriers. A 2024 report, while welcoming the formulation of the PAGCC, warns of "challenges in terms of identifying financial resources, territorial management capacity, and coordination with the private sector."[42]

Reports from Colombia to the UNFCCC

The evolution of Colombia's domestic policy is reflected in its reports to the UNFCCC:

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[37]Ministry of Environment and Sustainable Development. (2025). *Colombia's Gender and Climate Change Action Plan (PAGCC-CO): Actions for gender equality, sustainability, and justice* . https://www.minambiente.gov.co/wp-content/uploads/2025/02/PAGCC-DE-COLOMBIA.p

[38]Ministry of Environment and Sustainable Development. (2023). *Gender and Climate Change Tools* . https://www.minambiente.gov.co/cambio-climatico-y-gestion-del-riesgo/herramientas-de-genero-y-cambio-climatico/

[39]Government of Colombia. (2021). *Colombia's long-term climate strategy E2050 to comply with the Paris Agreement* . United Nations Network on Migration. https://www.minambiente.gov.co/cambio-climatico-y-gestion-del-riesgo/estrategia-2050/

[40]Ministry of Environment and Sustainable Development. (n.d.). *Gender and Climate Change Tools* https://www.minambiente.gov.co/cambio-climatico-y-gestion-del-riesgo/herramientas-de-genero-y-cambio-climatico/

[41]Congress of the Republic of Colombia. (December 22, 2021). *Law 2169 of 2021*. SUIN-JURISCOL https://www.suin-juriscol.gov.co/viewDocument.asp?id=30043747

[42]Ministry of Environment and Sustainable Development. (2025). *Monitoring Report on Environmental Public Policies* 2024. https://www.minambiente.gov.co/wp-content/uploads/2025/04/INFORME-DE-SEGUIMIENTO-A-POLITICAS-PUBLICAS-AMBIENTALES-2024-V1.pdf

- Initial Phase (Absence): Gender was absent from the first National Communications. A UNFCCC report confirms that NC2 and the first Biennial Report (BUR1) did not include gender considerations.[43]
- The first mentions: The turning point was BUR2 (December 2018). This is where the first official mention of the gender issue was made.[44]
- Consolidation: Consolidation materializes in BUR3 (January 2022)[45], the first major report after the adoption of Law 2169. This report reflects the new legal and institutional reality by explicitly referring to the "Gender and Climate Change Action Plan (GCCAP)"[46] as an official component of climate architecture.

Nationally Determined Contributions (NDCs)

Nationally Determined Contributions (NDCs), which establish future commitments, are a country's most important inputs. Colombia's 2020 NDC update[47] acted as the true catalyst for change; UNFCCC reports indicate that this revision was gender-sensitive.[48] In fact, the adaptation targets of this NDC served as the basis for what would be codified a year later in Law 2169.[49] This suggests that Colombia first adopted a gender-sensitive international commitment and then used Law 2169 to enshrine it at the national level legally.

The most recent and ambitious input is NDC 3.0 – Transformations for Life[50], which represents the culmination of this policy coherence. An analysis of this document reveals that the gender perspective has evolved from a component to a cross-cutting pillar, embraced as both an "analytical tool" and a "principle of legitimacy." This commitment reaffirms the "full and effective inclusion of women in all their diversity" (rural, Afro-Colombian, Indigenous, etc.) and of people with diverse gender identities and orientations. Crucially, it links gender equality with a "Just Transition" and "Climate Justice," promoting "decent work, with a special emphasis on women, youth, and ethnic communities." Furthermore, NDC 3.0 explicitly cites the Gender and Climate Change Action Plan (GACC-CO) as one of the frameworks for its implementation.

While the political and legal framework aligns with international standards, the critical challenge has shifted from design to implementation. Future success will no longer be measured by the elegance of the laws (Law 2169) or the ambition of the NDCs (NDC 3.0), but by the capacity to overcome implementation challenges. This urgently requires financial resources, territorial management capacity, and monitoring and evaluation systems.[51] In conclusion, success will depend on the State's capacity to finance and

[43]United Nations Framework Convention on Climate Change [UNFCCC]. (2020). *Informal compilation and high-level summary of the virtual regional workshops on gender integration into national climate actions.* https://unfccc.int/sites/default/files/resource/Informal%20Compilation%20Regional%20Workshops.pdf

[44]United Nations Framework Convention on Climate Change [UNFCCC]. (2019, November 27). *Technical analysis of the second biennial update report of Colombia submitted on 28 December 2018. Summary report by the team of technical experts* (FCCC/SBI/ICA/2019/TASR.2/COL). https://unfccc.int/sites/default/files/resource/tasr2_2019_COL.pdf

[45]United Nations Framework Convention on Climate Change [UNFCCC]. (n.d.). *Biennial Update Report submissions from Non-Annex I Parties* . Retrieved November 18, 2025, from https://unfccc.int/BURs

[46]Institute of Hydrology, Meteorology and Environmental Studies [IDEAM], United Nations Development Programme [UNDP], https://camacol.co/sites/default/files/2024-04/BUR3%2520-%2520COLOMBIA.pdf

[47]Ministry of Environment and Sustainable Development. (2020). *Update of the Nationally Determined Contribution (NDC)* . Retrieved November 18, 2025, from https://www.minambiente.gov.co/cambio-climatico-y-gestion-del-riesgo/actualizacion-de-la-contribucion-determinada-a-nivel-nacional-ndc/

[48]United Nations Framework Convention on Climate Change [UNFCCC]. (2020). *Informal compilation and high-level summary of the virtual regional workshops on gender integration into national climate actions* . https://unfccc.int/sites/default/files/resource/Informal%20Compilation%20Regional%20Workshops.pdf

[49]United Nations Office for Disaster Risk Reduction. (2021). *Presentation of Colombia's Nationally Determined Contributions under Law 2169 of 2021* https://www.undrr.org/media/98994/download

[50]Government of Colombia. (2025, September 25). *NDC 3.0 Declaration Colombia: Transformations for Life* . United Nations Framework Convention on Climate Change (UNFCCC). https://unfccc.int/sites/default/files/2025-09/NDC%203.0%20Declarativa%20Colombia%20Transformaciones%20para%20la%20Vida%20V.25.09.2025%20Gob.%20Nacional.pdf

[51] Hernández, LH (2020). *Gender and climate change* . Adaptation to the Impacts of Climate Change on Water Resources in the Andes Project (AICCA). https://biblioteca.olade.org/opac-tmpl/Documentos/cg00993.pdf

monitor the effective implementation of the PAGCC-CO at the territorial level, ensuring that the principles of climate justice and inclusion[52] translate into the real empowerment of rural, Indigenous, Afro-Colombian, and diverse women, whom Law 2169 and NDC 3.0 seek to position as central agents of climate action.

Relevance to the project

The current regulatory framework in Colombia constitutes the essential political and legal foundation for the project «Building a Resilient Water Landscape in the Bogotá Region», ensuring a socially just implementation. By integrating the mandates of Law 2169 of 2021, known as the Climate Action Law, and the NDC 3.0, the project formally links gender equity to the principles of climate justice and a just transition, providing legal support for strategies that empower women in their diversity.

This normative base, which includes instruments such as Law 731 of 2002 and the National Development Plan, ensures that activities oriented toward nature-positive economies are recognized as fulfilling a State mandate that positions rural women as proactive agents of change rather than merely passive beneficiaries. Nevertheless, the effectiveness of this framework faces a critical gap between de jure legislative design and de facto territorial execution, where robust laws like Law 1257 of 2008 have not managed to prevent women from continuing to represent between 70% and 77% of domestic violence victims nationwide.

This disparity proves that legal design alone does not guarantee physical safety or economic autonomy without territorial mechanisms for its effective implementation, a situation exacerbated by limited financial resources and fragmented management, which hinders the implementation of social safeguards. Administrative weakness is exacerbated by historical statistical invisibility; for instance, the gender component was absent from the first national communications to the UNFCCC and was only officially consolidated in the third biennial report of 2022.

At the territorial level, this institutional insufficiency translates into operational obstacles that exhaust rural women's time and limit their strategic participation, manifesting as structural time poverty, in which men dedicate 3 hours daily to unpaid care work, while women invest more than 8.6 hours. This burden intensifies amid ecosystem degradation, forcing women to walk more than 1,000 meters and spend more than 2 hours daily hauling water.

To overcome these implementation failures, the project acts as a catalyst for institutional capacity by generating sex-disaggregated technical evidence and directly supporting the mandates of entities such as DANE to address the data gaps that prevent the development of public policies grounded in local realities. By providing farm-to-farm technical assistance and administrative training to the Rural Aqueduct Boards, the project strengthens the grassroots organizations that the State often struggles to reach, transforming the abstract principles of the Gender and Climate Change Action Plan into tangible territorial actions. In the field of security, the initiative aligns with national priorities aimed at managing risks, such as the persistent permission culture, in which many women must still consult the men in the household to decide on land use or to participate in training.

This institutional synergy ensures that specialized protection guarantees the physical integrity of participants by relying on recent regulations against harassment and femicide risk assessment. The project addresses the gap in resource control through the creation of joint-signature agreements and the design of financing lines that eliminate the requirement of property titles, an asset held by only 26% of rural

[52]Ministry of Environment and Sustainable Development. (2025). *Colombia's Gender and Climate Change Action Plan (PAGCC-CO): Actions for gender equality, sustainability, and justice* . https://www.minambiente.gov.co/wp-content/uploads/2025/02/PAGCC-DE-COLOMBIA.pdf

women in the country. Finally, by implementing property planning methodologies that include all household members, the project ensures that ecosystem restoration and water security translate into tangible, quantifiable empowerment, thus fulfilling the national objectives of social justice and regional water resilience.

B. Climate change, water management, and gender

1. Climate vulnerability with gender focus.

The framework for water vulnerability in the project region is defined as a multidimensional phenomenon in which biophysical factors are intertwined with social realities. For example, according to scientific evidence from the IPCC, the Regional Autonomous Corporation of Cundinamarca (CAR), and the National University of Colombia, the climate regime of the Bogotá River basin is already experiencing significant changes. Projections for the 21st century suggest increases in average temperatures and greater intensity of extreme precipitation events, which accelerate evapotranspiration and reduce the net availability of water[53]. This reality constitutes a critical vulnerability, given that the region's sensitivity to climate change is "very high" and its adaptive capacity is "low[54]. "

Although regional climate models provide a technical view of the risks, rural communities' perceptions help gauge the true severity of these events in their daily lives. The findings collected during the field phase (essential for the construction of the project) not only validate the projections of environmental authorities, but also demonstrate critical pressure on the productive base and immediate water availability in the Bogotá-Region landscape, as detailed below:

[53] https://www.car.gov.co/uploads/files/6712bcc948a6c.pdf ; https://openknowledge.fao.org/bitstreams/4f7b1590-a679-47dd-8422-09d95fff50ac/download
[54] https://concejodebogota.gov.co/bogota-entre-las-ciudades-con-mayor-riesgo-por-el-cambio-climatico/cbogota/2019-02-21/143027.php

Table 2. Local perception of extreme weather events and their impact on rural production systems

	The perception of risk in the communities collected during the field data collection phase aligns with regional climate projections, indicating ongoing pressure on the productive systems and water supply. ❖ There is a unanimous consensus in the municipalities of Guatavita, Sesquilé, and Villapinzón that frosts and droughts are identified as the most impactful phenomena. This recurrence is critical to water availability, as drought reduces spring and reservoir flows, forcing households to rely on alternative sources. ❖ In Villapinzón and Guatavita, hailstorms are frequently reported as one of the main climate stressors. These events can quickly destroy subsistence gardens and affect small-scale livestock production, thereby compromising local food security. This territorial distribution of climatic events underscores that although drought is a widespread threat in the project area, specific risks vary across intervention landscapes and require differentiated adaptation strategies to ensure the stability of rural production systems.

Fieldwork, IDOM, 2025

This climate crisis affects men and women differently due to the gendered division of labour, unequal access to resources, and other inequalities. For men, who are generally involved in productive activities such as commercial agriculture, these changes pose financial and productivity risks. In contrast, for rural women, rising temperatures and irregular rainfall directly erode household stability by affecting their ability to secure basic water access, ensure food security, and provide community care[55]. Systemic barriers reinforce this vulnerability. Rural households headed by women experience higher levels of multidimensional poverty, which reduces their capacity to invest in adaptation measures[56]. In the face of droughts, hauling water increases their physical burden and exacerbates "time poverty," restricting their access to education or paid employment, while men typically have better coping mechanisms, such as credit or labour migration[57]. Furthermore, resource scarcity reveals a time-use gap, as caregiving responsibilities limit women's mobility, subjecting them to greater territorial vulnerability and a higher level of physical and emotional strain than men[58].

As can be seen, vulnerability is not a neutral phenomenon; it manifests itself differently according to gender roles and the division of labour in the home. While men face primarily financial risks, rural women see their families' water and food security compromised. The following table summarizes testimonies about how the climate crisis translates into a disproportionate burden of care and barriers to women's:

Table 3. Differentiated impacts of climate change on rural women in the intervention area.

	Women	Men
Field findings	❖ In Sesquilé, and Villapinzón, women unanimously reported that droughts increase their physical workload. This	❖ Direct impact on the profitability of livestock and potato monocultures due to lack of irrigation in Villapinzón,

[55] In Colombia, rural women are the roots of change | UN Women, https://lac.unwomen.org/es/stories/noticia/2023/10/en-colombia-las-mujeres-rurales-son-raices-mujeres-sembradoras-del-cambio

[56] https://www.dane.gov.co/index.php/servicios-al-ciudadano/servicios-informacion/serie-notas-estadisticas ; https://fondoaccion.org/?sdm_process_download=1&download_id=7682

[57] Adaptation is a matter of gender | Fondo Acción, https://fondoaccion.org/wp-content/uploads/2021/12/211130-Adaptarse-es-cuestion-de-genero.pdf

[58] https://dag.revista.uab.cat/article/download/v70-n1-valderrama/854-pdf-es/9211

	phenomenon forces them to seek alternative water sources to ensure their families have access to drinking water and hygiene, further exacerbating time-use inequality. ❖ In the municipalities of Villapinzón and Guatavita, women reported that recurring hailstorms destroy home gardens and small-scale livestock production. These areas are traditionally managed by them for family sustenance, so their loss directly impacts food availability and the household's economic independence. ❖ In Villapinzón, and Guatavita, most women reported relying exclusively on traditional knowledge to cope with weather events. This indicates limited access to early warning systems or official meteorological information, which restricts their capacity to plan and respond effectively.	Tausa, and Cogua. A critical dependence on water for livestock over crop irrigation is reported. ❖ Loss of heavy infrastructure (fences, machinery, stables) and death of livestock in Sesquilé, Villapinzón, and Guatavita. In Villapinzón, frosts and droughts are the most impactful phenomena for production. ❖ Livelihood loss leads to frustration, identity crises, and the risk of abandoning the rural vocation in Tausa and Cogua. In Zipaquirá and Cogua, water degradation is linked to temporary male employment in mining. ❖ Exercise of traditional leadership and control of productive assets in Sesquilé, Cogua, and Villapinzón. They typically hold management positions, and their voice is considered more authoritative in the field.

Fieldwork, IDOM, 2025

This situation worsens in emergency contexts, where risks of gender violence, exploitation, and effects on sexual and reproductive health are documented[59], while for men, the loss of livelihoods can trigger identity crises and affect mental health[60].

Although the characterization of the intervention landscapes reveals a low representation of ethnic groups in the region, with Afro-descendant and Indigenous populations not exceeding 1% in most municipalities, intersectionality remains a critical analytical lens. This approach recognizes that for the Indigenous and Afro-descendant women present in the territory, gaps are intensified as gender inequality converges with ethnic discrimination and a vital dependence on fragile ecosystems. Despite these accumulated barriers, these women sustain community resilience by safeguarding native seeds and creating care networks that protect the countryside's genetic memory[61].

Furthermore, the Venezuelan migrant population in key municipalities is identified as a group with distinct vulnerabilities. Despite their low numerical representation, factors such as legal precariousness and social exclusion may hinder their access to project benefits or exacerbate their exposure during environmental contingencies. Consequently, the project will integrate targeted protection and communication strategies tailored to the specificities of their migratory context.

[59] Natural disasters: scenarios of gender-based violence | UNFPA, https://lac.unfpa.org/sites/default/files/pub-pdf/UNFPAversiones.pdf
[60] The Grancolombiano Polytechnic presents research on how climate change affects the mental health of farmers | ASCUN, https://ascun.org.co/noticias-ies/el-politecnico-grancolombiano-presenta-investigacion-sobre-como-el-cambio-climatico-afecta-la-salud-mental-de-los-campesinos
[61] https://repositorio.cepal.org/bitstream/handle/11362/48413/3/S2200847_es.pdf

Regarding structural barriers, the burden of unpaid domestic and care work severely restricts the time available for women to dedicate to training and decision-making[62]. This reality results in a critical underrepresentation on community action boards and watershed councils, rendering their priorities invisible and leading to "gender-blind" policies that ultimately undermine the effectiveness of collective action.[63] Finally, community resilience is intrinsically linked to representation within water resource decision-making spaces. In Cundinamarca, although women's political participation has advanced, exceeding 30% in certain territorial positions[64]—the gap persists in water management. In rural aqueducts, women are frequently relegated to operational or administrative roles, while strategic decisions regarding infrastructure and budgets remain predominantly under male control. This disparity was confirmed during fieldwork in Villapinzón, where it was reported that women hold only 15% of management positions in the water sector[65].

The main barriers identified with effective leadership are:

- Double work shift: The lack of childcare services in rural areas prevents women from consistently attending decision-making spaces.
- Gender stereotypes: The idea prevails that technical management (valves and pipes) is a male task, which makes women's empirical knowledge of the local water network invisible[66].
- Administrative limitations: The difficulty many aqueducts have in complying with legal requirements generates institutional distrust that hinders access to resources.

Although programs such as "Agua a la vereda" have sought to strengthen these partnerships through technical and financial support, mainstreaming the gender perspective remains the structural challenge in regional public policy[67]. Field data reveals a disconnect between women's operational work as resource managers and their presence in formal power structures. The following presents the perceptions of women in the project area regarding female representation on Community Action Boards and Water Supply Boards, highlighting governance gaps:

Table 4. Women's participation in community action boards and aqueducts

Field findings	The analysis of the field findings made it possible to identify a critical gap in the representation of women within local power structures, such as Community Action Boards and Rural Aqueduct Boards: ❖ Guatavita and Sesquilé: There is a 50% split participation; however, in cases where there is participation, it is divided between Community Action Boards and Water Boards, reflecting a moderate female presence in water management. ❖ Villapinzón: Participation in these governance structures is minimal, with only 15% of women integrated into any board, which demonstrates an almost total exclusion of women in the formal management of the aqueducts of the sub-basin.

Fieldwork, IDOM, 2025

[62]The Role of the Private Sector in Transforming the Care Economy in Latin America https://www.corewoman.org/post/el-rol-del-sector-privado-en-la-econom%C3%ADa-del-cuidado-en-am%C3%A9rica-latina
[63] Gender and Climate Change Tools | Ministry of Environment and Sustainable Development https://www.minambiente.gov.co/cambio-climatico-y-gestion-del-riesgo/herramientas-de-genero-y-cambio-climatico/
[64] Progress towards equality between men and women in territorial elected positions - Observatory, https://observatorio.registraduria.gov.co/anexos/igualdad_entre_hombres_y_mujeres_cargos_de_eleccion_territorial.pdf
[65] WOMEN OF THE PARAMO - IUCN Portals, https://portals.iucn.org/library/sites/library/files/documents/2017-043.pdf
[66] Empowering rural women through water and sanitation, https://www.iadb.org/es/blog/agua-saneamiento-y-residuos-solidos/empoderando-las-mujeres-rurales-traves-del-agua-y-el-saneamiento
[67] Agua a la vereda: A Social Cohesion Strategy for Expanding Water Coverage and Access in Rural Areas - Uniandes Journals, accessed February 17, 2026, https://revistas.uniandes.edu.co/index.php/rdi/article/view/7491/7894

2. Gender gaps in water governance.

Water resource management in the Bogotá Region landscape, while fundamental to development, reflects unequal power relations that place women in heavier workloads and with less decision-making power. This structure not only deepens existing social gaps but also undermines the sustainability of water strategies by ignoring the needs of half the population[68]. In this context, a gender perspective helps us understand that women are not only users but also essential managers at home and in the community. Therefore, integrating their participation is not an optional complement but a crucial factor in the effectiveness of any intervention[69]. Under this premise, water management ceases to be a neutral process and becomes a field shaped by social relations that determine equity and community resilience[70].

In everyday practice, women are usually primarily responsible for ensuring access to water for human consumption, hygiene, and food security. However, the 2022 National Water Study warns that, in rural regions, dependence on non-conventional sources increases the time spent hauling water, a feminized task that limits the educational and productive opportunities of women and girls[71]. Meanwhile, large-scale productive use, mostly associated with men, enjoys greater visibility and economic recognition[72].

Data from DANE confirms that this "time poverty" disproportionately affects rural women, a situation exacerbated by climate change, which extends the hours spent collecting water[73]. Despite this critical work for domestic water security, women's representation in decision-making remains marginal. As mentioned above, rural aqueduct boards and user committees are predominantly male, which limits the integration of care and basic sanitation priorities. This lack of a voice and a vote in water governance undermines the effectiveness of local solutions by excluding essential knowledge for sustainability[74].

Finally, the strengthening of community initiatives in Cundinamarca, and, in specific cases, the Tunjuelo River Rural Complex, demonstrates that when women's voices are recognized, the legitimacy and effectiveness of public policies increase. Their participation has allowed for the integration of traditionally ignored knowledge about health and food security. To transform these inequalities, it is imperative to move from addressing only practical needs (immediate access) to strategic needs, ensuring women's leadership, access to treatment technologies, and funding for projects that dismantle unequal power structures in water management[75].

The gender gap is not only a matter of political will, but also the result of physical and operational barriers that consume the time of rural women. While theory warns of underrepresentation in decision-making, field research allows us to identify factors that perpetuate this exclusion, such as difficulty accessing

[68] https://www.ideam.gov.co/sites/default/files/prensa/boletines/2024-08-23/resumen_ejecutivo_estudio_nacional_del_agua_2022_0.pdf
[69] https://www.dane.gov.co/files/investigaciones/genero/publicaciones/mujeres-y-hombre-brechas-de-genero-colombia-informe.pdf
[70] Water, Sanitation and Gender - IADB Publications, https://publications.iadb.org/publications/spanish/document/Agua_saneamiento_y_g%C3%A9nero_Gu%C3%ADa_operativa_para_proyectos_en_zonas_rurales_es.pdf
[71] Gender Approach to Water Management and Culture, https://www.agua.unam.mx/assets/pdfs/impluvium/numero19.pdf
[72] Water and Gender: Women Leaders in the Water Sector - World Bank, https://www.worldbank.org/en/events/2020/08/26/water-and-gender
[73] Women and men: gender gaps in Colombia - DANE, https://www.dane.gov.co/files/investigaciones/genero/publicaciones/mujeres-y-hombre-brechas-de-genero-colombia-informe.pdf National Water Study | IDEAM, https://www.ideam.gov.co/sites/default/files/prensa/boletines/2024-08-23/resumen_ejecutivo_estudio_nacional_del_agua_2022_0.pdf
[74] Gender perspective in water management and culture, https://www.agua.unam.mx/assets/pdfs/impluvium/numero19.pdf
[74] Water and Gender: Women Leaders in the Water Sector - World Bank, https://www.worldbank.org/es/events/2020/08/26/water-and-gender
[75] Women and Climate Change: The Importance of a Relationship That Saves Lives -, https://www.minambiente.gov.co/mujeres-y-cambio-climatico-la-importancia-de-una-relacion-que-salva-vidas/ Gender Gaps in Water Management and Natural Infrastructure - Forest Trends, https://www.forest-trends.org/wp-content/uploads/2020/02/Gender-Gaps-in-Water-Management-and-Natural-Infrastructure.pdf

resources and the care burden stemming from inadequate sanitation. These critical governance findings are detailed below:

Table 5. Gender gaps in water governance: field findings.

Field findings	The analysis of water management in the territory reveals that women assume the role of operational managers of the resource, facing critical challenges of access and representation: ❖ In the municipalities of Guatavita and Villapinzón, women mentioned that they must travel distances of more than 1,000 meters to obtain water for their homes. ❖ Specifically, in Guatavita and Villapinzón, the respondents reported that the time spent collecting water (round trip) can exceed two hours per day, which drastically limits their available time for productive or training activities. ❖ The women of Guatavita, Sesquilé, and Villapinzón indicated that the water for human consumption is frequently non-potable (raw) or simply filtered, which imposes on them the additional responsibility of purifying the resource at home to prevent diseases. ❖ In Guatavita, a high dependence on natural resources, such as springs and rivers, was noted. This situation makes them more vulnerable to climate variability, since these sources are the first to be affected during the droughts that they themselves unanimously reported.

Fieldwork, IDOM, 2025

3. Differentiated impacts of ecosystem degradation

The relationship between ecosystem health and women's well-being is deeply interdependent, with environmental degradation disrupting household dynamics and exacerbating the burden of unpaid work. When high-Andean forests are fragmented or páramos (high-altitude Andean ecosystems) are drained for activities such as livestock farming, declines in water quality and quantity force women to intensify their efforts to ensure household health.[76] In the Bogotá Region, the replacement of native vegetation with high-impact crops or pastures has degraded water quality through agrochemical runoff and soil compaction[77]. This poor water quality imposes an additional burden on women, as they must spend more time boiling water, using more firewood or gas, filtering it, or traveling to more distant, cleaner sources. This work, although vital for preventing illness in children and the elderly, remains invisible on national accounts. However, the interconnection is so close that the ecological restoration of a micro-basin could free up to 2 hours of female labour per day that had previously been dedicated to mitigating scarcity or pollution[78].

Furthermore, the fragmentation of high-Andean forests reduces ecosystems' capacity to regulate the regional microclimate and directly affects the livelihoods of rural women, who possess ancestral knowledge of using non-timber forest resources that are disappearing due to biodiversity loss. Soil degradation, accelerated by water variability, reduces the productivity of home gardens and pushes women toward greater economic dependence on men or on volatile external markets[79]. This situation is exacerbated by gaps in land tenure, which is predominantly male, making it difficult for women to make autonomous decisions about soil restoration or the protection of water sources within family properties.

[76] https://www.clacso.org/wp-content/uploads/2022/12/Informe-Final-de-Cuidados-rurales.pdf
[77] https://ppdcolombia.org/wp-content/uploads/2024/07/PPD_BOLETIN_GUARDIANAS_SUMAPAZ_2023_V2_COMP.pdf
[78] https://dag.revista.uab.cat/article/download/v70-n1-valderrama/854-pdf-es/9211
[79] https://www.clacso.org/wp-content/uploads/2022/12/Informe-Final-de-Cuidados-rurales.pdf

This is particularly concerning given that less than 20% of women farmers worldwide own their land, [80]and in Colombia, only 26% of rural women hold title to the land they work[81].

Environmental degradation is not a process external to domestic life; rather, it profoundly alters the productivity and stability of women-managed farms. Field findings demonstrate how the loss of environmental services (such as water regulation and pollination) translates into concrete limitations for food security and household well-being. The following table systematizes the main indicators of ecological deterioration observed from the perspective of women and men producers:

Table 6. Differentiated impacts of ecosystem degradation: field findings

	Women	Men
Field findings	❖ In the municipalities of Guatavita , women mentioned that soil compaction is one of the main limitations for productivity and water infiltration on their properties. ❖ The women of Guatavita identified the steep slopes as a critical risk that, added to the lack of vegetation cover, increases erosion and soil instability in the face of intense rain events. ❖ In municipalities such as Guatavita and Villapinzón, women reported the presence of exotic forest cover that reaches up to 20% or 30% of the area of some properties, which alters local water regulation and displaces native biodiversity essential for their activities. ❖ In Guatavita, the women indicated that the low productivity of the soil and the scarce availability of water force them to depend economically on external activities or on renting their labour as local day labourers.	❖ Soil compaction and water erosion represent a loss of productive capital and commercial land value in the Bogotá-Region landscape. These factors force the expansion of the agricultural frontier toward the páramos to compensate for low productivity in the livestock areas of Villapinzón, Tausa, and Cogua. ❖ The loss of biodiversity generates conflicts due to the presence of wildlife on productive plots and the disappearance of essential ecosystem services, such as natural pest control, for intensive production. In municipalities like Sesquilé and Guasca, biological degradation compromises the long-term profitability of the farms. ❖ Exotic forest covers displace the native biodiversity necessary for sustainable livestock systems. In Guatavita and Villapinzón, these covers alter water regulation, increasing operational costs for water management in large-scale production. ❖ Low soil productivity and water scarcity lead to the financial failure of traditional systems, generating an identity crisis and the risk of abandoning the rural vocation in Tausa and Cogua. In Zipaquirá and Cogua, mining-induced degradation destroys the water base upon which their own productive units depend.

Fieldwork, IDOM, 2025

[80] https://www.dane.gov.co/files/investigaciones/notas-estadisticas/oct-2021-nota-estadistica-situacion-mujeres-rurales-colombia-resumen.pdf
[81] https://viacampesina.org/es/colombia-solo-el-26-de-las-mujeres-rurales-tienen-titularidad-sobre-la-tierra-que-trabajan/

C. Gender gaps in the agricultural sector: an analysis of the climate crisis

Women are central to the social and economic reproduction of these territories, playing roles ranging from small-scale agricultural production to livestock management and the conservation of strategic ecosystems[82]. However, their position is mediated by historical inequalities that limit their access to property, financial capital, and technical training[83].

The 2023 National Agricultural Survey (ENA 2023) reaffirms that land remains the most elusive asset for rural Colombian women and is the primary barrier to their productive development. Although the legal relationship between producers and land takes various forms, such as formal ownership, leasing, sharecropping, usufruct, or de facto occupation, the quality and legal security of these arrangements exhibit critical gender disparities. While for men these forms of land tenure are usually backed by contracts or clear titles, for women, the relationship with the land is marked by informality and precariousness.

This legal uncertainty translates into a multidimensional vulnerability:

- Co-ownership: According to data from DANE, integrating administrative records shows that when women are listed in documents, they are usually recorded as "co-owners" rather than "sole owners." This distinction is crucial because, in practice, co-ownership tends to dilute women's effective decision-making power over the productive unit, leaving its management to third parties[84].
- Decision-making vs. ownership: In strategic regions like Cundinamarca, it is evident that, even when women have a legal connection to the land, their ability to decide what to plant or how to manage it is significantly lower than that of men listed as owners[85]. This suggests that land tenure does not always guarantee autonomy unless accompanied by a cultural transformation.

Table 7. Barriers to autonomy and participation in territorial decision-making for rural women.

	Across various territories, limited autonomy is reported, with women sometimes needing men in the household's permission to make decisions about planting or managing the land. This barrier is compounded by a low social value placed on their opinions in community decision-making spaces, such as water systems or councils, despite their active role in production.

Fieldwork, IDOM, 2025

- Financing barriers: The legal insecurity of land tenure for women creates a domino effect that hinders their capitalization. Lacking robust property titles or formalized lease agreements in their names, women face systemic exclusion from the financial system. This situation not only restricts access to credit but also leads to higher interest rates, as the system perceives a greater risk of exposure. Despite FiINAGRO's 2023 agricultural credit regulations, collateral requirements continue to penalize rural women, who are categorized as having a higher financial risk profile due to the lack of personal assets to secure loans for the land they cultivate.

[82] https://lanotaeconomica.com.co/movidas-empresarial/compensar-56-millones-de-mujeres-residen-y-trabajan-en-zonas-rurales-de-colombia-segun-el-dane/
[83] https://lanotaeconomica.com.co/movidas-empresarial/compensar-56-millones-de-mujeres-residen-y-trabajan-en-zonas-rurales-de-colombia-segun-el-dane/
[84] Statistical Note - Rural Property in Colombia - DANE, https://www.dane.gov.co/files/investigaciones/notas-estadisticas/jul_2022_nota_estadistica_propiedad_rural.pdf
[85] Analysis of the socioeconomic situation of rural women, https://www.uexternado.edu.co/wp-content/uploads/2023/09/DDT73.pdf

As can be seen, the situation is defined by the intersection of traditional roles and structural barriers that limit their financial autonomy[86]. This manifests itself in a clear feminization of poverty.

- 31.6% of the 3.8 million rural households are headed by women.
- In 68.8% of these cases, there is no spouse present, which forces them to assume the care and production tasks alone[87].
- Economically, this translates into a 30% income gap compared to men, aggravated by the invisibility of their work under the category of "unpaid family workers"[88].

Although the Peace Agreement and the Comprehensive Rural Reform in Colombia establish preferential access for women, research has reported that gender commitments are progressing slowly; most provisions were in a "minimal" or "not initiated" state at the end of 2022[89].

Following the closure of previous programs, the new "Ruralidad para la vida" policies (2025-2030) aim to close these gaps by providing $85 million in loans from multilateral development banks, with priority given to female heads of household and conflict-affected victims[90]. However, access to services remains a barrier: only 26% of women received technical assistance in the last year, and the lack of collateral (property titles) continues to exclude them from agricultural credit. In addition, rural Colombia is experiencing a profound demographic transformation and an identity crisis that threatens its long-term sustainability and capacity for innovation. This reality can be broken down into the next critical areas:

Intellectual decapitalization and generational change

The rural sector is experiencing a steady loss of young talent and a worrying "feminization" of unpaid care work. Currently, 23.7% of young rural women who are not part of the education system are exclusively dedicated to housework. This phenomenon not only limits their economic autonomy but also creates a gap in technical knowledge among new generations. As a result, the responsibility for sustaining production falls on older women, who represent 13.4% of the rural population. These women leaders are forced to manage production units facing a severe technological gap, typically operating with outdated tools and with limited access to modernization processes that would facilitate physical labor[91].

Plurality and territorial justice

Agricultural policy design must move beyond a monolithic view of the peasantry to adopt a territorial approach that addresses the specific diversities and vulnerabilities of the intervention area. Rather than relying solely on national averages, the strategy must prioritize key local findings, such as the presence of the Muisca community in Sesquilé, whose ancestral and collective relationship with the land requires differentiated governance mechanisms. Furthermore, it is imperative to address the barriers faced by other disadvantaged groups in the region, including the migrant population and victims of the armed conflict. These groups encounter unique challenges regarding local integration, access to state services, and legal security; factors that often render them invisible within traditional institutional support frameworks.

[86] https://www.dane.gov.co/index.php/estadisticas-por-tema/enfoque-diferencial-e-interseccional/enfoque-diferencial-e-interseccional-publicaciones
[87] Situation of Rural Women in Colombia - DANE, https://www.dane.gov.co/files/investigaciones/notas-estadisticas/oct-2021-nota-estadistica-situacion-mujeres-rurales-colombia-resumen.pdf Analysis of the socioeconomic situation of rural women, https://www.uexternado.edu.co/wp-content/uploads/2023/09/DDT73.pdf
[88] https://www.uexternado.edu.co/wp-content/uploads/2023/09/DDT73.pdf
[89] Time is running out for the implementation of the gender approach, https://share-net-colombia.org/documentos/El_tiempo_se_agota_para_la_implementacio%CC%81n_del_enfoque_de_genero_2023.pdf
[90] https://colaboracion.dnp.gov.co/CDT/Conpes/Econ%C3%B3micos/4141.pdf
[91] https://www.uexternado.edu.co/wp-content/uploads/2023/09/DDT73.pdf

Visibility of the LGBTIQ+ population in rural areas

For the first time, the country has statistical tools to map historically denied identities in rural areas. The 2023 records, which documented 6,500 valid cases through instruments such as the "Voluntary Registry for the Visibility of Sexual and Gender Diversity," reveal a stark reality: trans and non-binary people in rural contexts face significantly higher levels of labor exclusion and social stigmatization than cisgender women. This structural discrimination not only affects their emotional well-being but also marginalizes them from productive sectors, denying them access to decent rural employment and land ownership based on prejudice against their identity[92].

1. Differentiated climate impacts on the agricultural sector

In the agricultural sector, the climate crisis is not a neutral phenomenon; its repercussions disproportionately affect those with fewer resources who depend directly and immediately on natural cycles[93]. For rural women, these factors are now drastically exacerbated by the global climate crisis, which multiplies pre-existing inequalities[94].

Impacts on rural production systems

- Subsistence agriculture: In Andean family farming, the "tropicalization" of the climate has altered thermal zones, exposing crops vital to food security (such as corn and various fruit trees) to pest and disease cycles that were previously nonexistent at these altitudes[95]. This not only reduces crop yields but also jeopardizes the household's food sovereignty.
- Cattle raising Small-scale: Although extensive livestock farming is generally a male-dominated sector, women play a critical role in both small-scale livestock farming and artisanal dairy processing[96]. Currently, in Colombia, 55% of farms smaller than 5 hectares already dedicate part of their land to livestock farming; however, they operate at chronically low productivity due to a lack of technical assistance and machinery[97].

Table 8. Economic dependence on livestock and pressure on water resources in Cundinamarca municipalities

	In municipalities like Villapinzón and in areas of Tominé (Guatavita and Sesquilé), livestock farming is not secondary; rather, it is the main economic pillar for all the women surveyed. This dependence places critical pressure on water resources, which are primarily used to water animals (especially in Villapinzón) rather than for crop irrigation.

Fieldwork, IDOM, 2025

- Increased workload: Ecosystem degradation translates into a direct physical burden. The scarcity of water sources and the erosion of pastures force women to travel ever greater distances to collect fodder and water, increasing their working hours and deteriorating their physical well-being[98].

[92] https://www.dane.gov.co/files/investigaciones/notas-estadisticas/2023-May-NotaEstadistica-RegistroVoluntarioLGBTI.pdf
[93] https://ikicolombia.com/web/wp-content/uploads/2025/02/Resumen_PAGCC_CAMBIO-2.pdf
[94] https://www.minambiente.gov.co/wp-content/uploads/2025/02/PAGCC-DE-COLOMBIA_VF.pdf
[95] https://journals.umcs.pl/al/article/download/13950/9765
[96] https://www.ica.gov.co/mujer-rural
[97] https://indepaz.org.co/acceso-a-tierras-de-las-mujeres-rurales-en-colombia-desde-la-decada-de-los-ochentas/
[98] https://www.brot-fuer-die-welt.de/fileadmin/mediapool/2_Downloads/Fachinformationen/Dialog/Dialog_09_Mujeres_Agricultoras_Internet.pdf

Table 9. Vulnerabilities of rural women due to the degradation of natural water sources in Villapinzón.

	This overload is exacerbated by dependence on vulnerable natural sources. In Villapinzón, most people rely on non-potable water from springs, increasing health risks from contamination or from these sources drying up during droughts.

Fieldwork, IDOM, 2025

Faced with this hostile scenario, rural women have ceased to be passive subjects and have emerged as leaders in nature-based adaptation strategies[99]:

- Guardians of seeds and biodiversity: They act as custodians of the genetic memory of the countryside. By preserving native varieties that have proven more naturally resistant to extreme droughts and floods, family gardens are maintained as living banks of agrobiodiversity, ensuring a source of food even when commercial monocultures collapse.
- Based on ancestral knowledge: Millennia-old practices such as the production of organic fertilizers (biofertilizers), the use of natural biopesticides, and the planning of crop rotation following lunar cycles, have ceased to be seen as mere traditions and are now validated as low-cost, high-impact scientific tools for climate adaptation[100].
- Territorial and water leadership: Women are currently leading wetland restoration efforts and the design of rainwater-harvesting systems. Notably, fieldwork in Villapinzón revealed that 54% of the women surveyed actively utilize climate information to organize their daily tasks, demonstrating a technical capacity that challenges traditional perceptions of rural passivity.

Finally, resilience to climate change is strengthened through income diversification and the diversification of associative structures. Among the most effective strategies identified are:

- Productive diversification: Integrating agriculture with community tourism and the production of handicrafts to reduce dependence on a single crop cycle[101].
- Direct marketing: The creation of short marketing circuits that eliminate intermediaries, allowing women to receive a fair and direct price for their agroecological products[102].
- Association and microfinance: Strengthening savings groups and women's associations that facilitate access to microcredits and support networks, essential for financing small climate infrastructure projects on their properties[103].

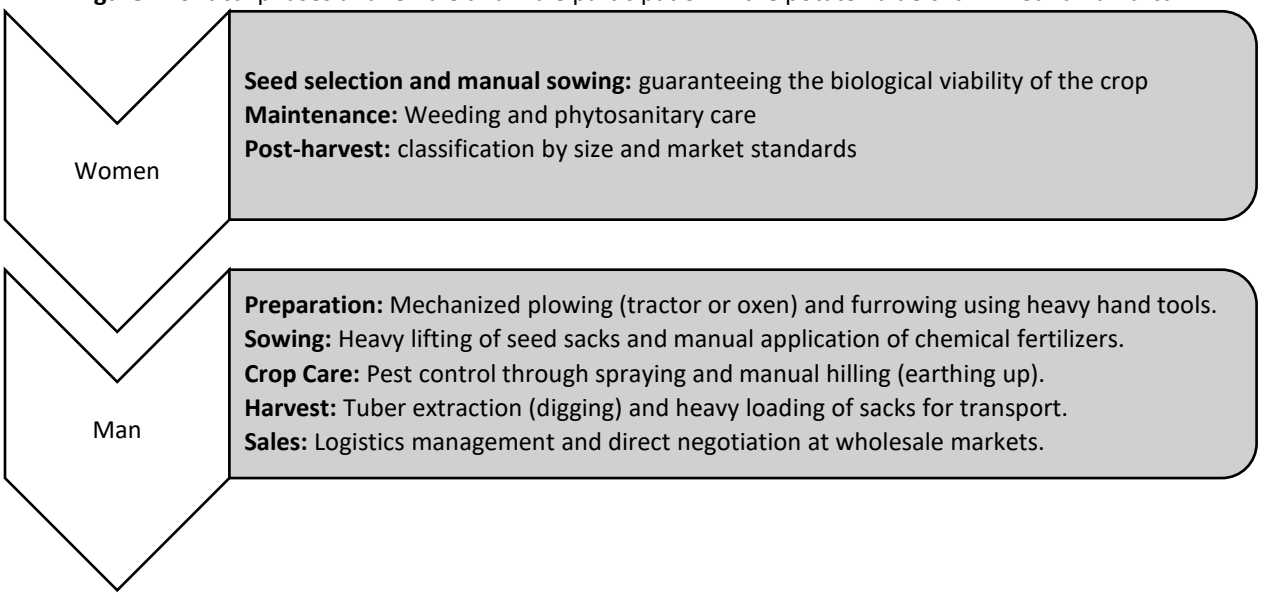
2. Gender roles in potato production

Cundinamarca, the department where areas are located, is consolidating its position as the epicenter of food security in the Andean region and as Colombia's leading potato producer. With 40,000 hectares dedicated to this tuber annually, its importance transcends the economic sphere and becomes part of the social fabric of municipalities like Villapinzón, where dependence on the crop is almost absolute: 81.7% of its agricultural area is dedicated exclusively to potatoes.[104]

[99] https://www.minambiente.gov.co/wp-content/uploads/2025/02/PAGCC-DE-COLOMBIA_VF.pdf
[100] https://andesresilientes.org/wp-content/uploads/2022/11/Saberes-ancestrales-de-mujeres-rurales-frente-al-cambio-climatico-como-potenciadores-de-politicas-para-la-agricultura-familiar-campesina-.pdf
[101] https://colombia.unwomen.org/es/stories/noticia/2025/06/la-resiliencia-de-las-mujeres-frente-a-la-crisis-climatica-en-colombia
[102] https://www.fao.org/colombia/noticias/detail-events/ar/c/1732568/
[103] https://www.sena.edu.co/es-co/Documents/Asi-vamos-10-(2)-(1).pdf
[104] https://fedepapa.com/home/wp-content/uploads/2024/10/Regional-Cundinamarca.pdf

Although the collective imagination often associates farm work with men, rural women play a critical, multifaceted role in sustaining the value chain. Their involvement is crucial in high-precision phases such as:

Figure 2. Critical phases and female and male participation in the potato value chain in Cundinamarca.



Despite their key role in the value chain, these workers' social vulnerability is evident: only 9% contribute to the health system[105]. Furthermore, women handle the food logistics for the work crews, an essential caregiving function that serves as an "invisible subsidy" for the Agricultural Production Unit (UPA), thereby reducing operating costs without remuneration[106.]

Recurring frosts and prolonged droughts cause irreversible damage to plant foliage, reducing productivity by over 20% during critical growing seasons. The persistent lack of modern irrigation systems leaves producers entirely dependent on rainfall. The resulting problem is tubers that do not reach minimum marketable sizes, preventing them from competing in wholesale markets and perpetuating cycles of low profitability for farmers[107]. Soil management in Cundinamarca faces pressure from traditional extensive livestock farming, which has accelerated soil compaction and water erosion[108].

Table 10. Biological and physical factors limit soil productivity in livestock and agricultural areas.

	The findings on the ground confirm that soil compaction is a constant limitation in livestock areas, compounded by low productivity and steep slopes that make physical labor difficult for women. Added to this is the loss of functional biodiversity; in Bogota, for example, female producers report the absence of pollinators and seed dispersers as a biological factor that compromises the health of their land.

Fieldwork, IDOM, 2025

[105] https://upra.gov.co/sites/default/files/2024-09/POP_Cadena_Papa.pdf
[106] https://americalatinagenera.org/wp-content/uploads/2014/09/U1ReproduccionyProduccion.pdf
[107] https://www.contextoganadero.com/agricultura/produccion-de-papa-disminuye-un-20-por-heladas-y-sequia https://saludconlupa.com/noticias/resistencia-agricultores-andes-heladas-sequias-cambio-climatico/
[108] https://www.uniamazonia.edu.co/arainmba/wp-content/uploads/2022/02/03.-Impacto_ganaderia_1_baja2.pdf

When women choose the best seeds, they are doing much more than manual labor: they are protecting the farm from the elements. By saving the varieties that best withstand frost or drought, they create a kind of "life insurance" for their crops. Thanks to this care, if a harvest is lost to bad weather, the family doesn't have to buy expensive seeds, because they already have the strongest ones at home to start again. Faced with soil degradation caused by livestock compaction and the intensive use of agrochemicals, women's role is key to advancing towards regenerative agriculture. Their leadership in implementing organic fertilizers and crop rotation, practices that improve soil structure and moisture retention, has resulted in fewer low-quality potatoes. Ultimately, the sustainability of potato production in Cundinamarca depends on transforming this unpaid contribution into productive capital through effective economic and social recognition.

Strengthening the financial autonomy of these women producers by facilitating their access to modern irrigation systems and social security programs is not only an act of justice but also a national necessity for food security. If women continue to operate informally and have limited access to credit due to a lack of land titles, the agricultural sector will squander its greatest asset for adaptation and resilience.

3. Gender roles in dairy production

Cundinamarca is recognized as the epicenter of water and food security in Colombia's central region. In this region, dairy farming is not merely an economic activity but the core of the social fabric in municipalities such as Villapinzón, Sesquilé, and Guatavita. The rural vocation in these territories is profound; for instance, in Villapinzón, 100% of the women surveyed identify livestock activities as their primary source of income.

Although the collective imagination often associates livestock farming with men, field findings demonstrate that rural women perform a critical technical and caregiving role. While men typically focus on commercialization and fence management, women lead milking hygiene, calf health, and dairy transformation. However, structural gender barriers persist; in Villapinzón, it is reported that women's participation remains limited, in some cases by the need to "ask permission" from men to decide what to plant or how to manage the land.

Roles and barriers in the dairy value chain

- Women (precision and care): They are responsible for manual milking, equipment cleaning (essential for food safety/inocuity), calf feeding, and the transformation of milk into products like cheese and curd.
- Men (logistics and ltrength): Their roles include the management of extensive pastures, the transport of milk cans, and representation in wholesale market associations.
- Identified Barriers: These include a disproportionate burden of domestic work, lack of access to land titles, and weak administrative formalization within their associations.

Despite their fundamental role, social vulnerability is evident. In municipalities like Sesquilé and Tausa, women's associations struggle against the low social valuation of their leadership and a lack of initial capital for productive reconversion.

The sustainability of dairy production in Cundinamarca requires the formal recognition of women's work in animal hygiene and health, thereby transforming their current role into productive capital and increasing their financial autonomy. To achieve this, it is essential to strengthen base associations and ensure direct, "farm-to-farm" technical assistance to address climate risks like frosts and droughts. Finally, improving trust in environmental authorities is vital; currently, fears of restrictive regulations ("If we plant natives, the CAR comes after us") hinder reforestation efforts. Promoting the planting of native species and protecting water sources will consolidate the sector's resilience against climate change.

D. Gender and ecosystem-based adaptation in the Bogotá Region

The landscape of the Bogotá Region is defined by a complex, multidimensional interplay among industrial areas, high-density urban centers, and high-mountain rural zones. These rural areas are primarily dedicated to dairy farming and potato cultivation. While this productive dynamic is a vital pillar of food security, it has exerted considerable historical pressure on strategic ecosystems; the expansion of the agricultural frontier into the paramos has led to the loss of native vegetation, severely compromising soil water retention and accelerating erosion. In this context, degradation, also manifested in carbon dioxide and nutrient depletion from large-scale, extensive cattle ranching, Ecosystem-based Adaptation (EbA) emerges as an integral strategy that leverages biodiversity to help communities mitigate the adverse effects of climate change.[109] [110]

In this region, women have led the adoption of this approach through practices that harmonize mountain protection with productivity. One of the most prominent strategies is the creation of high-mountain nursery networks to propagate native species, thereby avoiding dependence on foreign plant material. Women in municipalities such as Guasca have spearheaded seed collection and germination processes for key species.[111] A notable example is the "Guardianas del Páramo" (Guardians of the Moorland) initiative, which has established 25 community nurseries where ancestral knowledge of biological cycles merges with technical protocols.[112] This nursery model not only restores degraded hectares but also serves as a powerful mechanism for economic empowerment: by commercializing seedlings for restoration projects or private environmental compensation, women diversify their livelihoods while protecting essential micro-basins that supply rural aqueducts.

Table 11. Female leadership initiatives in community nursery management and regional ecological restoration.

	In Zipaquirá, women are already leading reforestation processes, notably in the Pueblo Viejo and Río Frío nurseries. In Fómeque, the ADIF association (comprising entrepreneurial women) manages the CTAP Nursery, demonstrating that women are the primary keepers of the materials needed for ecological restoration in the region.

Fieldwork, IDOM, 2025

[109] https://www.nature.org/es-us/sobre-tnc/donde-trabajamos/tnc-en-latinoamerica/colombia/adaptacion-cambio-climatico-comunidades-rio-magdalena/
[110] https://www.humboldt.org.co/noticias/viveros-comunitarios-aliados-para-restaurar-los-paramos-de-colombia
[111] https://www.humboldt.org.co/noticias/viveros-comunitarios-aliados-para-restaurar-los-paramos-de-colombia
[112] https://ppdcolombia.org/convocatoria/guardianas-de-los-paramos-y-la-accion-climatica-sumapaz/

Faced with increasing water scarcity, the transition from conventional agriculture to agroecological models has become an imperative led by women in Cundinamarca and others municipalities. Unlike potato monocultures that rely on synthetic fertilizers, agroecological gardens use bio-preparations and minimum tillage to conserve soil moisture.[113] Furthermore, the conservation of heirloom and native seeds ensures the existence of genetic varieties capable of adapting to the new temperature conditions imposed by climate change.[114] These actions are complemented by low-cost rainwater harvesting technologies, such as rooftop collection systems and geomembrane storage tanks, which, under the CAR, benefit many households by optimizing water use during dry months.[115] [116]

Table 12. Agroecological Transition and Sustainable Value Chain Experiences Led by Women's Associations in Cundinamarca

	Women's associations in Sesquilé (AMUSES and the Association of New and Entrepreneurial Women) and Guasca (the Association of Blueberry Women) are transforming traditional farming into specialized, sustainable value chains.

Fieldwork, IDOM, 2025

At the farm level, strategies are consolidated into three pillars: the use of live fences and silvopastoral systems to protect water sources; the maintenance of vegetation cover to reduce runoff and prevent landslides; and waste management through composting to prevent stream contamination.[117] This approach highlights that women are not passive victims of the crisis, but active leaders whose management of nurseries and rural aqueducts sustains regional water security. Nevertheless, to strengthen this impact, it is essential to integrate ancestral knowledge with scientific monitoring, design gender-sensitive Payment for Environmental Services (PES) mechanisms where land tenure does not act as a barrier to participation, and redistribute the burden of care work to ensure that the responsibility for sustainability does not fall exclusively on them.[118] [119]

Table 13. Synergies between female and male empowerment and ecosystem resilience[120]

Adaptation Measure (EbA)	Benefit for Women	Benefit for Men	Benefit for the Ecosystem
Rainwater Harvesting	Water autonomy and reduction in hauling time.	Reduces neighbor conflicts over water turns and lowers operational pumping costs, especially in Villapinzón, Guatavita, and Sesquilé.	Reduced pressure on surface water springs.
Community Nurseries	Income generation and technical leadership.	Community nurseries foster the recognition that protecting forests and riparian strips safeguards their property and productive infrastructure from flooding in Zipaquirá and Guasca.	Recovery of native biodiversity.

[113] https://www.adaptation-undp.org/sites/default/files/resources/PPD_BOLETIN_GUARDIANAS_SUMAPAZ_2023_V2_COMP.pdf
114 https://www.brot-fuer-die-welt.de/fileadmin/mediapool/2_Downloads/Fachinformationen/Dialog/Dialog_09_Mujeres_Agricultoras_Internet.pdf
[115] https://www.gwp.org/globalassets/global/gwp-cam_files/ea_cosecha-aguas-lluvias_fin.pdf
[116] https://www.humboldt.org.co/noticias/viveros-comunitarios-aliados-para-restaurar-los-paramos-de-colombia
[117] https://www.nature.org/es-us/sobre-tnc/donde-trabajamos/tnc-en-latinoamerica/colombia/adaptacion-cambio-climatico-comunidades-rio-magdalena/
[118] https://lac.unwomen.org/es/stories/noticia/2023/10/en-colombia-las-mujeres-rurales-son-raices-mujeres-sembradoras-del-cambio

[120] https://ppdcolombia.org/wp-content/uploads/2024/07/PPD_BOLETIN_GUARDIANAS_SUMAPAZ_2023_V2_COMP.pdf

Regenerative Agriculture	Improved family health and food security.	Regenerative agriculture and silvopastoral systems ensure long-term farm profitability and reduce dependence on chemical inputs in Tausa, Cogua, and Villapinzón.	Reduction of pollution and soil erosion.
Riparian Restoration	Property protection against flooding.	Riparian restoration protects plots against soil loss and improves water quality for livestock, a male priority in Villapinzón and Sesquilé.	Improved water quality and flow regulation.
Associative Strengthening	Recognition in JACs and local boards; reduction of "permission" barriers.	Associative strengthening requires men in Cogua, Sesquilé, and Villapinzón to yield traditional decision-making spaces and embrace household co-responsibility to allow for female technical participation.	Improved territorial governance and reduction of illegal agricultural expansion.

Fieldwork, IDOM, 2025

Table 14. Persistent barriers and time gaps affect the technical participation of rural women.
Fieldwork, IDOM, 2025

Despite their leadership, qualitative findings reveal deep-seated barriers: in Villapinzón, some women report needing to "ask permission" from male household members to decide what to plant on their own land. Furthermore, the burden of care is exacerbated by climate change; in several municipalities, women spend over 30 minutes per trip just to collect water, a "hidden" labour that limits their participation in technical training.

In conclusion, the climate resilience of the Bogotá-Region depends intrinsically on a paradigm shift in the management of its high-mountain landscapes. The transition from extractive models and monocultures toward Ecosystem-based Adaptation (EbA) practices has proven to be the most effective way to restore water capacity and protect the biodiversity of the *páramos*. This transformation is not only technical but also profoundly social, as it finds its primary architects in rural women who, through agroecology, water harvesting, and forest restoration, have successfully mitigated environmental risks while strengthening their communities' food security.[121] [122]

Finally, recognizing women as active leaders in climate action requires public policies to evolve toward gender-just governance. To ensure long-term sustainability, it is imperative that financing mechanisms, such as Payment for Environmental Services (PES), prioritize female heads of household and that care systems are implemented to alleviate their unpaid workload. To this end, the project must sensitize and actively involve men in promoting gender equality, fostering co-responsibility approaches at the household level. Only by integrating female ancestral knowledge with technical territorial planning will it be possible to guarantee regional water stability, recognizing that the health of Andean ecosystems and the well-being of those who inhabit them are the fundamental basis for life in the capital and its surroundings.[123] [124]

[121] https://www.minambiente.gov.co/wp-content/uploads/2025/02/PAGCC-DE-COLOMBIA_VF.pdf
[122] https://www.minambiente.gov.co/wp-content/uploads/2025/02/PAGCC-DE-COLOMBIA_VF.pdf
[123] https://lac.unwomen.org/es/stories/noticia/2023/10/en-colombia-las-mujeres-rurales-son-raices-mujeres-sembradoras-del-cambio
[124] https://ppdcolombia.org/wp-content/uploads/2024/07/PPD_BOLETIN_GUARDIANAS_SUMAPAZ_2023_V2_COMP.pdf

E. Gender profile by intervention zone

The characterization of the project's intervention landscapes is based on a mixed-methods analysis. Statistical indicators were integrated to define sociodemographic and gender contexts (Tables A and B), while fieldwork captured local realities through qualitative data and stakeholder perceptions.

Intervention landscape 1. Guandoque (Cundinamarca)

Table 15. Demographic context in intervention area 1

Demographic and territorial context			
Municipalities where the intervention area is located	This area comprises Tausa (45.66%), Cogua (27.43%), and Zipaquirá (26.91%).		
Geographic distribution	**Tausa**	**Urban:** 26.4% **Rural:** 73.6%	DANE-Population projections based on the 2018 Census-DNP, published in Terridata municipal fact sheets
	Cogua	**Urban:** 43% **Rural:** 57%	
	Zipaquirá	**Urban:** 85.2% **Rural:** 14.8%	
Population disaggregated by sex (2024)	**Tausa** 9,711 people	**Women:** 48% **Men:** 52%	DANE-Population projections based on the 2018 Census, available on Terridata
	Cogua 26,870 people	**Women:** 50.6% **Men:** 49.4%	
	Zipaquirá 160,629 people	**Women:** 51.5% **Men:** 48.5%	
Population over 59 years old	**Tausa**	**11.3%** of the total population.	DANE CNPV 2018
	Cogua	**13.6%** of the total population.	
	Zipaquirá	**11.7%** of the total population.	
Literacy *(% of people over 15 years old who can read and write)*	**Tausa**	**Men:** 95.1%. **Women:** 94.8%.	DANE CNPV 2018
	Cogua	**Men:** 95.7%. **Women:** 96.4%.	
	Zipaquirá	**Men:** 98.3%. **Women:** 97.9%.	
Place of birth	**Tausa**	**Men** Other country: 0.31% Other municipality: 27.93% **Women** Other country: 0.28% Other municipality: 27.88%	DANE CNPV 2018
	Cogua	**Men** Other country: 0.34% Other municipality: 40.2% **Women** Other country: 0.24% Other municipality: 41.84%	

	Zipaquirá ➲	**Men** Other country: 0.94% Other municipality: 23.22% **Women** Other country: 0.93% Other municipality: 25.69%	

The demographic analysis of Area 1 reveals a sharp contrast between the rural, peasant profile of Tausa (73.6% rural) and the urbanized expansion of Zipaquirá (85.2% urban). This divide influences gender distribution: while Tausa shows a slight male majority, likely due to female migration to urban centers, Zipaquirá maintains a female majority, reflecting its role as a regional service hub. A critical challenge is the aging of the rural population, with over 11% of residents aged 59 or older. This trend threatens generational renewal in water and land management, leaving climate adaptation tasks often physically demanding for an older demographic. Regarding human capital, high literacy rates (over 94%) mask a persistent technical gap in rural areas. Gender inequality further exacerbates this through "time poverty": while rural men spend 3 hours daily on domestic work, women invest over 8 hours. This burden is expected to intensify as water scarcity increases the effort required for household and livestock management.

Table 16. Inequality gaps in intervention area 1

A. Inequality Gaps			
Services *(% of homes that have the service)*	**Tausa** ➲ **Cogua** ➲ **Zipaquirá** ➲	Aqueduct: 87.6%. Sewerage: 18.6%. Aqueduct: 88.82%. Sewerage: 36.43%. Aqueduct: 94.8%. Sewerage: 91.2%.	DNP, with data from the Superintendency of Public Utilities 2022 - published in municipal records Terridata
Average daily time spent on unpaid domestic and care work (hours)	Regional data Men: 1.7 hours Women: 3.6 hours	Data for rural areas: Men: 3.0 hours Women: 8.6 hours	DANE-ENUT reported in the Colombian Observatory of Women
	Data scope: Time use information is presented at a regional scale and by zones (urban and rural), since the ENUT (National Time Use Survey) lacks statistical representativeness at the municipal or departmental level.		
Poverty (% of people living in that situation)	**Tausa** ➲ **Cogua** ➲ **Zipaquirá** ➲	Extreme poverty: 11.3% Moderate poverty: 29.7% Extreme poverty: 6.1% Moderate poverty: 22.2% Extreme poverty: 7.0% Moderate poverty: 22.5%	Records in SISBEN IV, 2024 published in municipal records Terridata
Rate of domestic violence *per 100,000 inhabitants*	**Tausa** ➲ **Cogua** ➲ **Zipaquirá** ➲	Rate 2023: 74.3 *Downward trend vs. the previous year* Rate 2023: 92.1 *Downward trend vs. the previous year* Rate 2023: 291.1 *Upward trend vs. the previous year*	DNP, with data from MinDefensa, Medicina Legal and DANE - published in Terridata municipal records

These disparities are exacerbated by socioeconomic factors, including extreme poverty in Tausa and limited women's legal land ownership, which can restrict their participation in decision-making and their access to conservation incentives, such as Payments for Environmental Services (PES). For this reason, it will be necessary to develop a mechanism to involve all household members, including women.

Furthermore, the deficient sewerage infrastructure in rural Tausa (18.6%) relative to urban Zipaquirá (91.2%) directly affects women, who, as the primary managers of domestic water, are exposed to contamination from inadequate wastewater discharge. Adding to this outlook are the concerning rates of domestic violence and harassment in the area, factors that could jeopardize personal safety and limit women's autonomy in community leadership roles.

To complement the statistical baseline, fieldwork was conducted in the intervention area to capture the lived experiences and perceptions of local communities. This qualitative approach enables a deeper understanding of the social fabric and the specific challenges that women face in practice. The following table synthesizes these field findings, categorized by leadership dynamics, participation barriers, and climate-specific vulnerabilities identified in Tausa, Cogua, and Zipaquirá.

Table 17. Qualitative fieldwork findings: leadership, barriers, and technical needs (Area 1)

Category	Tausa	Cogua	Zipaquirá
Leadership and Organizations	Key actors include female heads of household, artisans, and vegetable producers.	Features women's home garden associations and the "Casa de la Mujer" (Women's House).	Strong female leadership in local associations and entrepreneurship groups.
Barriers to Participation	Caregiving burdens, limited time and transportation.	Reports of harassment, social pressure within guilds, and a lack of recognition of women's roles in the field.	Caregiving burdens, limited time and transportation, and youth disinterest due to limited options.
Climate Vulnerability	Specific impacts on beekeeping (colony mortality) and loss of nutrients in livestock pastures.	Farmers experience pronounced seasonal variability in rainfall.	Women responsible for care and production are most affected by water scarcity.
Logistics and Technical Needs	Training in marketing and technical assistance for cold storage and packaging.	Coordination with environmental and social NGOs for recycling and environmental education.	Specific budgets to cover transportation and childcare services during project workshops.

Fieldwork, IDOM, 2025

The fieldwork conducted in the municipalities of Tausa, Cogua, and Zipaquirá demonstrates that female leadership underpins community organization, with a prominent presence in artisan and producer associations and in environmental care groups. In Zipaquirá, strong female participation in local associations was observed, whereas in Tausa, women, particularly female heads of households, are recognized as primary actors in the management of natural resources. However, this community leadership contrasts with institutional disconnection, as these leaders do not currently participate in external technical projects across several sectors, thereby limiting their influence on structural water-related decisions.

A central finding of the diagnosis is the persistence of structural barriers that condition women's participation. Caregiving burdens and domestic chores are cross-cutting factors that limit available time, compounded by transportation difficulties in hard-to-reach rural areas. Nevertheless, in municipalities like Cogua, additional challenges related to a lack of autonomy and social pressure are detected, where situations of harassment and a culture that still limits women's agency in the field are reported. Likewise, mistrust of external entities, stemming from prior experiences of imposition or sanctions, discourages the female community's active involvement in new processes. With respect to climate vulnerability, women are identified as the most exposed group due to their direct role in water management for domestic

consumption and family food security. Phenomena such as droughts and the drying up of springs significantly increase their workload and affect their livelihoods, including home gardens and small livestock farming. Despite this exposure, it highlights that women possess extensive traditional knowledge and historical memory of water source behavior, often exceeding official technical information.

It's useful to highlight that in the region, a significant proportion of women rely exclusively on agricultural work or on renting out their labor to survive, creating economic precariousness that limits their capacity to invest in adaptation measures. Furthermore, the educational attainment levels of some rural women may hinder their understanding of complex technical languages, underscoring the need to value and preserve local knowledge as a fundamental resource for the territory's resilience.

Intervention lanscape 2. Villapinzón (Cundinamarca)

In this case, the analysis focuses on the municipality of Villapinzón. The demographic context and gender gaps are then presented using official municipal statistics, information which is subsequently compared with the qualitative and quantitative findings obtained in the field.

Table 18. Demographic context in intervention area 2

Demographic and Territorial Context				
Municipalities where the intervention area is located	The area is distributed between Villapinzón (77.52%) and Chocontá (22.48%).			
Geographic distribution	**Villapinzón**	➲	**Urban:** 45.0% **Rural** 55.0%	DANE-Population projections based on the CNPV 2018, published in Terridata municipal fact sheets
Population disaggregated by sex (2024)	**Villapinzón** 20,735 people	➲	**Women:** 49.9% **Men:** 50.1%	DANE-Population projections based on the 2018 Census, available on Terridata
Population over 59 years old	**Villapinzón**	➲	**12.8%** of the total population.	DANE CNPV 2018
Literacy *(% of people over 15 years old who can read and write)*	**Villapinzón**	➲	**Men:** 97.1%. **Women:** 96.1%.	DANE CNPV 2018
Place of birth	**Villapinzón**	➲	**Men** Other country: 0.25% Another municipality: 21.32% **Women** Other country: 0.18% Another municipality: 21.81%	DANE CNPV 2018

Villapinzón is characterized by a landscape of hydric and social vulnerability, where rurality (55%) and poverty (47.1%) significantly shape women’s daily lives. A distinctive challenge in this area is the physical burden of water management: as local springs dry up, women are forced to spend up to an hour per trip collecting water. This labor is compounded by a deficient sewage system that covers only 40% of the territory, increasing their exposure to environmental contamination. These physical demands coexist with an aging population (12.8%) and deeply rooted gender barriers. Fieldwork identified a critical lack of autonomy, exemplified by the persistence of "male permission" for land management decisions and a low

formal participation rate in community organizations (15%). Given the rising domestic violence rates and the environmental pressure from the leather processing industry, interventions in Villapinzón must go beyond technical assistance. Interventions must prioritize reducing 'time poverty' and empowering women to achieve full sovereignty over their natural resources and decision-making processes. Furthermore, it is essential to implement sensitization strategies targeting men to deconstruct their traditional roles as 'gatekeepers' or intermediaries of access to property and community participation. Only by promoting co-responsible masculinities and fostering democratic household decision-making will it be possible to dismantle the barrier of 'male authorization' and ensure that women exercise genuine autonomy over the territory and its benefits.

Table 19. Inequality gaps in intervention area 2

A. Inequality Gaps			
Services *(% of homes that have the service)*	**Villapinzón**	Aqueduct: 88.3%. Sewage: 40.0%.	DANE CNPV 2018
Average daily time spent on unpaid domestic and care work (hours)	Regional data: Men: 1.7 hours Women: 3.6 hours	Data for rural areas: Men: 3.0 hours Women: 8.6 hours	DANE-ENUT reported in the Colombian Observatory of Women
	Data scope: Time use information is presented at a regional scale and by zones (urban and rural), since the ENUT (National Time Use Survey) lacks statistical representativeness at the municipal or departmental level.		
Poverty (% of people living in that situation)	**Villapinzón**	Extreme poverty: 12.2% Moderate poverty: 34.9%	Records in SISBEN IV, 2024 published in municipal records Terridata
Rate of domestic violence *per 100,000 inhabitants*	**Villapinzón**	Rate 2023: 264.20 *Upward trend vs. the previous year*	DNP, with data from MinDefensa, Medicina Legal and DANE - in Terridata municipal records

The table above reveals that although water supply coverage reaches 88.3%, the sewage system is significantly underdeveloped (40.0%), directly impacting the pollution of local water sources. Furthermore, 47.1% of the population lives in poverty to some degree.

As a part of the fieldwork, the community reports an alarming transformation of the hydric landscape over the last three decades. Climate risk perception in Villapinzón is critical and is characterized by three primary phenomena: hailstorms, frosts, and droughts. Local testimonies highlight the disappearance of springs and a drastic reduction in water flow on farms where, thirty years ago, streams ran year-round. This scarcity forces women into precarious water management: while some have access to aqueducts, many remain dependent on natural springs and reservoirs. This leads to extreme physical burdens, with some women traveling more than 1,000 meters and spending up to 1 hour per trip to collect water. Furthermore, a latent health risk persists as a significant portion of the population consumes non-potable (raw) water.

Regarding environmental degradation, the area faces multidimensional pressure on its natural resources. The expansion of the agricultural frontier, specifically potato cultivation on steep slopes, and livestock farming without proper waste management, has accelerated deforestation and soil contamination. A distinctive stressor in this area is industrial pollution from tanneries (curtiembres), with waste improperly disposed of in sensitive locations such as the Paramo. This situation creates constant tension between

production needs and the imperative for paramo conservation, a tension exacerbated by the absence of a Municipal Wastewater Treatment Plant (PTAR).

Despite women's high involvement in daily farm labor, their formal decision-making capacity and leadership remain limited. There is an evident technical disconnect: most rely exclusively on traditional knowledge for climate-related decisions and lack access to official meteorological data. Only a small minority (approximately 15%) currently participates in formal projects or community organizations.

Gender barriers in Villapinzón are explicit:

- In several households, women must still "ask for permission" from men to decide what to plant or how to manage the land.
- Domestic responsibilities and the geographical isolation of certain villages act as a "glass ceiling" for attending technical training.
- There is a widespread distrust of environmental authorities (such as the CAR), rooted in the perception that conservation projects may lead to sanctions or restrictions on their agricultural production.

The following table synthesizes the critical field findings for this area:

Table 20. Qualitative fieldwork findings: leadership, barriers, and technical needs (Area 2)

Category	Critical Findings in Villapinzón
Leadership and Organizations	The community structure relies on rural aqueduct associations and Community Action Boards (JACs). However, formal engagement is low, with only 15% of surveyed women linked to current initiatives. Female leadership is most visible in apiculture, local tourism, and dairy processing.
Barriers to Participation	Time poverty due to unpaid care and domestic workloads is the primary barrier. Restrictive gender dynamics persist, including the reported need for "male permission" for land management decisions. Logistical hurdles include distance, lack of transport, and institutional distrust.
Climate Vulnerability	Documented disappearance of water sources on family farms. High sensitivity to frosts, hailstorms, and droughts that threaten agricultural assets. Severe water insecurity, with collection times exceeding one hour for some households.
Logistics and Technical Needs	Stakeholders demand integrated technical assistance directly on the farm, tailored to each property. Key needs include training in restoration, community water-flow monitoring, and administrative support for direct marketing. Initial capital is required for transitioning to sustainable systems.

Fieldwork, IDOM, 2025

Intervention landscape 3. Tominé (Cundinamarca)

The intervention area is primarily concentrated in the municipalities of Guasca and Guatavita, both of which have a strong rural identity.

Table 21. Demographic context in intervention area 3

Demographic and Territorial Context			
Municipalities where the intervention area is located	This area comprises Guasca (44.80%), Guatavita (28.43%), Chocontá (16.57%), and Sesquilé (10.20%).		
Geographic distribution	**Guasca**	**Urban:** 48.2% **Rural** 51.8%	DANE-Population projections based on the 2018 Census-DNP, published in Terridata municipal fact sheets
	Sesquilé	**Urban:** 38.5% **Rural** 61.5%	
	Chocontá	**Urban:** 59.9% **Rural** 40.1%	
	Guatavita	**Urban:** 43.0% **Rural** 57.0%	
Population disaggregated by sex (2024)	**Guasca** 18,569 people	**Women:** 50.1% **Men:** 49.9%	DANE-Population projections based on the 2018 Census, available on Terridata
	Sesquilé	**Women:** 49.9% **Men:** 50.1%	
	Chocontá 12,939	**Women:** 50.1% **Men:** 49.9%	
	Guatavita 7,605 people	**Women:** 50% **Men:** 50%	
Population over 59 years old	**Guasca**	**12.9%** of the total population.	DANE CNPV 2018
	Sesquilé	**12.1%** of the total population.	
	Chocontá	**12.2%** of the total population.	
	Guatavita	**15,0%** of the total population.	
Literacy *(% of people over 15 years old who can read and write)*	**Guasca**	**Men:** 96.0%. **Women:** 96.8%.	DANE CNPV 2018
	Sesquilé	**Men:** 96.7%. **Women:** 97.0%.	
	Chocontá	**Men:** 96.0%. **Women:** 95.3%.	
	Guatavita	**Men:** 95.8%. **Women:** 96.6%.	
Place of birth	**Guasca**	**Men** Other country: 0.63% Another municipality: 29.28% **Women** Other country: 0.67% Another municipality: 29.33%	DANE CNPV 2018
	Sesquilé	**Men** Other country: 1.08% Another municipality: 31.63% **Women** Other country: 0.93% Another municipality: 31.85%	
	Chocontá	**Men** Other country: 0.49% Another municipality: 18.24%	

	Guatavita	**Women** Other country: 0.33% Another municipality: 17.63% **Men** Other countries: 0.24% Another municipality: 20.10% **Women** Other countries: 0.16% Another municipality: 20.23%	

Regarding the social profile, Guatavita shows a slightly higher aging index, with 15.0% of the population aged 59 or older, compared to 12.9% in Guasca. Nevertheless, both municipalities maintain outstanding literacy levels exceeding 95% for both sexes, reflecting a solid educational foundation. In terms of mobility and local roots, 2018 Census data reveal that Guasca presents a more active internal migration dynamic: approximately 29% of its population was born in other municipalities, compared to 20% in Guatavita. In contrast, the presence of a foreign population is marginal in both locations, not exceeding 0.67%. This territorial configuration suggests stable communities with a strong sense of belonging, key factors for the success of intervention efforts in the area.

Table 22. Inequality gaps in intervention area 3

A. Inequality Gaps			
Services *(% of homes that have the service)*	**Guasca** **Chocontá** **Sesquilé** **Guatavita**	Aqueduct: 80.4%. Sewerage: 40.5%. Aqueduct: 87.75%. Sewerage: 48.06%. Aqueduct: 91.97%. Sewerage: 58.32%. Aqueduct: 42.6%. Sewerage: 17.5%.	DNP, with data from the Superintendency of Public Utilities 2022 - published in municipal records Terridata
Average daily time spent on unpaid domestic and care work (hours)	Regional data: Men: 1.7 hours Women: 3.6 hours	Data for rural areas: Men: 3.0 hours Women: 8.6 hours	DANE-ENUT reported in the Colombian Observatory of Women
	Data scope: Time use information is presented at a regional scale and by zones (urban and rural), since the ENUT (National Time Use Survey) lacks statistical representativeness at the municipal or departmental level.		
Poverty (% of people living in that situation)	**Guasca** **Chocontá** **Sesquilé** **Guatavita**	Extreme poverty: 3.0% Moderate poverty: 16.5% Extreme poverty: 11.2% Moderate poverty: 34.9% Extreme poverty: 11.1% Moderate poverty: 26.2% Extreme poverty: 5.5% Moderate poverty: 24.0%	Records in SISBEN IV, 2024, published in municipal records Terridata
Rate of domestic violence *per 100,000 inhabitants*	**Guasca** **Chocontá** **Sesquilé**	Rate 2023: 166.8 *Upward trend vs. the previous year* Rate 2023: 91.1 *Upward trend vs. the previous year* Rate 2023: 81.4 *Downward trend vs. the previous year*	DNP, with data from MinDefensa, Medicina Legal and DANE - published in Terridata municipal records

	Guatavita	Rate 2023: 135.5 *Downward trend vs. the previous year*	

The gender dimension underscores serious challenges in how time is distributed. In the eastern region, women bear the disproportionate burden of unpaid domestic work. Additionally, public safety remains a concern: although Guatavita reports a lower rate of domestic violence (135.5 per 100,000 inhabitants) with a declining trend, Guasca shows a higher figure (166.8) with a worrying increase.
Fieldwork conducted in Guasca, Guatavita, and Sesquilé revealed that while community groups have high capacity for organization, access to resources remains limited. The findings highlight three key areas:

- There are serious concerns about soil degradation due to mining, monocultures of potato and blueberry, and the spread of invasive species. Limited basic services in peripheral areas force families to depend on natural reservoirs, with collection times exceeding one hour.
- Women participate actively in organizations, yet their leadership is undervalued socially, and a caregiving overload hampers their personal and economic growth.
- Communities seek direct 'farm-to-farm' technical assistance and communication strategies to break the isolation of scattered rural districts.

Table 23. Qualitative fieldwork findings: leadership, barriers, and technical needs (Area 3)

Category	Guasca	Guatavita	Sesquile
Leadership and Organizations	High associative capacity in various sectors: blueberries, weaving, beekeeping, and farmers' markets. Women lead organizations such as AGREGUA, Manos Tejedoras, and dairy associations.	Solid network of dairy cooperatives (Levacar, AMEG, Coprolag) and female entrepreneurs. Notable local tourism agency managed exclusively by women with a matrifocal structure (female heads of household).	Established dairy cooperatives (Coldorados, Copranses) and women's associations such as AMUSES and "Nuevas y Emprendedoras." Growing interest in youth movements and associations.
Barriers to Participation	Lack of interest and generational renewal among rural youth. Women face double workloads and meeting schedules incompatible with household care. Distrust toward previous extractive or infrastructure projects.	Lack of credibility in the municipal administration and institutional distrust. Women perceive a lower social valuation of their voices and leadership than men do. Conflicts with invaders on vacant border lands.	Technical information "does not flow" to the periphery and relies on word-of-mouth. Low social valuation of female management capacity. Resources tend to be centralized, leaving remote areas neglected.
Climate Vulnerability	Water rationing in sectors like Pastor Ospina and recurrent flooding of the Siecha River. Technical supply issues in dispersed areas like San Jorge, where they rely on direct collection from creeks.	Extreme water insecurity: 90% of surveyed women consume non-potable water (raw or filtered). Some travel more than 1,000 meters to obtain water, with collection times of up to two hours.	Severe scarcity in summer and risk of forest fires. Degradation of wetlands in rural districts like Agua Blanca. Landslides in Ranchería are affecting property stability.
Logistics and Technical Needs	Demand for "farm-to-farm" technical assistance in soil management and silvopasture. Need for climate monitoring kits and accounting/administrative training for associations to manage their own resources.	Prioritize irrigation projects in critical sectors and the creation of a municipal nursery for native species. Request incentives for water reuse plants in tourist accommodations.	Require reservoirs to store water in summer and genetic improvement of livestock. Need clear, free, and timely calls for participation to ensure the involvement of peripheral areas.

Fieldwork, IDOM, 2025

The vulnerability in the Tominé intervention zone presents a paradox: it is a region rich in strategic water resources, yet its residents, particularly in Guatavita, face extreme water insecurity. The municipality's low coverage of aqueducts (42.6%) and sewerage (17.5%) means water security is a daily challenge, especially for women who spend over an hour manually collecting water. This situation diminishes the community's adaptive capacity, as the physical effort and time spent on basic survival leave little room for pursuing long-term climate strategies.

In terms of ecosystem restoration, the area's high aging index (15% in Guatavita) and the 8.6-hour daily caregiving burden on women pose significant obstacles. When women's leadership is undervalued and their time consumed by domestic responsibilities, the social fabric necessary for hydric resilience remains underexploited. The project must recognize that women in Guasca and Guatavita are not only participants but also the traditional custodians of sacred sites like the Siecha Peaks. Their ancestral knowledge is a vital asset for Ecosystem-based Adaptation (EbA).

Therefore, these findings underscore the importance of linking water resilience to efforts to close basic service gaps. To ensure sustainable restoration, the project should implement "farm-to-farm" technical assistance to reduce the labor burden on older populations and women. Success hinges on transforming the strong associative capacity of dairy and craft cooperatives into a governance platform that empowers women with the technical autonomy and time to lead efforts to protect the páramo, so that the territory's water resources primarily support the resilience of the communities that protect them.

Intervention landscape 4. Tunjuelo (Bogotá)

The characterization of Intervention Landscape 4 incorporates data from both the Usme and Sumapaz localities. This area juxtaposes Usme, which functions as the critical transition border between Bogotá's dense urban sprawl and its rural páramo ecosystems, with Sumapaz, the only locality in the capital with a strictly rural composition. While Usme encompasses a vast rural territory (accounting for approximately 85% of its total area), most of its population is concentrated in the urban periphery. Conversely, Sumapaz encompasses almost 40% of the city's total area but houses only 0.05% of its population. The following table outlines the essential demographic and territorial context for both localities for the intervention's strategic planning.

Table 24. Demographic context in the intervention area 6 (Usme and Sumapaz)

Demographic and territorial context	Usme (Locality 5)	Sumapaz (Locality 20)	Source
Location of the intervention	Characterized by a complex rururban (rural-urban) composition. Acts as Bogotá's southern agricultural and environmental border.	Characterized by a strictly rural composition. The only 100% rural locality in Bogotá.	ETIS Locality 5 and 20
Geographic distribution	Urban: ~95% of population (concentrated in the northern edge).	Urban: 0%. Rural: 100%.	ETIS Locality 5 and 20

	Rural: ~5% of population (dispersed in the center and south).		
Population disaggregated by sex (2024)	~405,200 people. Women: 51.2%. Men: 48.8%.	3,926 people. Women: 49.7%. Men: 50.3%.	Population projections
Population over 59 years old	High concentration of youth and working-age adults (15-59 years). Represents a challenge for youth employment and rural generational transition.	56.7% of the total population. It represents a challenge for the generational transition.	Demographic profile
Literacy (% of people over 15 who can read and write)	95.1% of the population. Solid basic educational foundation, though higher education access is limited.	93.9% of the population. Solid basic educational foundation.	ETIS Locality 5 and 20

Demographic analysis highlights diverse challenges across the landscape. Usme presents a dual phenomenon: a densely populated, young working-age urban sector alongside a progressively aging rural population. While Usme's urban area faces immense pressure for formal employment and services, its rural sector shares an urgent need for generational succession in land and water management with Sumapaz. Sumapaz highlights a critical phenomenon of population aging, where more than half the population is over 60, women make up most of the elderly, and only 30.4% of women are of working age (15-59 years). This demographic structure suggests additional pressure on care systems. Furthermore, a technical gap is evident across both localities. Although basic literacy is high, women's access to technical and higher education remains severely limited, standing at only 3% in Sumapaz. In Usme, high commuting costs to the city center and economic precarity are major barriers. Across both areas, the heavy burden of household chores (cited as a 20% obstacle in Sumapaz alongside 30% high costs) restricts women's ability to advance their education and limits their participation in technical decision-making and sustainable agricultural practices.

Table 25. Inequality gaps in intervention area 6 (Usme and Sumapaz)

Category	Usme (Locality 5)	Sumapaz (Locality 20)	Trend / Observation	Source
Services (Health and Needs)	Healthcare Access: High demand in peripheral settlements.	Preventive Health: Maternal Mortality: 0 cases.	Urgent need to strengthen the Usme Hospital network and rural health posts, and to scale up Nazareth Hospital to level 2.	ETIS Locality 5 and 20
Use of time (Unpaid care work)	Care Gap: Women spend up to 2.5 times as many hours on unpaid care as men.	Care Gap (Childcare): Women: 21.9%, Men: 9.4%. In Sumapaz, women provide 2.3	Childcare and domestic work predominantly fall on women across both localities.	Diagnosis of the Economics of Care

		times as much care as men.		
Poverty (% of people in this situation)	Local Poverty: Extreme: 12.4%. Multidimensional (Female-headed households): 24.5%.	Local Poverty: Extreme: 25.9%. Multidimensional (Female-headed households): 20.0%.	Nearly 1 in 4 female-headed households in Usme and 1 in 5 in Sumapaz face multidimensional poverty.	SISBEN / ETIS

Vulnerability in the Tunjuelo landscape is critically manifested through multidimensional poverty, geographic isolation, and structural barriers that limit women's economic autonomy. In Usme, 24.5% of female-headed households face multidimensional poverty, which is exacerbated by the locality's peripheral geography and informal urban expansion. In the strictly rural Sumapaz district, the extreme poverty rate reaches 25.9%, and one in five female-headed households faces multidimensional poverty. This economic precarity, coupled with the geographic isolation typical of rural Bogotá, limits women's ability to invest in climate change adaptation measures and productive resilience in both sectors. In Usme's urban sector, long commute times to central Bogotá further compound women's "time poverty". Regarding the care economy, both Usme and Sumapaz reveal profound project gaps: women shoulder a vastly disproportionate share of unpaid domestic and caregiving work. Women in Usme spend up to 2.5 times as many hours on unpaid care as men, while women in Sumapaz assume childcare 2.3 times as much as men (21.9% versus 9.4%). This "time poverty" is particularly exacerbated in Sumapaz, where 80% of women are primarily engaged in housework. Ultimately, this limits their ability to participate in technical decision-making spaces related to water and land management across the area.

In the areas of health and safety, the landscape presents contrasts. Sumapaz shows positive indicators in preventive health, noting the absence of maternal mortality and school dropout rates due to child pregnancy. However, the intersection of urban informality in Usme and rural isolation in Sumapaz creates complex safety challenges. Limited local support networks in peripheral neighborhoods and rural districts often hinder the formal reporting of gender-based violence out of fear of repercussions. This obscures structural risks that can compromise women's physical safety and autonomy.

To move beyond simply analyzing statistics and to understand social dynamics from the perspective of those directly involved, a primary data collection exercise and community dialogues were conducted. This approach allowed for a comparison of gender gap and aging indicators with the everyday experiences of communities in rural Bogotá. Based on the field findings, the following results were consolidated, defining the qualitative dimension of the intervention:

Table 26. Qualitative fieldwork findings: leadership, barriers, and technical needs (Intervention landscape 4)

Category	Findings in Area 4
Leadership and Organizations	High levels of female participation are reported in Community Action Boards (JACs) and community gardens. 71% of the women surveyed participate in organizations.
Barriers to Participation	The women commented that lack of time due to caregiving responsibilities, institutional distrust, and adult-centrism are barriers to participation. They also reported needing to "ask permission" in some rural contexts to make decisions.

Climate Vulnerability	The women identified frost and drought as the greatest impacts. Critical flood risks in certain areas of this intervention zone.
Logistics and Technical Needs	Certified environmental education, strengthening of biodiversity monitoring networks, and support for home water purification.

The perception of climate risk in this region is unanimous and intrinsically linked to the survival of production systems. Women identify frosts and droughts as the most impactful phenomena, directly affecting their main activities: small-scale agriculture and livestock farming. This climate vulnerability translates into severe "time poverty"; faced with scarcity, women assume the physical responsibility of finding alternative sources, resorting to springs or rural aqueducts that sometimes require a walk of up to 500 meters. Furthermore, the water available for human consumption is frequently reported as undrinkable (raw), which imposes an additional, invisible workload at home to ensure family health through filtering or boiling.

Unlike other intervention landscapes, the Tunjuelo River has experienced historical environmental degradation of industrial and urban origins. Local accounts describe the river as a "dead" body of water along much of its course, impacted by leachate from the Doña Juana Sanitary Landfill, hazardous discharges from tanneries in certain sections, and the massive disposal of construction debris. In the rural area, this degradation manifests as soil compaction and the loss of functional biodiversity, such as pollinators and seed-dispersing birds, which local producers identify as critical limitations to the natural restoration of their lands. This ecosystem crisis acts as a risk multiplier, where the loss of environmental services forces women to depend economically on external activities or on selling their labor as day laborers.

In terms of social participation, Area 6 shows remarkable dynamism: 71% of rural women report being involved in organizations, primarily Community Action Boards (JACs) and community gardens like "El Tunjo." However, a gap persists between operational participation and strategic decision-making. While women's attendance exceeds 90% in grassroots processes, their representation on technical committees for water systems remains limited.

The barriers identified in the field are structural: the burden of caregiving and the persistence of stereotypes that associate technical water management with masculine roles. Furthermore, situations have been documented in which women still need to "ask permission" from the men in the household to make decisions about land use or the adoption of new technologies, a limitation on their autonomy that the project must address through economic empowerment mechanisms.

F. Main findings and recommendations of gender analysis

1. Use and prioritization of natural resources

How do women and men currently use and prioritize the natural resources impacted by this project? How might this change as a result of the project?

The use of natural resources in the territory is deeply marked by the sexual division of labor and pre-established gender roles.

Men	Men prioritize large-scale productive use and commercial agriculture. They tend to prioritize access to water for large-scale activities, as is the case in Villapinzón, where irrigation of pastures for livestock is prioritized, which places their main vulnerabilities in the financial and productivity spheres.
Women	Field data identifies women as the primary operational managers of water resources in the domestic sphere. They assume the main responsibility for managing water for human consumption, hygiene, and household food security, also prioritizing subsistence gardens and small-scale livestock farming. In municipalities like Guatavita and Villapinzón, the heavy reliance on natural resources, such as springs and rivers, positions women as the first to detect the effects of climate variability. However, this work involves a considerable physical burden; it is reported that in these areas, women must travel more than 1,000 meters to collect water, a task that is especially burdensome during droughts. Although this prioritization of domestic use is vital for the food security of these communities, it currently lacks formal recognition in the technical planning of rural aqueducts.

Through ecological restoration and strengthened water infrastructure, the project aims to free up hours of daily physical labor, allowing women to reinvest that time in strengthening their economic autonomy through the transition to agroecology and by creating community nurseries they lead. This transition also involves breaking down structural barriers and addressing the historical exclusion of women from the technical governance of water systems, ensuring that they no longer serve as an "invisible subsidy" for production and become leaders with technical expertise and decision-making power over their territories.

2. Impacts of the project on women and men

How will women and men be affected by the project activities, including their livelihoods, workload, and control of resources?

The analysis of the project's impacts begins with the recognition that the climate crisis is not a neutral phenomenon but affects the population differently along lines of gender roles and the division of labor. For men, the consequences of environmental variability and the project's activities are primarily manifested in the productive and financial dimensions. Since they tend to prioritize water resources for

large-scale commercial activities, such as irrigating pastures for livestock in Villapinzón, their greatest risks are the loss of profitability and competitiveness. Although it is recognized that the loss of livelihoods can generate identity crises and affect mental health, the project focuses its gender approach on women because men possess more robust coping mechanisms, such as greater access to official credit, technical information, and greater mobility for labor migration.

For women, the impact acts as a multiplier of "time poverty" and structural inequalities. Currently, women in these rural areas spend an average of 8.6 hours per day on domestic and care work, compared to 3.0 hours for men. In urban contexts like Bogotá, this care gap persists, with women bearing 2.3 times more burden than men.

Extreme weather events directly impact women's autonomy and safety in the following ways:

- Droughts: cause an increase in the time spent collecting water, which leads to the abandonment of other activities, whether productive, educational or leisure.
- Hailstorms: These result in the destruction of subsistence gardens and the loss of small animal husbandry, activities managed almost exclusively by women, leading to the loss of food sovereignty and independent income.
- Frosts: cause foliar damage in potato and pasture crops, which reduces dairy and agricultural productivity at the family level.
- Landslides: These cause the rupture of rural aqueducts, forcing families to rely on non-potable water, with the consequent health risks.

The project aims to mitigate these impacts by restoring and strengthening water infrastructure, thereby reducing the physical burden of manually transporting water and freeing up women's productive time. It also seeks to strengthen their economic autonomy through the transition to agroecology and the creation of community nurseries led by women. However, a critical challenge is resource control. Land ownership is predominantly male; in Colombia, only 26% of rural women hold property titles. This lack of titles acts as a barrier to accessing credit and participating in conservation incentives such as Payments for Environmental Services (PES). Furthermore, it has been found that women provide an "invisible subsidy" to agricultural production by managing food logistics for work crews without remuneration.

The analysis acknowledges that inequalities deepen when considering groups with vulnerabilities:

- For women facing compounded vulnerabilities—such as victims of armed conflict or migrants—gender gaps are exacerbated by the convergence of multiple forms of discrimination and their vital dependence on fragile ecosystems.
- The phenomenon of rural aging, which exceeds 15% in areas such as Guatavita, significantly hinders climate adaptation tasks, which require a great physical effort.
- The LGBTIQ+ population faces much higher levels of social stigmatization and labor exclusion in rural contexts.

3. Participation in decision-making and limitations

To what extent do women and men participate in decision-making processes regarding the management or governance of these natural resources? What are the limitations (social, cultural, economic, political) that might restrict the active participation of certain women in decision-making processes at the household, community, and project levels?

The governance of natural resources in the region reflects a profound power asymmetry. While men typically control strategic decisions, infrastructure, and budgets, women assume roles as "primary operational managers" of the resource yet have marginal influence in technical decision-making.

Female participation is inversely proportional to the level of technical and strategic power:

- Community participation (high): Women actively participate in organizations, but their work is concentrated in Community Action Boards (JAC) and family gardens.
- Water governance (low/marginal): In the technical management of rural aqueducts, representation is minimal, which implies an almost total exclusion from decisions about the water network of the sub-basin.
- Operational vs. strategic roles: In aqueducts where there is a female presence, women are usually relegated to administrative or manual water purification functions, while the handling of valves, pipes and infrastructure planning remains under male control due to gender stereotypes

The barriers restricting this leadership are structural and multifactorial. First, the "time poverty" resulting from the double workday is a critical obstacle, as rural women devote significant time to caregiving and housework. This burden is exacerbated by persistent gender stereotypes that associate technical tasks exclusively with men and render invisible the empirical knowledge women possess about the local water network. Furthermore, in many rural contexts, a restrictive culture still prevails in which women feel the need to "ask permission" from the men in their household to make decisions about planting, land management, or their own participation in training programs. From economic and political perspectives, the lack of autonomy is exacerbated by the asset ownership gap. In Colombia, only 26% of rural women hold title to the land they work, which not only diminishes their decision-making power but also systematically excludes them from access to credit and technical assistance.

4. Access to information

Do women and men have equal access to the information needed to participate in and benefit from the project activities?

In the project's intervention landscape, there is currently no real equality in access to the technical information needed for climate change adaptation and resource management. Men tend to have more robust coping mechanisms due to greater access to credit and official meteorological information. In contrast, most rural women rely primarily on traditional knowledge, historical memory, and ancestral wisdom for climate-related decision-making. While this knowledge is a vital asset that often surpasses the accuracy of official technical data at the local level, its empirical nature limits women's ability to anticipate extreme weather events through early warning systems.

The use of complex technical language by state institutions serves as a filter for exclusion, hindering the effective dissemination of agroforestry or soil management guidelines to women. This is compounded by a latent institutional distrust, particularly toward environmental authorities such as the CAR (Regional Autonomous Corporation), stemming from past experiences in which information was perceived as a tool for punishment rather than support.

To overcome these limitations, the project proposes a model to democratize information through gender-responsive farm-to-farm technical training. Recognizing the high regional rates of Gender-Based Violence

(GBV) and the fact that extension services are predominantly male-led, the model incorporates rigorous safeguarding protocols to mitigate the risks of Sexual Exploitation, Abuse, and Harassment (SEAH). This ensures that knowledge reaches the productive spaces managed by women in dispersed rural areas through safe, inclusive, and protected environments. The strategy includes installing climate and biodiversity monitoring stations that will serve as community learning centers, integrating scientific protocols with women's traditional knowledge. To guarantee that the information is truly inclusive, the project is committed to using diverse communication channels and clear language that breaks down the isolation of these remote communities and transforms technical information into a tool for women's empowerment and economic autonomy.

5. Gender violence and project risks

How prevalent is gender-based violence at the project site, compared to the national average? Is there a possibility that the project activities will perpetuate or increase gender inequalities and discrimination?

The prevalence of gender-based violence in the intervention landscapes present a complex and heterogeneous picture that, in critical areas, significantly exceeds the challenges observed at the national level. While Colombia registers an average of 228.8 cases of domestic violence per 100,000 inhabitants, where women constitute between 70% and 77% of the victims, the project covers territories with alarming risk indicators.

At the municipal level, "hot spots" with upward trends are observed, such as Zipaquirá (291.1) and Villapinzón (264.20), where violence appears to be increasing. On the other hand, although municipalities such as Guasca (166.8), Guatavita (135.5), and Tausa (74.3) report figures below the national average, these figures should be interpreted with caution. Gender analysis warns that, in highly rural or geographically isolated areas, the lack of local support networks and fear of reprisals can lead to significant underreporting. In these contexts, statistical silence often masks structural risks that compromise women's autonomy and physical integrity, limiting their capacity to fully participate in the environmental governance of the territory. Similarly, there is a deeply ingrained cultural barrier known as the "permission culture." In municipalities such as Villapinzón, it has been documented that many women still need to consult with or request permission from the men in their households to decide what to plant or how to manage their land. If the productive transformation interventions of Component 1 are directed solely at "heads of household" or formal landowners, the project could unintentionally reinforce male control over resources. Finally, the risk of exclusion extends to the realm of knowledge and technology. Technical water management and machinery operation are often marked by gender stereotypes that associate these tasks with masculinity. Without a differentiated approach, women could be relegated to minor operational roles, ignoring their ancestral and empirical knowledge of local biodiversity.

Based on these findings, the project identifies critical gaps that must be addressed across all areas. The following section details how each component of the project will mitigate these risks and empower women. This will be further reflected in the specific activities of the Gender Action Plan.

Component 1. Proof of concept to achieve the highest hydrological benefits at the Watershed scale.

The objective is to generate robust territorial evidence of Volumetric Water Benefits (VWB) that begins at the plot scale and gradually scales to the watershed level to trigger long-term financing under Component 2. Outputs under Component 1 prove that i) Restoration and conservation interventions in headwaters areas, along water streams and farms, together with ii) climate-resilient transformation of productive practices, lead to better livelihoods, reduced pressure on strategic ecosystems and, ultimately, yield water benefits. Activities under this component will be implemented in a) Public Protected Areas, b) Private Protected Areas (Civil Society Natural Reserves), and c) public and private property lands benefiting farmers, landowners, producer associations, and local organizations.

Table 24. Gender gaps to consider in Component 1

Gender Gap	Impact and risk for the project	Affected activities	Proposed Mitigation Measures	Opportunities and VWB Acceleration
Unequal land tenure and control	Land is a fundamental productive asset. In rural Colombia, women own less than 30% of land parcels, and these tend to be smaller and less productive. The lack of property titles prevents them from accessing credit, receiving technical assistance, and becoming direct beneficiaries of incentives, thereby impeding their ability to invest in the agricultural transformation promoted by the project.	1.1.1.2: Conservation agreements, 1.1.2.1: Passive restoration, 1.1.2.2: Active restoration, 1.2.1: Resilient production systems	Decouple benefits from property titles through "adaptation agreements" requiring joint signatures from both men and women.	Women's legal empowerment accelerates VWB by ensuring long-term maintenance of conservation practices, given their historical role in protecting family resource bases.
Lack of autonomy to adapt	Without control over land and access to capital, women cannot make autonomous decisions to adapt their farming systems to water scarcity or excess (e.g., building a reservoir, installing drip irrigation, or diversifying to drought-resistant crops). They remain trapped in highly vulnerable subsistence practices.	1.2.1.1: Silvopastoral systems 1.2.1.2: Agroecology in potato 1.2.1.3: Farm-level water saving 1.2.1.4: Agrifood diversification	Promote inclusive financial mechanisms with flexible collateral requirements adapted to the reality of landless rural women.	Empowering household water managers optimizes the implementation of water-saving techniques (Act. 1.2.1.3), accelerating runoff reduction and baseflow stability.
Segregation in value chains	Women are concentrated in the lowest-value and lowest-paid segments of agricultural value chains (planting and harvesting), whereas men dominate the more profitable stages of	1.2.2.1: Business models 1.2.2.2: Market access	Set explicit gender targets to promote women into higher-value-added roles, such as processing, management, and marketing.	Including women in commercial management adds value to rural products that contribute to water regulation, thereby creating a direct economic incentive

	commercialization and management.			to achieve resilience indicators.
Economic dependence	The lack of their own income makes them more vulnerable to the impacts of climate change. They lack savings to absorb crop losses from floods or droughts, making them more dependent on their spouses and reducing their bargaining power within the household.	1.2.2: Commercialization and markets, 1.2.1.4: Agrifood diversification	Provide direct support to collectives and producer associations led by women to generate independent income.	Women's control over household financial resources ensures that VWB-derived benefits translate into effective family resilience rather than just nominal income increases.
Exclusion from financial systems	Rural women face systematic exclusion from formal credit; their loan applications are approved at only 1 in 10, compared with 3 in 10 for men. Without capital, they can't implement resilient agriculture practices.	1.2.1: Resilient production systems, 1.2.2: Commercialization and markets	Collaborate with local cooperatives to ensure financing mechanisms include flexible guarantee requirements for rural women.	Access to credit is the engine that allows for the purchase of technology for water infiltration and efficient irrigation, directly increasing the volume of water regulated at the farm level
Women's exclusion from knowledge and decision-making	Women's traditional ecological knowledge of water sources is often overlooked, resulting in less effective management and restoration plans that are disconnected from the community's genuine needs.	1.1.1.1: Control, surveillance, and monitoring in Protected Areas. 1.1.2.1: Passive restoration of degraded lands. 1.1.2.2: Active restoration of degraded lands.	Establish gender quotas for leadership positions in all co-management and governance committees of protected areas.	Integrating women's traditional ecological knowledge is a key accelerator for identifying critical restoration sites, optimizing the project's hydrological outcomes.
Time poverty and unpaid work overload	The burden of domestic and care work (exceeding 8 hours a day) prevents women from participating in project activities, leaving the project without the "community workforce" it had assumed it had.	1.1.2: Restore high Andean ecosystems. 1.2.1: Climate-resilient production systems at farm level	Allocate specific resources for childcare services during training sessions and organize safe collective transportation.	Removing time barriers allows women to lead restoration brigades (Act. 1.1.2), ensuring the survival of species that regulate infiltration and runoff.
Invisibility of their water needs	Decisions on which water sources to protect may prioritize male-dominated productive uses (such as commercial irrigation) over domestic ones (including consumption, hygiene, and home gardens), thereby weakening household resilience and water security.	1.1.2: Restore high Andean ecosystems. 1.2.3: Efficient water use in community-run systems.	Prioritize domestic water uses (hygiene, home gardens) in protection and restoration plans.	By addressing domestic use, female empowerment accelerates the adoption of community water-efficiency measures, directly impacting the stability of local water balance.

Safety and mobility barriers	The risk of violence in remote areas restricts women's participation, excluding them from economic benefits (income from nurseries) and from technical capacity building.	**1.1.1.1**: Control, surveillance, and monitoring in Protected Areas. **1.1.2.2**: Active restoration of degraded lands.	Organize collective transport and establish mixed or all-female restoration brigades in remote areas.	Creation of local green jobs for women in environmental monitoring and surveillance activities, enhancing the security of the restored areas.

Concentrating technical assistance and capital exclusively on male heads of household while failing to consider gender dimensions in restoration projects exacerbates preexisting power imbalances and introduces significant risks to the success and sustainability of interventions. By excluding women, who perform a significant portion of agricultural labor and possess detailed knowledge of local water resources and ecosystems, the project achieves low adoption rates of resilient practices and produces ineffective plans that fail to prioritize the community's overall water security. Ultimately, if resource control and decision-making remain exclusively male, an increase in household income cannot guarantee family well-being or the necessary buy-in from half the population, severely undermining long-term resilience and the maintenance of protected areas.

Strategic recommendations

- ✓ Decouple benefits from land titles: Design the " climate resilient farm agreement " and land-use planning exercises to require the joint signature of both men and women, thereby recognizing use rights and labor contributions, not just formal ownership.
- ✓ Promote inclusive financial mechanisms for women: In partnership with local cooperatives, *ensure that any financing mechanisms promoted or supported by the project* include flexible collateral requirements that are tailored to the economic realities of rural women.
- ✓ Establish gender targets in value chains: set explicit targets to promote women into higher value-added roles (e.g., processing, management, commercialization) and to support women-led enterprises. Furthermore, the project will prioritize women's leadership and participation in crop diversification and in food and water security initiatives, ensuring they have direct control over resources essential for household and community climate resilience.
- ✓ Meaningful Participation and Technical Empowerment: Establish gender quotas for leadership positions in all co-management and governance committees. To ensure these are not merely "token" roles and to prevent male intermediation, the project will implement a specialized technical and leadership training program for women before they assume these positions. This ensures they have the specific skills (e.g., environmental management, public speaking, financial oversight) to participate autonomously, preventing men from acting as "spokespersons" or intermediaries.Valuing and remunerating women's role: Prioritize providing remuneration for women's associations and collectives with high female participation for the execution of key activities, such as managing nurseries and restoration brigades, thereby recognizing their role as conservation agents.

- ✓ Removing barriers to participation: Allocate specific resources to offer childcare services during meetings and training sessions, and to organize safe, collective transportation. These measures are essential to eliminate the time and mobility barriers that limit their involvement.
- ✓ Implement a 'Do No Harm' and survivor-centered framework: To prevent project-induced violence (backlash due to shifting power dynamics or women's economic empowerment), the project will conduct ongoing gender-risk monitoring and engage men in "positive masculinity" and co-responsibility workshops. Additionally, a clear and confidential GBV Referral Pathway (Ruta de Atención) will be established. This ensures that if gender-based violence occurs, survivors have immediate access to safe, non-judgmental, and survivor-centered support (health, legal, and psychosocial) in coordination with local authorities.

Component 2: Finance mobilization and scale-up.
The objective is to widen the use of existing regulations to mobilize and scale public and private financing for water resilience in the Bogotá Region by establishing financing pathways for VWBs that can sustain and expand investments beyond GCF's initial support. This component operationalizes i) an environmental fee into Bogotá's water tariff by providing evidence of water benefits for the Bogotá's Water Utility users, and ii) a mechanism for private companies to invest in VWBs results linked to their corporate stewardship and compensation goals.

Table 25. Gender gaps to consider in Component 2

Gender Gap	Impact and risk for the project	Affected activities	Proposed Mitigation Measures	Opportunities and VWB Acceleration
Under representation in power structures	Women are drastically underrepresented in leadership positions on Community Water Boards (Juntas de Acueductos Veredales) and other water management organizations.	2.1.1.3: replication models for water utilities.	Implement leadership programs for women focusing on water governance, public speaking, and financial management.	Female leadership in community water boards accelerates financial sustainability by improving fee collection and the transparency needed to attract private investment.
Incomplete adaptation plans	They [plans/policies] will be deficient if they do not incorporate women's priorities, who manage water for family health, food, and hygiene.	2.1.1.1: Cost-effectiveness indicators and methodologies. 2.1.1.2: Systematic reporting for authorities.	Develop verifiable plans to progressively promote women's participation and achieve parity in water board decision-making.	Parity ensures that VWB indicators reflect the territory's reality, providing the legitimacy required for environmental fees to be accepted and scalable.
Gender-blind design of financial mechanisms	Given that women often do not hold land titles, this mechanism poses a significant risk of becoming a massive transfer of resources to men, rendering the	2.1.1: Environmental fee for the water tariff. 2.1.2: Financial mechanism for private investments.	Redesign the Payment for Ecosystem Services (PES) system to be based on conservation labor performed, not	Recognizing women's conservation efforts through direct PES accelerates the mobilization of private capital with high Social (ESG) standards,

	conservation work that women perform invisible and uncompensated.		exclusively on land ownership.	optimizing the metric of investable VWBs.+1
Exclusion of new sources of income	A gender-blind PES (Payments for Ecosystem Services) scheme would deny them a vital source of income that could value their environmental work, increase their economic autonomy, and, in turn, their capacity to invest in adaptation.	2.1.2.2: Administrative and financial structure of the mechanism.	Ensure that PES agreements are signed by all household members, with processes that include everyone to guarantee direct benefits for women.	Direct payments to women increase their economic autonomy and their capacity to reinvest in climate adaptation, further securing the project's "exit strategy".

The exclusion of women from water governance structures will result in a weak and unrepresentative system, as decisions will lack the legitimacy and effectiveness that can only be achieved through the participation of half the user population. This governance failure risks perpetuating environmental injustice; ironically, a progressive instrument like Payments for Ecosystem Services (PES) could end up entrenching existing power and economic inequalities within the territory. Likewise, the project's financial sustainability will be compromised, as partnerships with the private sector and other mechanisms will not be viable in the long term if they focus exclusively on formal economic actors, who are predominantly male, thus ignoring a fundamental part of the local economy.

Strategic recommendations

- ✓ Promote gender parity through capacity building: Technical and financial support for rural water systems includes accompaniment to strengthen their capacities and develop a verifiable plan to progressively promote women's participation in decision-making and achieve parity on their boards of directors.
- ✓ Redesign the PES: The PES (Payments for Ecosystem Services) scheme must be based on conservation work carried out, not exclusively on land ownership. Furthermore, PES agreements must be signed by all household members, and the process of establishing the agreement must include all members.
- ✓ Implement leadership programs for women: Create a specific training program for women focused on water governance, leadership, public speaking, financial management, and entrepreneurial skills, to prepare them to assume leadership roles in the structures supported by the project and to support their own business initiatives.

SECTION III: Gender Action Plan

This Gender Action Plan (GAP) ensures that all project interventions recognize and integrate the distinct needs, uses, and priorities of both men and women. The Conservation International (CI) team brings a robust technical background in implementing gender strategies, supported by extensive experience within the region, ensuring contextualized and effective implementation. To safeguard the quality of the outcomes, a capacity assessment of the executing partners will be conducted. Should technical gaps be identified, CI will facilitate the necessary training and sensitization processes to align local capacities with international gender mainstreaming standards.

The Gender Assessment identified key structural barriers affecting women and marginalized groups within the project scope, including: (i) exclusion from decision-making processes in water governance and natural resource management; (ii) time poverty linked to unpaid care responsibilities and water-related tasks; (iii) unequal access to land, finance and project benefits; and (iv) intra-household power asymmetries affecting resource control and participation. These findings provide the basis for the design of the GAP objectives and activities presented below.

In the Action Plan, this latent risk has been addressed by adopting methodologies that work at a household level, also to engage men and prevent a backlash when women are encouraged to participate in spaces and roles that are not traditional.

In response to these realities, this Gender Action Plan (GAP) defines strategic action areas that translate into its primary objectives. The main objectives of this GAP are aligned with the strategic recommendations from the gender assessment and also respond to the technical scope of the project, as shown in the following table:

Strategic Recommendations of the Gender Assessment by Component	Gender Action Plan Main Objectives by Component
Component 1: ✓ Decouple benefits from land titles ✓ Promote inclusive financial mechanisms for women ✓ Establish gender targets in value chains. ✓ Meaningful Participation and Technical Empowerment of women. ✓ Removing barriers to participation ✓ Implement a 'Do No Harm' and survivor-centred framework to prevent potential project-induced violence (backlash due to shifting power dynamics or women's economic empowerment)	Component 1: a) Women and marginalized groups are effectively reached and equitably benefit from climate adaptation and value chain interventions through inclusive participation, barrier reduction, and fair access to opportunities generated by the project.

Strategic Recommendations of the Gender Assessment by Component	Gender Action Plan Main Objectives by Component
Component 2: ✓ Promote gender parity through capacity building for rural water systems. ✓ Redesign the PES within the existing normative framework. ✓ Implement leadership programs for women and youth.	Component 2: b)Strengthen women's agency and control over resources, by promoting changes in social norms at the household level, in water governance systems, and institutional practices to enable equitable decision-making, prevent gender-based violence, and sustain inclusive climate resilience enabled by the project."

The Gender Action Plan (GAP) has been designed to ensure full alignment and traceability between the findings of the Gender Assessment, the strategic recommendations, the GAP objectives, the corresponding activities and the monitoring indicators.

This alignment is operationalized through the translation of strategic recommendations into concrete technical measures embedded across project components. For instance, recommendations related to enhancing women's participation in decision-making are addressed through activities such as: (i) the establishment of gender-responsive governance mechanisms, including leadership training and parity targets in rural aqueduct boards, and (ii) the integration of women's Traditional Ecological Knowledge (TEK) into restoration and water management plans. These are reflected in indicators tracking women's participation and influence in decision-making processes.

Similarly, recommendations aimed at addressing structural barriers—such as land tenure inequality, time poverty, and financial exclusion—are operationalized through: (i) the design of Climate Resilient Farm Agreements requiring co-signature by adult household members, (ii) gender-responsive Payments for Conservation eligibility criteria based on conservation labor rather than land ownership, and (iii) the provision of targeted measures such as childcare services, safe transportation, and farm-to-farm technical assistance. These actions are linked to indicators that measure women's access to resources, participation in project benefits, and reduction of time burdens. These findings are directly addressed through the GAP objectives:

- **Objective 1 (Component 1):** Ensure that women and marginalized groups are effectively reached and equitably benefit from climate adaptation, restoration and value chain interventions;
- **Objective 2 (Component 2):** Strengthen women's agency and control over resources through changes in household decision-making, productive systems and water governance structures.

Each GAP activity has been designed to operationalize the corresponding strategic recommendation and is supported by gender-responsive indicators that measure not only participation, but also access to benefits, control over resources, reduction of time burdens, and influence in decision-making processes.

The proposed GAP activities provide direct contributions to the two main objectives. Under Objective 1, activities such as Climate Resilient Farm Agreements with co-signature of adult household members, the redesign of the PES mechanism based on conservation labor, and the provision of farm-to-farm assistance and water access solutions ensure that women can effectively access and benefit from project interventions. Under Objective 2, activities such as leadership and financial training programmes, participation in governance structures, and the development of women-focused business plans contribute to strengthening women's decision-making power and control over productive resources. Together, these actions demonstrate a clear link between the Gender Assessment recommendations and the expected outcomes of the GAP.

The project does not aim to alter or guarantee land tenure rights. Instead, it addresses structural barriers by ensuring that access to project benefits is not restricted by formal land ownership. Mechanisms such as Climate Resilient Farm Agreements and gender-responsive eligibility criteria are designed to facilitate inclusive participation and equitable access to resources, without intervening in legal land tenure arrangements.

While deficiencies in sanitation infrastructure and wastewater management are recognized as critical challenges that disproportionately affect women, particularly as primary managers of domestic water, large-scale, sanitation interventions fall outside the scope of the project.

However, the project incorporates complementary measures that contribute to mitigating the impacts of these challenges within its technical scope. These include: (i) the installation of rainwater harvesting and storage systems to improve water access for domestic and productive uses, including household food production (home gardens), (ii) the promotion of agroecological practices that enhance water use efficiency and reduce dependency on contaminated sources, and (iii) the implementation of decentralized, household-level water management approaches that reduce exposure to unsafe water and the time burden associated with water collection.

These measures contribute to improving water security, reducing women’s workload and exposure to water-related risks, while remaining fully aligned with the defined scope of the project.

The Payments for Conservation mechanism will incorporate a gender-responsive design to ensure inclusive participation at the household level. Eligibility criteria will recognize conservation and restoration activities (e.g. labor contributions) rather than relying exclusively on formal land ownership, allowing women without formal tenure to access benefits. To ensure equitable participation, PES agreements will require the involvement and co-signature of all adult household members. This approach ensures that women are recognized as active contributors and beneficiaries of conservation efforts, and that benefits are not captured exclusively by landowners. In addition, the project will promote that a defined portion of PES incentives is directed to activities identified as priorities by women through participatory processes. These may include activities such as home gardens, water access solutions, small-scale productive activities, restoration-related work, or value-added production activities (which were identified in the consultations at this stage). These priorities will be validated during project implementation to ensure they reflect local needs and context.

Climate Resilient Farm Agreements (CRFA) are project-level instruments that formalize commitments between the project and beneficiary households for the implementation of climate-resilient and ecosystem restoration activities. These agreements are similar in structure to conservation agreements but specifically tailored to support adaptation measures at the farm level. The CRFA defines the roles and responsibilities of household members in implementing agreed activities and serve as an entry point to access project benefits, including technical assistance, inputs and PES incentives. To ensure inclusivity, these agreements require the participation and co-signature of adult household members, recognizing women as active contributors to conservation and adaptation efforts. This approach has been applied in similar ecosystem-based adaptation and conservation initiatives, where household-level agreements are used to link incentives to sustainable land-use practices. In this project, CRFAs are adapted to incorporate a stronger gender-responsive approach, building from the lessons learned by previous projects, allowing women to access project benefits regardless of formal land tenure, without altering legal ownership structures.

The following structure ensures that the GAP complies with GCF requirements for gender-responsive action plans, including measurable indicators, defined targets, means of verification, timelines and institutional responsibilities.

Gender Action Plan

Component 1. Proof of concept to achieve the highest hydrological benefits at the Watershed scale.								
Output 1.1: Strategic High Andean ecosystems restored and conserved								
Project Outputs	**Activities to mainstream gender into Output**	**Target**	**Baseline**	**Indicator**	**Method of Verification**	**Timeline**	**Budget (USD)**	**Responsible**
Activity 1.1.1. Conserve high Andean ecosystems: High-Andean ecosystems conservation will cover selection of beneficiaries based on predefined criteria in selected private and public lands.	Incorporation of traditional environmental knowledge (TEK) from all household members, especially women, in the design, species selection, and management of restoration plans, to support that their views and knowledge are considered at the farm-level decision making	At least 50% of the restoration plans explicitly incorporate the collected traditional technical knowledge and women's recommendations on species selection and restoration management.	Pending measurement (Year 1)	• % of restoration plans that integrate women's technical knowledge.	Final documents of the "Restoration Plan" (with a specific section on TEK).	Years 2-5	*Include as part of the activities of Social Coordinator and 3 Social leads*	PMU-Technical Leader for Component 1-Gender Specialist
	Establish participatory monitoring groups where youth and women use technological tools to measure water regulation and biodiversity in restored areas, linking local knowledge with technical decision-making for protected area management.	At least 40% of participants in participatory monitoring groups are women and youth, and at least 50% of the monitoring data incorporated into management plans is generated by women and youth. To bridge the gender and generational digital divide by integrating local knowledge into technical decision-	Pending measurement (Year 1)	• Percentage of women and youth who operate technological monitoring tools whose data are incorporated into management plans.	Attendance lists	Years 2 to 5	*Include in the budget of Activity 1.1.1*	

		making for water resource management.						
	Implement restoration measures (planting and soil rehabilitation) through "knowledge exchange sessions" where senior men, women, and youth work together, allowing youth to lead the technical and digital recording of areas while seniors provide historical memory on land use.	At least one knowledge exchange session per intervention area is conducted annually, ensuring participation of women, men and youth. To strengthen community resilience through knowledge exchange	Pending measurement (Year 1)	• Number of sessions that include women and youths	Reports from the intergenerational exchange sessions.	Years 2-5	*Include in the budget of Activity 1.1.1*	
	Establish eligibility criteria for the regional PES program that recognizes and reward conservation and restoration activities (e.g., labor) carried out by women or that are a priority for women, regardless of formal land tenure. Ensure that all adult household members sign PES agreements.[125]	At least 30% of the signed PES agreements directly benefit women or women-headed households.	Pending measurement (Year 1)	• % of direct PES payment beneficiaries who are women.	Signed PES agreements	Years 2-5	*Covered under project staff time*	
Activity 1.1.2. Restore high Andean	Implementation of active restoration using multi-purpose native species	At least 30% of the total hectares are restored using multi-	Establish hectares under active	• Percentage (%) of total hectares	Participatory selection and plot-	Years 2-5	*Include in the budget*	PMU-Technical Leader for

[125] The PES mechanism will be operationalized through a participatory process during the initial phase of the project, identifying priority activities jointly with women and communities. These may include: home gardens, rainwater harvesting systems, restoration activities, community nurseries, and productive transformation initiatives. At least 30% of PES incentives will be allocated to these activities. Eligibility will be based on conservation labor rather than land ownership, ensuring inclusion of women without formal tenure.

ecosystems: High-Andean ecosystems restoration will cover selection of key sites and landowner beneficiaries based on predefined criteria in selected private and public lands.	with socioeconomic value, the selection of species must reflect those that are a priority for women's livelihoods, as well as for men.	purpose native species identified as priorities by women through participatory selection processes.	restoration processes using priority species that directly benefit the care economy and the health of rural families.	under active restoration that incorporate multi-use native species (medicinal, food, or commercial) prioritized by women and their families.	level design reports		*of Activity 1.1.2*	Component 1-Gender Specialist
Output 1.2: Climate-resilient transformation of productive practices								
Project Outputs	**Activities to mainstream gender into Output**	**Target**	**Baseline**	**Indicator**	**Method of Verification**	**Timeline**	**Budget (USD)**	**Responsible**
Activity 1.2.1. Implement climate-resilient production systems at the farm level: Farmers who will implement measures to achieve farm-level resilience for water regulation will be selected based on predefined criteria in prioritized	Conduct a participatory mapping exercise on the use of time and space prior to designing the packages. Identify women's needs and preferences when designing the packages, by facilitating inclusive household-level decision making.	Conduct a gender-sensitive participatory mapping and a needs identification in each area of intervention of the project (4)	0 (New action)	• Number of mappings carried out in relation to the total intervention landscapes	Reports or reports of the mapping with photographs	Year 2	*Include in the budget of Activity 1.2.1*	PMU-Technical Leader for Component 1-Gender Specialist
	Implement participatory farm planning using gender-sensitive methodologies that include all household members (both women and men) to ensure that	Farm plans were developed, including a gender analysis (time use) and	0 (New action)	• % of agricultural plans that specify actions for the equitable distribution of benefits and the	Property plan archive (for content review).	Years 1-5	*Include in the budget of Activity 1.2.1*	

agricultural lands.	the proposed models do not increase the overall workload of any household member, especially women, and that benefits are distributed equitably[126].	mechanisms for the equitable distribution of benefits.		management of women's workload.				
	Design "Climate Resilient Farm Agreements" at the household or family level, ensuring that women (as wives, daughters, or heads of household) are co-signatories to guarantee their direct access to and control over resources, inputs, and technical assistance, thus overcoming barriers to technology and finance.	Generate Climate Resilient Farm Agreements (CRFAs) co-signed by adult women in the household (where applicable).	0 (New action)	• % of CRFA that include the signature of at least one adult female in the household.	The project beneficiary lists, broken down by sex, allow cross-referencing with signed agreements.	Years 2-5	*Include in the budget of Activity 1.2.1*	
	Supply and installation of rainwater harvesting and storage systems in dispersed rural households, primarily for productive and complementary domestic uses (e.g. home gardens and small-scale food production), to support water access, food security and	At least 150 storage systems have been installed in high-vulnerability areas.	(Year 1) Pending measurement.	• Number of women with rainwater harvesting and storage systems installed in their homes	Signed certificates of acceptance or receipts of conformity by the female beneficiaries of the rainwater storage systems	Years 2-5	*Included in the budget of Sub-Activity 1.2.1.3*	PMU-Technical Leader for Component 1-Gender Specialist

[126] The use of the **Gender Action Learning System (GALS**) methodology is recommended for this activity and all others where feasible, as its household-based approach facilitates the achievement of transformative results. On the following website, you will find a guide to its implementation. The document details a step-by-step approach to the design, execution, and monitoring of GALS, integrating its operational aspects into existing management tools, such as the monitoring and evaluation system: https://www.ifad.org/en/w/publications/how-to-do-note-integrating-the-gender-action-learning-system-in-ifad-operations

	resilience. These systems contribute to reducing the time burden associated with water collection and the use of unsafe water sources, particularly for women as primary managers of domestic water..				installed in households.			
Activity 1.2.2. Commercialization and opening of markets that value rural products that contribute to water regulation	Develop and implement targeted business plans for value chains with high female participation, including: (i) identification of priority value chains, (ii) tailored technical assistance for women producers, and (iii) support for transition into higher value-added roles such as processing, commercialization and financial management.	At least 10 business plans have been developed (2 per intervention area), focused on value chains with high female participation (e.g., processing, transformation, local marketing).	0 (New action)	• # of business plans developed that explicitly target links in the value chain dominated by women.	Archive of more than 10 business plans for content review.	Years 2-5	*Include in the budget of Activity 1.2.2*	PMU-Technical Leader for Component 1-Gender Specialist
	Implement "Farm to Farm" technical assistance with a gender perspective[127], replacing urban workshops with direct visits to the production plots of women and other	100% of women-led farms receive on-site technical assistance (Farm-to-Farm).	0 (New action)	• % of farms run by women that receive on-site technical support. • % of farmers (disaggregated by sex and age) reporting high	Visit reports techniques with photos georeferenced Results from a standardized	Years 2-5	*Include in the budget of Activity 1.2.2*	

[127] Urban workshops will be replaced by direct on-site technical visits to overcome mobility barriers and the time poverty identified among female producers in the region. As a mandatory prerequisite, all extension personnel—specifically male staff—must certify their training in gender-sensitive approaches and Prevention of Sexual Exploitation and Abuse (PSEA) protocols. To mitigate security risks in isolated areas, visits will be coordinated through the Community Action Boards (JACs). Priority will be given to "paired visits" or "learning nodes," where small associations of neighboring women gather at a nearby property, ensuring a safe, transparent, and community-validated environment

	groups, such as the elderly, to overcome mobility barriers.			satisfaction with the quality, relevance, and safety of the assistance received.	perception survey			
	Implement a comprehensive training program in soft skills and financial education for women, and young people, to strengthen their leadership and spokesperson skills, with tools to autonomously manage their income and lead reinvestment in their productive units.	25% of women and youth who participate in the training implement at least one financial management practice (savings, reinvestment, or income planning) in their productive units within 6 months after completing the training	Year 1 Pre-test	• Number of participants (disaggregated by sex and age) who complete the training programme. • % of women and youth reporting increased confidence to participate in decision-making and leadership roles.	Disaggregated attendance lists, certificates of participation, and capacity assessment reports (pre- and post-training). Qualitative surveys or focus group reports using a Likert scale.	Years 2-5	*Include in the budget of Activity 1.2.2*	PMU-Technical Leader for Component 1-Gender Specialist
Activity 1.2.2. Commercialization and opening of markets that value rural products that contribute to water regulation	Training in the technical management of grant resources to men, women, and youth of the associations, focused on rural administration, ensuring transparency and guaranteeing that women and youth actively participate in strategic and financial decision-making,	At least 30% of participants demonstrate improved technical capacities in rural administration and financial management.	Year 1 Pre-test	• % of participants (disaggregated by sex) who demonstrate an improved level of technical competence in rural administration and financial reporting.	Pre- and post-training technical evaluations	Years 2 to 5	*Include in the budget of Activity 1.2.2*	PMU Technical Lead for Component 1: Gender Specialist

	promoting equitable co-responsibility in the management of economic benefits and the sustainability of the countryside. Sub-grants under this activity will include gender considerations in the evaluation criteria[128].							
Activity 1.2.3. Implement efficient water use measures efficiency in community-run water supply systems in prioritized watersheds	Develop gender-responsive training and awareness-raising processes targeted at men, women, and youth associated with community water systems, promoting equitable practices in water efficiency and co-responsibility for water management at the domestic and community levels.	At least 50% of people linked to community water systems improve their knowledge of the gender perspective on efficient water use.	0	• Number of people trained, disaggregated by sex and age.	• Attendance lists • Pre/post training surveys	Years 2 to 5	*Covered under project staff time*	
Component 2: Finance mobilization and scale-up								
Output 2.1 Financing instruments and mechanisms for scaling water volumetric benefits								
Project Outputs	**Activities to mainstream gender into Output**	**Target**	**Baseline**	**Indicator**	**Method of Verification**	**Timeline**	**Budget**	**Responsible**

[128] Include specific eligibility and evaluation criteria that provide additional scoring to women-led organizations, in alignment with Colombian regulatory definitions. See the Grants Manual Annex for further information.

2.1.1.1. Define and validate indicators and methodologies to demonstrate the cost-effectiveness of water-resilience investments.	Develop a socio-economic valuation methodology that includes "time poverty" and family health variables, and measures the economic savings for women from improved water regulation.	At least 1 validated cost-effectiveness model that integrates gender-differentiated benefits.	Pending measurement (Year 1)	• Number of gender variables incorporated into the socioeconomic valuation methodology.	Final methodology document and technical validation report.	Year 2	*Include in the budget of Activity 2.1.1*	PMU-Technical Leader for Component 2-Gender Specialist
2.1.1.2. Implement systematic reporting for authorities that measure investment effectiveness in hydrological outcomes.	Design a gender reporting module within the Bogotá Water Utility (EAAB) monitoring system to visualize how investments financed by the environmental fee impact female-headed households.	100% of annual reports to authorities (CRA, SDA) include an analytical section on the equitable distribution of water benefits.	Pending measurement (Year 1)	• Periodic reports available that disaggregate beneficiaries by sex and type of household headship.	Annual reports submitted to regulatory authorities.	Years 2-5	*Include in the budget of Activity 2.1.1*	
2.1.1.3. Develop replication models for other water utilities	Elaborate a "Gender-Responsive and Resilient Water Investment Guide" as part of the replication package, systematizing lessons learned on women's participation in environmental fee design.	1 replication toolkit was produced, including a specific protocol for gender equity in water finance.	0 (New action)	• Number of water utilities receiving and validating the gender-responsive toolkit.	Published toolkit and distribution/training records.	Years 4-5	*Include in the budget of Activity 2.1.1*	

Activity 2.1.2 Operationalize a long-term financial mechanism for private investments	Design and implement access rules and eligibility criteria for the financial mechanism that reduce barriers for women and women-led organizations, including simplified requirements, targeted outreach, and technical support during application processes	Increased level of awareness and participation of women in the calls for proposals and benefits of the financial mechanism.	Pending measurement (Year 1)	• Number of women reached by dissemination campaigns, disaggregated by region and economic activity.	• Dissemination materials (brochures, radio spots, social media posts). • Attendance lists from information sessions.	Years 2-5	*Include in the budget of Activity 2.1.1*	PMU-Technical Leader for Component 2-Gender Specialist
Crosscutting issues								
Project Outputs	**Activities to mainstream gender into Output**	**Target**	**Baseline**	**Indicator**	**Method of Verification**	**Timeline**	**Budget**	**Responsible**
Crosscutting issues	GBV and SEAH Awareness: Sensitize all project staff, and particularly men in the communities, on the benefits of gender equality	Provide staff and men in the communities with tools to identify, prevent, and act in situations of violence and inequality.	0 staff trained / No previous protocols in place.	• Improved response protocols and gender perspective applied in interventions.	Attendance lists, training reports, and a published protocol manual.	Year 1	*Covered under project staff time*	Gender Specialist
	Incorporate time-use analysis into at least 50% of farm plans and include specific measures to reduce women's unpaid workload, such as labor-saving practices, improved water access	Develop plans that include time-use analysis to ensure models do not overburden women.	0 plans with a time management approach.	• % of conservation plans that specify actions for workload management.	Good practice guides and minutes from awareness sessions.	Years 1-5	*Covered under project staff time*	

	and task redistribution mechanisms.							
	Baseline Estimation of gender activities as required in each of the project's three landscapes.	Collect baseline gender information across the three landscapes.	Lack of gender-disaggregated data at the start.	• Number of project landscapes where qualitative and quantitative baseline information was collected.	Social mapping reports with photographic records.	Year 1	**54,730**	
	Continuous mapping and updating of institutions and available referral pathways within the territories for the care of GBV (Gender-Based Violence) and SEAH (Sexual Exploitation, Abuse, and Harassment) survivors.	To map, update, and socialize institutional referral pathways for survivors of Gender-Based Violence (GBV) and Sexual Exploitation, Abuse, and Harassment (SEAH) across project territories.	No formal mapping or coordination of GBV and SEAH referral pathways currently exists within the project framework.	• Number of referral pathways mapped and updated within project territories. • Number of socialization/outreach processes conducted regarding referral pathways and the GRM.	Referral pathway mapping document. Socialization and outreach materials.	Years 1–5	*Covered under project staff time*	Gender Specialist
	Emergency funds for immediate urgent response in GBV or SEAH cases.	To guarantee an immediate and appropriate response to GBV and SEAH cases within the project framework.	Emergency fund established and operational.	Number of cases assisted through the fund (without disclosing sensitive information).	Fund guidelines and protocols. Administrative records of fund usage (anonymized).	Years 1 to 5	**2,000**	

Budget

The Gender Action Plan (GAP) is fully costed and financed through a combination of dedicated gender personnel, consultant inputs, monitoring resources, workshops, and component-level implementation budgets. Most of the activities outlined in the GAP do not have separate budget lines, as they are implemented through the core budgets of their respective project components and supported through the technical oversight of the Social, Safeguards, and Gender staff of the Executing Entities.

The table below presents the project budget lines from which GAP implementation is financed. These include personnel, consultancies, workshops, and other implementation activities that support the delivery, monitoring, and reporting of the GAP. While the full value of each budget line is shown, a percentage of these resources will be allocated to GAP-related activities during project implementation. This approach reflects the project's commitment to integrating gender considerations across all components, rather than implementing the GAP as a separate or parallel workstream. By embedding gender-related activities within core implementation budgets, the project ensures that gender equality objectives are systematically incorporated into project planning, delivery, monitoring, and reporting.

1. Budget for Gender Action Plan (GAP) Implementation

Staff

CI		
Safeguards Manager	Lead the implementation and adaptive management of the Environmental and Social Management Plan (ESMP), related safeguards plans, and the grievance redress mechanism for CI-Colombia activities. Build the knowledge and capacity of project staff, sub-grantees, and stakeholders regarding safeguards; lead safeguards-related monitoring and reporting, including safeguards screening of local organizations (Activities 1.1.2 and 1.2.1) and properties (Activity 1.2.1); and coordinate safeguards activities with Fondo Acción's Social Specialist.	**342,474**
Gender Manager	Lead the implementation and adaptive management of the Gender Action Plan (GAP); build the knowledge and capacity of project staff and stakeholders on gender issues; oversee gender-related monitoring and reporting in coordination with Fondo Acción; and ensure the gender-responsive design of calls for proposals.	**342,474**
FA		
Social Specialist	The Social Specialist leads the implementation, adaptive management, and monitoring of the ESMP, Gender Plan, and grievance mechanism, while coordinating closely with the PMU's Safeguards lead. The role ensures social safeguards and equity in PES implementation (Activity 1.1.1), supports producer associations in integrating gender and inclusion into commercialization sub-grants (Activity 1.2.2), and oversees community engagement and safeguards for water system upgrades (Activity 1.2.3). It also manages grievance tracking and ensures compliance through ongoing safeguard monitoring, evaluation, and reporting across all activities.	**191,716**

Consultants

CI			
Activity	**Type**	**Purpose**	**Total**
A.1.1.1	**Participatory Biodiversity Conservation and Monitoring Leader - Landscape 1 -2, Landscape 3 and Landscape 4 (3 consultants)**	Lead and coordinate the conservation team across four landscapes, support activities in protected areas, and strengthen biodiversity monitoring and engagement with key stakeholders. (GAP)	**123,926**
	Participatory Biodiversity Conservation and Monitoring Leader - Landscape 1 -2, Landscape 3 and Landscape 4 (3 consultants)	Coordinate Strengthen participatory biodiversity monitoring networks by integrating data into platforms and promoting intercultural knowledge management including (GAP)	**193,226**
	Land Tenure, Legal Analysis and Private Conservation Registry; and Private Civil	Two consultancies: legal and land-tenure analysis to determine eligibility and support landowners in registering Private Civil Society Natural Reserves (RNSC); and	**165,907**

	Society Natural Reserves Zoning and Registration Specialists (RNSC) (2 consultancies)	provide technical and environmental support to align land-use zoning with conservation objectives and complete the registration process. Include GAP responsibilities	
A.1.1.2	**Local Extensionist for restoration (25 consultants)**	Provide technical, social, and operational support for the implementation of restoration and productive transformation initiatives. Visit the sites, motivate the beneficiaries, and coordinate logistics in clusters 1, 2 and 3, includes GAP responsibilities	**1,337,838**
	Social Lead — Farm Restoration (4 consultants)	Oversee the implementation of restoration and rehabilitation strategies for degraded areas in Core Areas 1, 2, 3 and 4 includes GAP responsibilities	**454,251**
A.1.2.1	**GAP Land-Use Transformation Consultant**	Coordinate, guide, and supervise the production transformation; design plans and protocols; and monitor and supervise contracts, includes GAP responsibilities	**88,389**
	Sustainable Land-Use and Farm-Level Transformation Specialist – Landscapes 1, 2, 3 and 4 (4 consultants)	Support farm planning and transformation through socioeconomic analysis, resilience, agreements, restoration, capacity building, and reporting. Includes GAP responsibilities	**319,100**
	Social Coordinator — Farm Transformation	Coordinate social processes for farm transformation, including capacity building, stakeholder engagement and facilitation of agreements at farm level. Includes GAP and SEP responsibilities.	**89,533**
	Social Coordination and Capacity Building Lead – Farm Transformation - Landscapes 1, 2, 3 and 4 (4 consultants)	Lead social coordination for farm transformation through capacity building, beneficiary engagement, agreements, planning, and reporting. (SEP+GAP)	**319,100**
	ESMP/GAP Enumerators to conduct surveys for the Gender Action Plan.	Enumerators for collecting time-use data and Gender Action Plan indicators (baseline, midline, and endline) in Area of Intervention 1, 2 and 3. See more details in Annexes 8 and 6.	**54,730**
	GBV/SEAH Emergency Response Fund	Emergency budget to provide survivor-centered support for GBV/SEAH cases linked to project activities. See details in Annex 8.	**2,000**

Travel, Meetings and Workshops

CI			
A.1.1.2	**Restoration Workshop**	Training workshop for extension workers and community leaders to support community training under restoration plans, integrating gender considerations. (GAP+ESMP+GRM)	**27,099**
A1.2.1	**Conservation Workshop**	Watershed workshop with leaders launching conservation training, integrating gender and participatory governance agreements aligned with SEP. Annex 7	**36,572**
		Workshop on site selection with leaders, integrating gender, with on-farm dialogues on sustainable production and water impacts under the SEP. Annex 7	**55,955**

SECTION IV: Monitoring and Reporting

In compliance with Conservation International's (CI) Gender Mainstreaming Policy, this project will systematically collect and analyze sex-disaggregated data. This approach will provide the foundation for a gender-responsive monitoring and evaluation process that periodically reports on the progress of the strategic activities detailed in the Gender Action Plan. CI prioritizes documenting how its projects contribute to closing inequality gaps in natural resource management. By generating specific indicators, such as participation in decision-making and access to financial incentives, the project aims to reduce the technical information gap and strengthen gender statistics, which remain limited in the environmental sector.

Generating socio-economic benefits and services for women:

o No contribution

o Yes contribution *(explain)*. How do you plan to measure this?

To evaluate the impact on women's quality of life and financial autonomy, the project will implement a monitoring system focused on ownership and access to resources. A fundamental pillar is the formalization of control over productive assets through the co-signing of the Adaptation Agreements (CRFAs), ensuring that women have a legal voice in the inputs and technical assistance they receive. Economically, the creation and operation of financing lines with gender criteria will be measured, including seed capital funds that remove traditional barriers such as mandatory land titles.

This financial progress will be complemented by training indicators that track the number of women who complete financial literacy and business management programs. Additionally, the project will monitor that at least 40% of Payments for Ecosystem Services (PES) directly benefit women or women-headed households. Furthermore, work in nurseries and restoration brigades will be formally remunerated to prevent it from being treated as unpaid community volunteer work. Finally, socioeconomic well-being will be verified through the delivery of "Safe Water" kits in vulnerable households and the use of farm planning methodologies that analyze time use to prevent new activities from disproportionately increasing women's domestic workload.

Closing gender gaps in access to and control over natural resources:

o No contribution

o Yes contribution *(explain)*. How do you plan to measure this?

The project addresses women's systemic "invisibility" by requiring the co-signing of the Climate Resilient Farm Agreements (CRFAs) at the household level, granting them legal standing and direct control over resources, inputs, and technical assistance. To overcome historical barriers related to land tenure, the strategy establishes gender-sensitive financing lines and seed capital funds that utilize non-conventional guarantees, specifically removing the mandatory requirement for land titles to access credit. This financial inclusion is further strengthened by training in financial literacy and by modifying eligibility criteria for the regional Payment for Ecosystem Services (PES) program, which now recognizes and rewards conservation labor performed by women, regardless of formal land ownership.

Beyond contractual adjustments, the project institutionalizes the value of women's expertise by requiring that the restoration plans explicitly incorporate their Traditional Environmental Knowledge (TEK) into species selection and ecosystem management. This shift from passive participation to active management is solidified by prioritizing the hiring and remuneration of women's associations to manage community nurseries and restoration brigades, ensuring their labor is economically compensated rather

than treated as unpaid volunteer work.

Increasing women's influence in environmental decision making:

o No contribution

o Yes contribution *(explain)*. How do you plan to measure this?

Regarding empowerment and political representation, the plan sets clear metrics to observe how women transition from passive beneficiaries to active leaders. In the area of water governance, compliance with a quota for women in leadership positions within rural aqueduct boards will be measured and verified through official election minutes. The influence on public policy design will be evaluated by the number of priorities identified by "Women's Water Focus Groups" that are formally integrated into the Climate Resilient Farm Agreements.

To ensure this participation is effective rather than merely symbolic, the project will track the success of mentorship programs in public speaking, administration, and governance. A critical success indicator will be the provision of logistical support, such as transportation and childcare services, and the number of women who were able to access decision-making spaces thanks to these facilities. Finally, the plan will verify that women's associations lead community nurseries and restoration brigades and have direct representation in the technical secretariat of the public-private Alliance, ensuring their commercial and labor interests are present at the highest levels of project decision-making.

The following table presents the indicators that the project will use to track the implementation of the Gender Action Plan.

Indicator	**Target**[129]	
	Men	***Women***
1. *Number or percentage of direct (e.g., socio-economic) project beneficiaries*	**1,476,558**	**1,536,825**
2. *Number of strategies, plans (e.g., management plans and land use plans) and policies derived from the project that include gender considerations*	At least 5	
3. *Indicative percentage of women who report increased access to and control of natural resources*	*TBD following the Year 1 baseline assessment.*	
4. *Average daily time (minutes/hours) saved by women and men in water collection, treatment, and management activities.*	*TBD following the Year 1 baseline assessment.*	
5. *Percentage of persons (disaggregated by gender) reporting stable or improved income compared to baseline*	*TBD following the Year 1 baseline assessment.*	
6. *Number and percentage of persons (disaggregated by gender) who received livelihood restoration benefits (disaggregated by type)*	*TBD following the Year 1 baseline assessment.*	
7. *Percentage of persons (disaggregated by gender) who report adopting improved productive or climate-resilient practices*	*TBD following the Year 1 baseline assessment.*	

[129] Targets should be ambitious yet realistic. Please be prepared to explain how the targets were determined and how the data will be collected. Indicators and targets can also be made to capture intersectional components (e.g., age of men and women, or IPLC status).

8. *Percentage of women who have control over productive assets and/or income generated through project-supported activities*	*TBD following the Year 1 baseline assessment.*
9. *Percentage of consultation participants who report that their views and recommendations were incorporated into agreements*	*TBD following the Year 1 baseline assessment.*
10. *Percentage of women who report greater autonomy over their use of time as a result of project-supported activities*	*TBD following the Year 1 baseline assessment.*

Calculation Methodology for indicator 3

The indicator is determined by comparing a Baseline (initial) with a Final Evaluation, utilizing three core analytical pillars.

1. Measurement Dimensions

To be included in the "percentage with increased access and control," progress must be verified across the following pillars:

Dimension	Objective Evidence (Documentary)	Perception (Subjective)
Legal	Signing of Climate Resilient Farm Agreements (CRFA).	Sense of autonomy in decision-making.
Financial	Records of credit disbursements or PES payments in their name.	Ability to invest in climate technologies without "asking for permission".
Governance	Election minutes from water boards (minimum 35% quota).	Social recognition of their technical leadership.

2. Steps for Calculating the Indicator

- Initial Collection (Baseline): Surveys and social mapping are utilized to identify how many women currently exercise real control over their resources.
- Verification of Control Mechanisms: Throughout the project, disbursement records and signed agreements are audited to ensure women have the legal standing to manage capital and inputs.
- "Time Poverty" Evaluation: Participatory Time-Use Mapping is used to verify if access to new infrastructure (e.g., filters or water systems) effectively freed up hours for women to engage in productive control.
- Final Calculation: The final percentage is established by identifying women who, at the end of the period, documentally prove ownership or leadership AND report a perceived improvement in autonomy via final surveys.

SECTION VI: Considerations for the Implementation of the GMP

1. Alignment + integration

The activities, budget, and staffing outlined in this action plan are integrated into the project's overall Project Document + Results Framework.

a. The activities identified in this Action Plan have been integrated into the project's proposal document, including the results framework. (Y/N)-YES

b. The necessary budget for activities identified in this Action Plan has been integrated into the project's overall budget. (Y/N)-YES

2. Staffing capacities

a. Who will be responsible for overseeing the implementation of the actions? Will that person need to be hired or is s/he already on staff?

The Conservation International (CI) team includes institutional gender specialists to provide strategic support. Additionally, the Project Management Unit (PMU) will hire a social specialist with extensive experience in mainstreaming and implementing a gender perspective in climate change adaptation initiatives.

b. Does that person have the technical background and skills appropriate for the level of complexity of this GMP? If not, how will this be addressed?

The Terms of Reference (ToR) for the Gender Specialist will require knowledge of the Gender Mainstreaming Policy (GMP). Should the selected candidate lack this specific experience, the Conservation International (CI) core team will provide the necessary technical training to ensure its proper implementation.

c. What percentage of that person's time will be focused on implementation of this plan?
The primary function of the Social and Gender Specialist will be to fully implement this plan, dedicating 100% of their time to achieving the established gender targets and indicators.

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