



GEF-6 REQUEST FOR ONE-STEP MEDIUM-SIZED PROJECT APPROVAL

TYPE OF TRUST FUND: (choose fund type)

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PART I: PROJECT IDENTIFICATION

Project Title:	Water Funds: A Conservation/Climate Resilient Model for Stressed Watersheds in Latin America and the Caribbean		
Country(ies):	Argentina, Brazil, Chile, Colombia, Guatemala	GEF Project ID: ¹	
GEF Agency(ies):	IADB (select) (select)	GEF Agency Project ID:	RG-T3177
Other Executing Partner(s):	The Nature Conservancy (TNC)	Submission Date:	03-26-2018
GEF Focal Area(s):	Multi-focal Areas	Project Duration (Months)	36
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		
Name of Parent Program:	[if applicable]	Agency Fee (\$)	173,156

A. FOCAL AREA STRATEGY FRAMEWORK AND PROGRAM²:

Focal Area Objectives/programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
BD-4 Program 9 (select) (select)	Outcome 9.1 Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management.	GEFTF	456,621	2,028,738
IW-2 Program4 (select) (select)	Outcome 4.1 Increased water/food/energy/ecosystem security and sharing of benefits on basin/sub-basin scale underpinned by adequate regional legal/institutional frameworks for cooperation	GEFTF	1,369,863	6,086,213
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
Total project costs			1,826,484	8,114,951

B. PROJECT FRAMEWORK

Project Objective: Develop 5 Water Fund mechanisms that protect upper watershed biodiversity and improve the water security of 14 million people in 5 major Latin American cities by connecting water users in urban areas with upper watershed land stewards that produce important hydrologic benefits through healthy watersheds.

Project Components/ Programs	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
WATER FUND DESIGN AND MONITORING	TA	A) Increased protection of terrestrial and freshwater ecosystems (# of hectares of land in upstream catchment areas managed effectively for freshwater	a) Water Funds operating (# of watersheds with an established and functioning water fund:	GEFTF	612,350	2,668,689

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on GEF 6 Results Frameworks for GETF, LDCF and SCCF and CBIT programming directions.

³ Financing type can be either investment or technical assistance.

		<p>conservation: - FIVE Water Funds begin to directly impact lands under conservation and/or sustainable farming agreements</p> <p>- Beginning with TWO THOUSAND FOUR HUNDRED AND NINETY hectares during the design and launch of these water funds. Significantly higher areas will be impacted as part of an operating water fund's activities beyond the scope and timeline of this project)</p> <p>B) Improved water security for downstream populations and large water users (# of people benefited downstream: FOURTEEN MILLION inhabitants; # of large water users benefited: at least Three public utilities and/or large water users)</p> <p>C) Improved human well-being/ livelihoods (# of upstream families involved: 224 families. Significantly higher number of families will benefit as part of an operating water fund's activities beyond the scope and timeline of this project)</p> <p>D) Improved water ecosystem services, in particular improved water quality for large water users (Sediment retention benefits derived from the conservation projects: TBD/Estimated/Monitored)</p>	<p>FIVE. # of Water Funds launched: 3. # of Water Funds supported: 2)</p> <p>b) Increased private and public sector funding to pay for water and biodiversity related services (leveraging a minimum of: USD 7 Million)</p> <p>c) Improved stakeholder participation in collaborative processes for biodiversity and watershed protection (additional number of partners engaged in accountable management of watersheds; at least EIGHT new partners are engaged in the water funds being supported)</p>			
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TECHNICAL ASSISTANCE	TA	<p>A) Increased WF compliance with financial sustainability requirements (# of WFs with Long-Term Financing Plan; at least 2 WFs with long-term financing plan developed and implemented)</p> <p>B) Increased WF fund development capabilities and opportunities (# of WFs with an increase in the number of funding sources: FIVE WFs)</p>	<p>a) Institutions trained (# of WF that receive technical and financial data, training & support: FIVE institutions)</p> <p>b) Water Fund's Technical Secretariat supported (# of WF whose technical secretariat receive financial assistance: at least THREE WF)</p>	GEFTF	616,893	3,908,005
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TRAINING, KNOWLEDGE AND CAPACITY BUILDING	TA	<p>A) Enacted legislative and institutional mandates that promote investment in watershed management services through local and regional environmental authorities (# of National or subnational authorities with new legislation: at least ONE)</p> <p>B) Engagement of Energy sector in watershed management (# of WFs with Hydro sector as key strategic and/or funding partner; at least ONE)</p> <p>C) Increased technical capacity for third parties to establish WFs (# of third-party WF initiatives underway: at least ONE)</p> <p>NOTE: Funding is focused on the setup of the WF mechanism. Some outcomes may occur beyond the life of this Program. The mechanisms established by this Project are long-term and financially sustainable. The strategic plans they develop aim to fund the long-term conservation and/or restoration of tens of thousands of hectares in each site. Such outcomes are reached over a period of approximately a decade after the Water Fund begins operating.</p>	<p>a) Water Tariff Financial Sustainability Tool developed and applied (# of Countries where the tool is applied to generate watershed conservation funding from water tariffs/taxes: at least ONE)</p> <p>b) WF Long-Term Financial sustainability planning tool developed and applied (# of Countries with WFs developing comprehensive funding source mapping and plans that include Endowment and Private & Public sector funding: at least TWO)</p> <p>c) Hydroelectric watershed conservation demonstrative projects launched (# of sites with on-the-ground design and implementation: at least ONE)</p>	GEFTF	381,197	541,170	
EVALUATION	TA		a) Project evaluation performed: 1	GETF	50,000	78,918	
Subtotal						1,660,440	7,196,782
Project Management Cost (PMC) ⁴					GEFTF	166,044	918,169
Total GEF Project Financing						1,826,484	8,114,951

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

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

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Donor Agency	IADB	Technical Cooperation	200,000
Others	Parana State Government (Brazil)	Unknown	1,972,000
Private Sector	FEMSA Foundation	Grants	2,573,000
Donor Agency	IADB	Technical Cooperation	2,459,951
Others	FUNCAGUA (Guatemala Water Fund)	Grants	585,000
Others	The Nature Conservancy	Grants	325,000
select		select	
(select)		(select)	
(select)		(select)	
Total Co-financing			8,114,951

D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee ^{a)} (b)	Total (c)=a+b
IADB	GEF TF	Regional	International Waters	(select as applicable)	1,369,863	43,379	1,413,242
IADB	GEF TF	Regional	Biodiversity	(select as applicable)	456,621	130,137	586,758
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total Grant Resources					1,826,484	173,516	2,000,000

a) Refer to the Fee Policy for GEF Partner Agencies.

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁵

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	755 hectares BIO 2,465 hectares IW (730 hectares)

⁵ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF, SCCF and/or CBIT.

that it provides to society		(730 hectares contribute to both indicators)
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	0 hectares
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	5 Number of freshwater basins
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	Percent of fisheries, by volume
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	metric tons
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	metric tons
	Reduction of 1000 tons of Mercury	metric tons
	Phase-out of 303.44 tons of ODP (HCFC)	ODP tons
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	Number of Countries:
	Functional environmental information systems are established to support decision-making in at least 10 countries	Number of Countries:

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/CBIT Trust Fund) in Annex B.

G. PROJECT PREPARATION GRANT (PPG)⁶

Is Project Preparation Grant requested? Yes No If no, skip item G.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS*

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁷ (b)	Total c = a + b
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total PPG Amount					0	0	0

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; b) the baseline scenario or any associated baseline projects, c) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of

⁶ PPG of up to \$50,000 is reimbursable to the country upon approval of the MSP.

⁷ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

⁸ For biodiversity projects, in addition to explaining the project’s consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving.

expected outcomes and components of the project, d) incremental/ additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF, CBIT and co-financing; e) global environmental benefits (GEFTF), and adaptation benefits (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

A) GLOBAL ENVIRONMENTAL AND/OR ADAPTATION PROBLEMS, ROOT CAUSES AND BARRIERS THAT NEED TO BE ADDRESSED

GLOBAL ENVIRONMENTAL PROBLEM

Healthy watersheds provide vital natural infrastructure for water supply systems that serve cities around the world. They collect, store and filter water and provide benefits for biodiversity conservation, climate change adaptation and mitigation, food security, and human health and well-being. Today, an estimated 1.7 billion people living in the world's largest cities depend on water flowing from source watersheds sometimes located hundreds, if not thousands, of kilometers away. By 2050, those urban source watersheds will be tapped by up to two-thirds of the global population though they represent one-third of the Earth's land surface (TNC).

Forty percent of urban source watershed areas have high to moderate levels of degradation, with potentially severe impacts on water security. This degradation increases nonpoint source pollutants, such as sediment and nutrients from agriculture and other sources, which find their way into water sources and can raise the cost of water treatment for municipal and industrial users. Loss of natural vegetation and land degradation can also change water flow patterns across the landscape and lead to unreliable water supplies, with implications for both upstream and downstream users. According to the World Bank, some regions could see their growth rates decline by as much as 6 percent of GDP by 2050 as a result of water-related losses in agriculture, health, income and property—sending them into sustained negative growth. Aspirational goals to see livelihoods improve, like those set in the Sustainable Development Goals (SDGs), are beyond reach without a more water-secure world.

Regional Context

The Latin American and the Caribbean (LAC) region has relative water abundance (~28,000 M³/inhabitant/year), 30% of rainfall and 33% of world's renewable water resources. However, availability is highly seasonal and unevenly distributed. Global circulation models predict an increase in climate variability, intensification of extreme events, and more frequent water-related natural disasters in the region (e.g. El Niño). By 2025, as variability of water quantity and quality grow due to climate and land use change, and water demand grows with increasing population and development, 70% percent of LAC's population is expected to live in water-stressed areas. Urban water supply infrastructure suffers from lack of investment, and it is increasingly exposed to extreme climatic events which are expected to increase in frequency and intensity (84% of the population in LAC is expected to live in cities by 2030).

A recent TNC study⁹ identified cities in LAC whose water supplies are at risk from climate change and development pressures. Approximately 1 in 4 of these cities could substantially improve water security by investing in climate-resilient management and restoration of green infrastructure – natural habitats and ecosystems that provide water regulation and processing services complementary to accustomed grey infrastructure – in the watersheds from which they draw their water supplies – and for most, the cost of source water management and protection is lower than grey-infrastructure investments that are often chosen as the first course of action. In many cases, green infrastructure also serves as Ecosystem-Based Adaptation, which provide a climate change adaptation benefit to land managers in the watershed and/or to water consumers in urban areas. Current policy and funding streams target delivery and processing in the form of grey infrastructure, and there are few mechanisms that target funding for watershed management. Some countries have mandated participatory management by local communities at the watershed level, but in most cases these entities lack the institutional and financial capacity to manage watersheds effectively.

⁹ Report, An opportunity for water security in 25 cities in Latin America, developed with data from the study: McDonald, R. I. y D. Shemie. *Blueprint de Agua Urbana: Mapeo de soluciones de conservación para el desafío mundial del agua*. 2014, The Nature Conservancy: Washington, D. C.

Many National Adaptation Plans (NAPs) identify water security (scarcity and flooding) as a climate risk, and target grey and green infrastructure as solutions to climate risks to water security. City populations and private companies worry about water security risks and how to obtain water at a reasonable cost, and governments are concerned with providing water for multiple uses while managing risks (such as floods and droughts).

ROOT CAUSES

The region's abundance of natural resources has fueled economic growth, but with negative impacts on environmental health and human wellbeing. Global forest loss in LAC has a slightly lower percent loss than Oceania, North America and Asia, but its total extent of loss dwarfs that of those other regions (TNC). Many of these regions are notable for their terrestrial and freshwater biodiversity, so these high rates of forest loss are particularly concerning from a conservation perspective. The agricultural expansion is the dominant driver of deforestation in LAC, causing around 70% of forest loss and impacting ecosystem services and biodiversity (IUCN).

LAC is also the most urbanized region of the developing world, where 80% of the population lives in urban areas. Over the next 15 years, LAC's urban population is estimated to grow from 503 to 595 million (UNPD) and by 2050, an estimated 90% of the population will live in urban areas. The process of urbanization has been characterized by unplanned urban growth, resulting in uncontrolled and low-density expansion of the urban footprint, which produces a myriad of problems related to the water cycle. Achieving water security in the region is thus a socioeconomic priority, but increasingly difficult to achieve as the region's cities are increasingly exposed, both in frequency and intensity, to extreme climatic events such as floods and droughts.

Climate variability increases the vulnerability of water sources and water supply infrastructure, threatening the livelihood of millions of people. Many drinking water sources are severely degraded. Changes in land use and hydrological variability have caused serious degradation in water-related ecosystems such as wetlands or forest streams, which store and reduce runoff, recharge aquifers, digest organic waste, and halt erosion.

BARRIERS

Source water protection activities can contribute both to safeguarding water quality by reducing soil erosion and filtering pollutants, and to maintaining reliable downstream flows through water infiltration, storage, and release of water over time. These ecosystem services – the benefits that people derive from healthy forests, wetlands, and other ecosystems – are a critical component for water security.

The ecosystem services of natural infrastructure also go beyond water security, encompassing a variety of other benefits that are important to people. Across global urban source watersheds, the ceiling of potential for contributing to these co-benefits through source water protection activities is high.

The water security benefits and co-benefits of source water protection are not being captured systematically today. Despite overwhelming benefits to cities, most exert little influence over how sources are managed. The barriers to implementation generally fall into three main areas:

- There is often a mismatch between the jurisdictions of the problem owners and problem solvers. Urban water users, such as municipalities, urban water managers or industries, have limited jurisdiction and cannot easily reach beyond those jurisdictional borders. Rural land stewards are making decisions that affect urban users but have little to no incentive to reduce their impacts.
- Knowledge transfer is lacking on how investments in source water protection can achieve specific water security outcomes or other benefits.
- Replicable mechanisms that allow for a diversity of funding flows, based both on a supportive policy environment and on specific financial structures, are lacking.

B) BASELINE SCENARIO

Despite numerous efforts to improve watershed management, few programs provide the legal and financial mechanisms to allocate resources for water source conservation and climate protection. On the one hand, protected areas, which in many cases were originally created to shelter water sources, often lack the financial support for conservation activities in upstream farmlands. In Colombia, for example, 50% of the population receives water from public protected areas, but market and institutional failures prevent these areas from getting the necessary financial funds to be soundly managed. On the other hand, upstream private and communal lands that provide hydrologic, environmental and climate services are typically not compensated by downstream users. Current incentives “force” upstream farmers to continue using land practices that negatively affect water quantity and quality. In most cases, it would be more cost-effective to compensate farmers to improve their land practices, set aside private areas for conservation or improve the management of public protected areas. For that, access to finance is critical, generally through innovative funding instruments that combine public, private and international resources.

Baseline Scenario by Site

Curitiba, Brazil

Curitiba Metropolitan Region (CRM) has most of its area located at the Upper Iguaçú river. From the headwaters in this intensely urbanized region, Iguaçú rivers flows west, draining to Parana river, reaching the Argentina border. Despite the location so close to the headwaters, the Iguaçú river has its worst quality parameters around Curitiba, due to solid and liquid waste, sediments and nutrients.

3,5 million inhabitants live in the 29 municipalities of the CMR. Water supply comes from part of Upper Iguaçú River watershed. There is an integrated water supply system which encompasses 42 micro basins and provides 300 million m³/year of superficial water plus 6.3 million m³/year of groundwater to 88% of the population distributed in 11 of these municipalities. The water supply comes mainly from a relatively small river basin which corresponds to less than 2% of the territory of Paraná and concentrates more than 28% of the population of the State. Continued growth remains the main threat to water security in CMR. Sanepar, the water facility, strives to meet the growing demand, which in recent periods has been greater than the availability of drinking water, a situation that has been softened after the expansion of Miringuava water reservation system.

Multiple stakeholders are working in the same sites, without a specific common target, trying to solve immediate demands, on a scenario without enough technical staff. This represents a clear risk to governance. Threats to water supply are many. For example, urban zoning is planned according to many topics. Despite Brazilian Native Vegetation Law defining buffer zones along the rivers in rural areas, misinterpretation and no enforcement lead to the actual situation: there is a significant part of these buffer zones that need to be restored. Landowners don't have the knowledge and tools to remedy such situations, and they don't understand the importance of these areas for water and biodiversity, as they are not aware about the link between water availability and landscape management and protection. Vegetation restoration usually is quite expensive and when not done properly, it results in time, money and biodiversity loss. This also results in incorrectly portraying natural infrastructure as inefficient.

Brazil has international commitments to restore and avoid deforestation, specially to Amazon Forest, but funds for actions outside this biome are not well defined or they need to be gathered locally. Biodiversity and integrated landscape management are treated as additional elements on the infrastructure and economic plans, not as part of the economic core values. There are funds from water use charges in the watershed committee since 2013, but they aren't specifically directed to biodiversity or natural infrastructure purposes. In some cases, compensatory acts in the watershed must be applied to specific conservation activities in it. So, the strategy is to merge partners and funds from different sources to optimize efforts on watershed conservation.

Another inefficiency of Upper Iguaçú data about climate, sediments and nutrients monitoring, water use, land use. In some cases, is out of date or is not compiled to support decision making.

Cali, Colombia

Cali's catchment areas have been under pressure for many years from agricultural and ranching expansion in the upper parts of the river basins, increasing degradation of key ecosystems such as high Andean forests and paramos that are not within the national parks. In addition, mining and poor industrial waste water management threaten water quality. As a result, the water supply system is becoming increasingly vulnerable, and currently faces major problems in maintaining operations in pronounced rainy seasons, when sediments, debris, and garbage hamper the treatment plants.

Cali is the third most populated city in Colombia with 2.41 Million inhabitants. The city obtains water from two major water provision systems: Cali-Melendez-Pance watersheds, born in Farallones National Park (forest and paramo areas), and the Cauca system. The total watershed areas cover 14.477 Has. within Los Farallones National Park; 10.875 Has. of municipal Natural Reserve; and 9.632 Has. of private lands.

A unique aspect in this part of the Magdalena River basin is the extraordinary biodiversity. The combination of multiple altitude gradients, the rain patterns and the temperature variations mean a vast diversity of ecosystems that result in the most diverse vascular plant flora in the country. Throughout the Magdalena Basin, it includes an estimated 45,000 to 50,000 species, 15-17% of all the World's species. Furthermore, 20,000 of these species are considered endemic and represent the richest concentration of endemic plants on the Planet. Additionally, there are over 3,000 vertebrate species with about 1,500 identified as endemic, among these, there are 1,666 bird species, 479 reptile species, and 830 amphibian species.

Despite efforts from environmental authorities and local governments, Andean and sub-Andean ecosystems in the Cali water provision areas have been strongly degraded, mainly by non-controlled occupation, inefficient agriculture, deforestation and mining, bringing water contamination and water sources degradation. According to estimations from the Environmental Authority CVC, Cali watersheds present a deficit of forest cover. Cali River watershed area has only 55% of forest cover, while Lili, Meléndez and Cañaveralejo watersheds report only between 10-15% of this type of coverage.

The basins of the "Cali- Aguacatal" system show considerable environmental deterioration, due in large part to the high level of deforestation. This is due to the cleaning of lands for grazing, urbanization and mining activities. This is one of the most important watersheds for the water provision for the city. The Meléndez-Lili-Cañaveralejo river basin suffers from accelerated pollution and a considerable deterioration in the water quality, largely due to the domestic wastewater income from the human settlements located along the entire basin, and municipal wastewater from the sewerage system. In the same way, the use of land in these basins has changed significantly: deforestation and the promotion of livestock and agricultural activities have taken precedence over processes of conservation and maintenance of ecosystems, as is the case with mining activity, very present in the middle and upper part of the Lili river basin.

Finally, the Pance - Jamundí system presents the best environmental conditions, which allows it to have ecotourism activities. However, this generates a great attraction for the development of real estate projects, which has begun to increase exponentially the value of the lands. The real estate attraction and the great potential of the area have generated an absence of adequate planning processes of the territory, since the basin does not count with considerable reserve areas or management area according to its vocation.

Guatemala, Guatemala

The Motagua River is one of the largest in the country, and drains into the Caribbean Sea in an area that borders with Honduras and Belize. Its waters, with all kinds of solid and liquid waste, sediments and nutrients, from small communities along the basin and the Metropolitan Region of Guatemala (MRG), have a direct impact on the coastal-marine areas of the three countries, particularly on the large area of the Mesoamerican Reef, with important impacts in ecological, political and economic terms, both in Guatemala, Belize and Honduras and even Mexico.

The MRG is a territory formed by at least 12 municipalities with an estimated population of around 4 million inhabitants and supplied by 20 micro-basins, which contribute at least 701 million m³/year of surface water

and 140 million m³/year of groundwater, coupled with the contribution of 4 micro-basins of the Xayá and Pixcayá rivers, which despite being located outside the MRG, represent an important source of surface water, with a contribution of 88 million m³/year. Of these 20 micro-watersheds where the WF works, ten drain to the Motagua River Basin, three of them are part of the Xayá-Pixcayá system and the remaining seven are within the MRG itself.

The life zones that correspond to the four watersheds from the Xayá-Pixcayá Region are subtropical low montane very humid forest and the Subtropical Lower Montane Rain Forest, with at least 4 species included in the List of Threatened Species of the National Council of Protected Areas of Guatemala. Critical areas for water availability of the MRG are also an important source of valuable species of flora or fauna as some of them are considered at risk mainly, due to habitat change.

Lack of information and data to inform decision making, lack of awareness, the lack of coordinated involvement from public and private stakeholders (a common governance framework), the political nature of decision making (especially from the Government), and the lack of sustainable financing are a common theme in the management of water resources for the MRG. Currently there is a lack of reliable data on both water security and biodiversity, which negatively affects the ability of different stakeholders to take informed investment decisions. Monitoring data is dispersed through a number of different stakeholders, and is often not made available. Furthermore, in terms of governance, there is a strong culture of distrust between the public and private sectors, and of both from the public-at-large.

Mendoza, Argentina

The Mendoza River Basin rises in the high peaks of the Aconcagua hills in the Andean Mountains in the northwest of Mendoza province. The basin includes a small portion of the southern province of San Juan. The drainage area exceeds 19,000 km² and ends in one of the Argentina's Ramsar sites: Lagunas de Guanacache, shared with San Luis and San Juan Provinces. The Province of Mendoza is located in the so-called South American Arid Diagonal that crosses from the Northwest of Peru to Patagonia. Precipitation in this area of Mendoza is scarce, seasonal and concentrated in the spring and summer. Precipitation does not exceed 220 mm on average per year coinciding with the highest evapotranspiration period that reaches 780 mm. Due to this, the snows and glaciers that cover these mountains, are the main sources of water that supply the populations and the fields that are located in the foothills of the mountain range. Along its route, in the flatter areas, the province developed one of the most important irrigation networks in the country (Oasis), covering 360,000 hectares. (25% of the country's total).

The province has a population of more than 1.8M people, being the fourth most populated province in the country. Of this total, almost 1 million people are concentrated in the so-called Greater Mendoza that also includes the Department of Capital, Las Heras, Guaymallén, Godoy Cruz, Maipú and Luján de Cuyo. This urban agglomeration concentrates a good part of the productive activity of the province based on agricultural production and packaged products (vine, fruit and vegetables) and beverage companies with production plants such as Coca Cola, Danone, Quilmes, PepsiCo. Water availability in this area is under half of the world average with an amount of 1,620 m³/hab/year. This is considered by many specialist's lower than the critical level. It is important to notice that in the high part of the basin, and due to the alluvial fan, there exists a rock porosity that allows for storage of groundwater that could contain between 20,000 and 30,000 Hm³ that now are under exploited.

In this context, arid zone, scarce rainfall, high evapotranspiration, extensive irrigation and scarce flows generate a pronounced water deficit. However, all the economic development of this region is based on the use of the water resource of which the Province has historically been one of the Argentine provinces that has tried a regulated and orderly management, through the so-called "Oasis", a resource so critical for its social and productive development like water.

In addition to the natural conditions of the basin, the climate change perspectives for the province, and the Cuyo region in general, are indicating that, according to the scenario selected and indicated by the IPCC as₁₁

scenario A2, increases in average temperature of 1.5 ° C and decrease in -105mm in the projected rainfall for the period 2020-2030. Although this is a scenario that can be indicated as pessimistic, climatic trends go in that direction, which will aggravate the water conditions of the region in general and of the Mendoza River basin in particular.

Human water consumption continues to increase This increment in the context of a scarce resource and the waste water produce by industries, urban contamination, drainage that came from irrigation, the health consequences that area associated, are the main challenge that the Mendoza community are facing. Additionally, the over use of some groundwater is resulting in salinization of soils. A coordinated attempt to address the issues is lacking despite the generally acceptable management of water resources in the area.

Santiago, Chile

The Maipo River basin, located in central Chile, has freshwater reserves that serve as the main source of water for Santiago, the capital of Chile where more than 6 million people live. The Maipo river basin is a snow dominated basin and therefore it functions as a natural reserve of water for the city. Hence, drinking water availability depends on snow accumulation and snow and glacier melting processes. High Andean wetlands store and filter freshwater naturally, providing essential ecosystem services for human activities. This is a highly stressed and degraded area. In addition, multiple productive activities, such as a large extension of irrigated agriculture - more than 136,000 hectares, 11 hydroelectric production plants, and several large-scale mining projects in the upper part of the basin, depend on water availability from these sources. Both the Maipo River basin and the Santiago Metropolitan Region (SMR) are located in one of the five Mediterranean areas of the world. This region is a biodiversity hotspot of high ecological importance.

However, the Maipo River basin is currently in a critical state of conservation, with less than 2% of its habitat under formal protection. This, added to the strong anthropic pressures associated with the aforementioned activities, has resulted in an evident state of degradation of their natural ecosystems, and of the ecosystem services they deliver. Projections indicate that by 2025 there will be a water deficit from the SMR of approximately 6,000 million cubic meters per year, a figure that corresponds to a decrease in total water availability close to 4%. This is equivalent to the current capacity of all reservoirs nationwide.

From a biodiversity perspective, the high Andean wetlands located in the Maipo River watershed, are a special habitat for native species. The wetlands that are part of the páramo, jalca and puna ecosystems are known as Andean and high Andean wetlands and contain a biological diversity with a high level of endemism, both in terrestrial flora and fauna as aquatic. Wetlands are considered fragile ecosystem, a condition that could be due to natural causes such as extreme droughts, strong winds, high radiation and large thermal amplitudes and / or anthropic factors, such as overgrazing, agriculture, mining, and the consequent modifications in water courses and extraction for human consumption.

Hundreds of animals are taken up the mountains to be fed every summer by livestock communities. This practice allows them to naturally feed their animals on a very low cost, supported by wetland vegetation. Goats, horses and cows intervene the natural ecosystem by compacting the soil and therefore preventing vegetation growth. Tourism activities in these areas include camping and off-road driving destroy wetland vegetation and the soil underneath, since no tourism regulation exists within these areas. Mining activities rely on trucks and roads to transport mining products, impacting over the natural ecosystem of high Andean wetlands.

C) PROPOSED ALTERNATIVE SCENARIO

SOURCE WATER PROTECTION and WATER FUNDS

The cost of source water protection could be covered by revealing benefits to diverse payers through the business case for a WF. Understanding the value proposition of source water protection to each city is critical to making the business case and pooling resources. When looking at the relative water treatment return on

investment (ROI) in TNC's source watershed model and cross-walked to relative values of co-benefits such as climate change mitigation, biodiversity, and human health and well-being,

The OECD highlights that the Water Crisis is a governance crisis. Existing WFs have shown to be governance mechanism for source water protection explicitly designed to address trust and engagement, effectiveness and efficiency. WFs are adapted to the local socio-cultural, political, economic and environmental context. Each water fund is tailored to the local socio-cultural, ecological and economic context. They display a wide diversity of funding, governance and implementation strategies related to the objectives of organizing and mobilizing resources and supporting watershed protection.

A US\$5 million grant (GRT/CF-12631-RG) provided by the GEF through the IDB, and executed by TNC, supported the establishment of 10 WFs in five countries: Brazil (Camboriu, Palmas and Espiritu Santo), Colombia (Medellin, Bogota and Santa Marta), Dominican Republic (Yaque del Norte and Santo Domingo), Mexico (Monterrey) and Peru (Lima). Execution was finalized in December 2016. In all these countries, WFs have used science to develop policy instruments for better watershed conservation; they have helped water users integrate conservation activities in their business models; and have provided new revenues for watershed conservation.

Forty WFs initiatives are underway in the region, 20 of which are formally created and operating in Brazil, Mexico, Peru, Ecuador, Colombia, Costa Rica and the Dominican Republic. There are nearly 90 million people who could potentially benefit from watershed conservation projects implemented through these WFs. The total area to be conserved by these 20 funds is nearly 2 million hectares. In the last five years, these funds have been able to leverage over US\$120 million for conservation investments from a variety of public and private sources.

Learnings can be drawn from the WF experience so far:

- 1) WF's must engage water utilities (such as Medellin Water Fund), guaranteeing that water conservation practices are mainstreamed in the utilities' business model and their sustainability objectives;
- 2) WF's must promote policy change and an enabling regulatory environment (such as Lima Water Fund) to unlock public and private funding for land/water conservation activities (new tariff systems, new public funding mechanisms, payment for environmental services schemes or other public-private instruments);
- 3) WFs must put in place strong monitoring mechanisms to quantify results of land/water conservation activities; and
- 4) WFs must develop conservation plans that define specific objectives and strategies to achieve them, differentiating short, medium and long-term objectives. These plans should foster a pipeline of green infrastructure projects, aligning themselves with Bank priorities and respond to climate challenges faced by the watersheds.

This Project will expand a better defined and more targeted WF model throughout LAC, having proved it can lead to successful results. This strengthened WF model is a result of more focused and integrated technical studies, earlier establishment of more long-term partnerships, and a more strategic approach of ecosystem valuation to integrate into water tariffs and water-sector financial instruments such as water infrastructure loans.

Proposed Alternative Scenario by Site

Curitiba, Brazil

Implementation of this WF would strengthen the governance of the Upper Iguaçu River Watershed, integrating headwaters municipalities, state government, local nonprofit organizations and private sector, as part of a national strategy head by TNC – the Green Blue Water Coalition. This water fund is following the Water Producer program from the National Water Agency (ANA). The State Government has an agreement with

ANA to implement the program. The program will be part of a national effort to promote best practices on water resources conservation.

The WF will support the local previous effort to improve water governance but on an aligned approach. WF planning will contribute to an effective activities' planning, applying academic and previous knowledge to indicate priority areas for action to reduce river sedimentation or improve forest coverage, which can contribute to minimize water scarcity in some seasons, which according to climate change models will be more frequent in the future.

More than 60% of Curitiba's fresh food supply comes from the immediate region. Use of soil conservation best practices in priority areas scientifically defined by the WF will contribute to an improvement of water parameters and availability through time (like improving rainfall infiltration, reducing runoff and erosion). This brings results not just from an agricultural approach (production efficiency and maintenance), but by helping to maintain or promote a more efficient use of natural resources. When technically feasible, agroforestry systems will be encouraged as an optional economic alternative for family farmers. Family farmers, listed as vulnerable population in the NAP will be key players in the Curitiba WF as they are the owners of priority areas for action through the watershed. They depend on the land to survive, and would be able to have technical support on soil management best practices, and in some cases receiving benefits due to priority areas protection through ecosystem services maintenance or improvement.

Restoration and protection of vegetation remnants can be linked to both Climate Change and Biodiversity Action Plans. The WF will stimulate ecological restoration, using native species, encouraging partners to apply efficient and appropriate techniques for biodiversity improvement (natural regeneration, seedlings planting, combining methods in a same site), considering ecological and functional aspects together (as fauna attraction, low interference on soil structure, control of invasive alien species, etc.).

Ecological restoration is aligned to the strategy of productive mosaics, which aims to promote interaction among crop-livestock-forest integrated systems throughout croplands, forest plantation, native vegetation remnants and ecological corridors. Maintenance and restoration of riparian buffer zones can act as natural shaped corridors, improving landscape functionality. Principles of ecological restoration, economic use of native species (native fruit trees, for example), can be some of the main ways to rehabilitate, maintain and improve ecosystem safety and diversity, resulting in natural resources (like water, soil) conservation, ecosystem resilience improvement and new arrangements for native species uses.

Forest restoration work is critical to maintain local soil stability in some sites, avoiding soil loss and leaching, can contribute to reduce effects of large rainfall impacts, and would recover sites allowing fauna and flora to take up space again. Remnants protection on priority areas can be equal important to these factors, as well to increase chances of biodiversity maintenance or improvement.

As forests are a relevant land use type in the Upper Iguaçú Watershed (46%), and despite the law (Atlantic Forest Law), deforestation is still happening due to urban and rural expansion. The CMR has one of the largest urban growth rates in Brazil. All efforts to protect these remnants would reflect not just in biodiversity, but in climate too. For biodiversity, it would maintain and improve species and ecosystems richness. For climate change, due to the maintenance of carbon pools in plant biomass (Araucaria Forest, the vegetation type that occurs in the region, can stock from 80 to 168 t C per hectare) and in soil, as well the continuous improvement of stocks due to forest growth process.

Brazil intends to commit to reduce GHG emissions by 37% below 2005 levels in 2025 (an INDC commitment), and restoration and forest protection (=avoid deforestation) are two key activities that can be equally applied to adaptation and GHG emissions reduction purposes.

Many initially identified priority sites of the WF are not just essential to the water availability of the CMR, but also represents an important spot of flora and fauna - there are at least 30 species of bats (56% of the Paraná state)¹⁰, 389 species of birds¹¹, 26 species of fish¹² and 400 of vascular plants¹³ listed to the Upper Iguaçú

¹⁰ http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0031-10492003000600001&lng=en&nrm=iso

¹¹ <http://www.ao.com.br/download/2014%20HCT-9%20Aves%20de%20Curitiba%20ed.pdf>

Watershed. Originally covered by Araucaria Forest and natural grasslands, the watershed has around 46% of forest remnants, but they are, in most of cases, small and degraded, and are under high threat due to deforestation caused by urban and rural expansion. Protect these remnants using a broad approach, including biodiversity, water and other ecosystem services can make people aware about the importance of them.

Araucaria Forest is a vegetation type of Atlantic Forest biome, exclusive of Southern Brazil (192.500 km²) and part of Argentina and Paraguay – and it's highly endangered – in Brazil, there is 0.3 to 0.7 % of mature secondary forest remnants – pristine sites have gone¹⁴. Timber and other forest products were the basis of economic cycles after 1800 in Paraná State, and intense urbanization and economic growth in the last decades pushed rates of deforestation up. According to Brazilian Red List, there are at least 17 fauna species under some level of threat that can be found in Upper Iguaçú Watershed. Local flora red lists are out of date since 1995, and there are, at least, 5 plant species included in IUCN Red List for this region.

Cali, Colombia

Water supply in Cali has been identified as one of the most important challenges the city needs to address. Cali's 100 Resilient Cities (Cali 100 RC) program includes key ecosystem protection to secure long-term water provision. The WF together Cali 100RC will align efforts to build resiliency for the city.

Cali WF will work with public and private sector to implement long term conservation strategies in key areas for water provision for the city of Cali. Implementation will be driven by a strategic plan including priority sites (science based conservation portfolios) for return of investment in terms of water quality/quantity and biodiversity. Cali Water Fund will promote also long-term agreements between public and private sector to attain Water Fund recognition as the adequate platform to contribute to the Water Security of the city of Cali

The WF will focus on strengthening watershed management by articulating public and private initiatives and increasing funding to protect, restore and maintain key ecosystems of the water supply system. Activities prioritized by past technical analysis include conservation of strategic areas for water provision (such as paramos), reforestation, river protection by riparian buffers and sustainable production systems in rural areas. This Project will support remaining WF knowledge and capacity gaps in order to determine the specific reduction in sedimentation levels, contribution to flow regulation, flood risk reduction that specific upper watershed conservation activities will contribute to. Hydrological and socioeconomic monitoring systems will be implemented as water management is strengthened and integrated management of the supply basins is supported.

The Cali WF is currently in creation phase. WF partners include the Municipality of Cali, Cali Environmental Authority DAGMA, Cali Water Utility EMCALI, Regional Environmental Authority CVC, National Parks Agency (Parques Naturales) and Latin American Water Funds Partnership (IDB, FEMSA, GEF and TNC). The WF brings together partners to address issues that have so far been dealt with separately. The lack of long-term vision and commitments to ensure significant and lasting results in watershed protection has mainly been due to short term initiatives led by elected local governments not continued by the next government. The WF's structure, plans and broad group of decision making stakeholder will counter this previous fault. The WF is articulating private and private sector concerns which have in the past been unconnected and resulted in dispersed actions and a lack of focus and priority of collective action.

The WF is also focusing on securing long term funding for upper watershed conservation activities, uniting a variety of actors that have acted separately and not coordinated conservation efforts, resulting in less impact.

Guatemala, Guatemala

¹² <http://revistas.unipar.br/index.php/veterinaria/article/view/540>

¹³ <http://www.sociedadechaua.org/espicias-nat-floresta-ombrfila-mista>

¹⁴ https://www.researchgate.net/publication/283459400_Floresta_Ombrfila_Mista_aspectos_fitogeograficos_ecologicos_e_metodos_de_estudo

By supporting the strengthening of this WF, there are opportunities to strengthen the governance of the Motagua River Basin and generate a reduction in wastewater discharges in the communities of the basin, together with the municipalities as part of a national strategy, led by several state institutions and accompanied by private corporations.

The WF's focus is to contribute to maintain or improve the water supply for both the economic actors settled in the largest and most productive city in Central America and for the population in general and at the same time reduce the risk of the impacts of climate change, particularly by reducing erosion and landslides, so frequent on the surrounding bare hillsides that are part of the MRG. In addition, TNC, under its water security program, has been participating in the discussions of the Water Framework Law proposals, with the purpose of introducing important elements such as the concepts of economic compensation for the management of groundwater recharge zones as well as the theme of international or shared waters.

This Project will support the local effort to improve water governance and environmental management of the hillside areas that provide water to the MRG, as part of the focus of the responsibility of Guatemala in the management of the basin of the Motagua River. This will be supported by the ResCA project, which intends to create a multi-sector compact that will transition the region to a climate-resilient agricultural approach in a model that will allow for the conservation of these natural habitats, secure food and water resources and safeguard these communities from the impacts of climate, primarily by promoting local and regional value chain linkages with better and more sustainable agricultural practices, adapted to climate change.

The implemented actions will contribute to provide a sustainable source of food and renewable wood-fuel (through agroforestry systems and reforestation) and protect important habitats for plants and animals alike (through forest conservation). Some actions have been promoted to either reduce the impact of forest degradation (wood-fuel or non-forest timber product extraction). The work that has been supported through our donors as pilot projects for the WF are located in two regions: the Xayá-Pixcayá Region and the Metropolitan Region.

In the MRG, the intervention basins are located between two large life zones: the Subtropical Lower Montane Rain Forest and the Subtropical Tempered Humid Forest. In this region, at least 5 species are in the List of Threatened Species of the National Council of Protected Areas of Guatemala. For the ResCa project, work will be carried out in an important area embedded in the Multiple Use Reserve of the Lake Atitlán Basin, an area with a very high biological diversity, due to the combination of the tropical climate with the varied geography of the region that is characterized by the presence of volcanic cones. These characteristics allow the formation of microclimates that generate specific habitats for a large number of species of flora and fauna, many of them endemic to the region or in danger of extinction.

There is a direct relationship between the areas that we consider can serve a purpose of contributing to water security and can also serve for conservation of biodiversity. For both water security and biodiversity, there are barriers that need to be addressed by the WF, related to improving the information available for decision making and governance. This can be achieved by working on designing a monitoring plan that can do the proper adjustments in the strategies and optimize the investments for both private and public partners, turning the hard data into actionable information, and feeding it into multi-stakeholder governance platforms through which a common understanding can be reached. The WF will also improve outreach to communities and society so that there can be a better involvement from all stakeholders through a communications plan that can address both the need to invest in water and biodiversity conservation but also raise awareness on the risks of losing our natural capital, especially that related to the provision of ecosystem services.

Mendoza, Argentina

The set of these environmental, social and economic situations make the province of Mendoza and in particular for the populations, the productive activities associated to the basin, and the interest of the governmental authorities, an optimal place to be able to develop a WF.

TNC just entered an agreement with Aguas Mendocinas (State water agency), Irrigation Department of the Province of Mendoza and the Secretariat of Environment and Territorial Organization about addressing the

growing challenges to water resources. The sets the WF in a unique situation to serve as the platform to bring stakeholders together. The agreement recognizes as a central activity the design of strategies and implementation of actions that tend to ensure and regulate the availability of water for urban centers and for production in a sustainable manner. The agreement also recognizes that such accomplishment can only be achieved through participation and commitment between the public and private sectors who, based on this proposal, incorporate both their investment and management decisions, actions and resources for the conservation of ecosystems and associated watersheds.

The implementation of the Mendoza WF will include the participation of government authorities, a variety of water users. Among them and in addition to irrigation activities that uses 84% of the consumptive use, there are users for energy production. The Mendoza river contributes 48% of hydroelectricity (Los Potrerillos Dam – 760 Gw/year) in the region. Just 7 kms down water, a water diversion goes to the Luján de Cuyo refinery. This same water is needed for the regions thermal power plant. Other important group are the uses by food and beverages industries which use approximately 36% of available water supplies. This mix of large, powerful and diverse users makes the recent agreement a turning point for the WF.

Mendoza is also Argentina's province with the highest groundwater use in the country. The groundwater reserve is estimated in 23,000 Hm³ which is 15 times the capacity of all dams built in the province. The main groundwater reserves area is linked to the Mendoza River. The use of this groundwater is critical mainly during low flow years.

The area's context highlights the relevance for proper coordination of the conservation of this basin, biodiversity and ecosystem services, to guarantee the amount and quality of water. This action could be reached and sustained in time if a WF is implemented and the conservation actions and the financial resources that arise from it are applied. A positive is that Mendoza has historically managed water resources well with an institutional framework that was created to support its uses, a well consolidated academic and research sector and many regulations at the national and provincial level that provides the legal bases for the intervention and actions of the Water Authorities. Among these authorities we can mention the Ministry of Environment and Public Works. This ministry coordinates the activities of the three main institutions in Mendoza Water Management: a) Irrigation General Department, b) The Water and Sanitation Provincial Entity, c) the Electricity Regulator Provincial Entity and the different Municipalities associated. Talks are underway on how the WF can help align water objectives among these institutions and the private sector.

Santiago, Chile

Chile has 76% of the glacier surface of the American continent which are distributed along the Andes Mountain Range and which play a relevant role in the available water supply. However, the vast majority of Chile's glaciers are retreating, forced by climate change. Solutions must be explored to regulate water flows. One of the alternatives for accumulating water in a natural way, are wetlands. Specialized vegetation grows in them, that plays a fundamental role in the recycling of nutrients, in the maintenance of trophic networks, the stabilization of sediments and the quality of surface and groundwater. Wetlands are among the most productive means in the world, they are cradles of biological diversity and water sources.

These wetlands are under heavy stress caused by humans and livestock intervention. TNC is currently monitoring high Andean wetlands, in an area of 100 hectares, proving how important these wetlands are as natural infrastructure. This project establishes the foundation to also restore them and protect them. Beyond this Project's development of a WF in Santiago, we aim to improve the productive practice and management of two human activities that take place in this area: tourism and livestock.

During and beyond this Project's tenure the WF will work closely with stakeholders associated to these activities to improve wetland conditions and water availability. This will be implemented through strategies such as livestock rotation strategies, water efficiency practices, and awareness workshops for high Andean tour operators. The WF will identify and implement best practices in productive sectors. High Andean water sources are one of the main supply of water for people and the environment in this region, therefore, through

the improvement of productive practices, we will indirectly influence availability and quality of water sources for the whole upper zone of the Maipo River watershed, which has an area of 400,000 hectares.

The WF will tackle regulating tourism to wetland areas, the lack of land planning to identify camping areas and trekking tracks, and the need for warning signage to educate people visiting these wetlands about its environmental value, nor to prevent tourists from doing off-road driving. A key unifying theme among the tourism and grazing drivers is the lack of formal protection for these areas. The WF's strategic plan will identify funding sources to pursue formal protection for critical wetlands.

GEF Focal Areas and Expected Outcome

I) International Waters; IW 2: Catalyze investments to balance competing water uses in the management of transboundary surface and groundwater and enhance multi-state cooperation; PROGRAM 4: Water/Food/Energy/Ecosystem Security Nexus

II) Biodiversity; Objective Four: Mainstream biodiversity conservation and sustainable use into production landscapes and seascapes and sectors; Program 9: Managing the Human-Biodiversity Interface

This Project supports the design and setup of WFs. WF's will implement the vast majority of their conservation activities in the mid and long term and deliver significant biodiversity and water security benefits in the medium and long term as well. This Project is not a conservation project so it is important to keep in mind that a crucial benefit of WF is the sustained series of conservation activities in the long term.

By pointing to the Quito WF which is the longest operating WF, one can gauge what the long term benefits may look like and justify the benefits of supporting the setup of WFs. The Quito WF was established in 2000 with just over US \$1M in grant type support. Now the WF has an endowment of over US \$14M, has protected over 126,000 Has of Quito's watershed and positively influences over 500,000 Has. Upstream, 4,000 families are benefited each year from the WF's activities. All of these numbers will continue to grow.

Now that TNC's policy efforts in Peru have helped pass a law that generates hundreds of millions of dollars for upstream catchment protection, we expect to see larger WF impacts but in a shorter period in that country. For Lima, Peru's capital, that amount generated is approximately US \$100M over just the first 5 years. It is investment in these mechanisms that we seek in this Project. Outcomes in this Project are not high numbers because due to the focus on the setup of the WF but long-term, the outcomes listed below will be significantly larger:

- Increased protection of terrestrial and freshwater ecosystems (# of hectares of land in upstream catchment areas managed effectively for freshwater conservation:
 - 11,000 Has
 - 5 Water Funds directly impacting lands under conservation and/or sustainable farming agreements
- Improved water security for downstream populations and large water users (# of people benefited downstream; # of large water users benefited):
 - 14,000,000 inhabitants;
 - At least 3 public utilities and/or large water users
- Improved human well-being/ livelihoods (# of upstream families involved):
 - 1,500 families
- Improved water ecosystem services, in particular improved water quality for large water users (Sediment retention benefits derived from the conservation projects):
 - TBD/Estimated/Monitored per pending setup and studies

- Enacted legislative and institutional mandates that promote investment in watershed management services through local and regional environmental authorities (# of National or subnational authorities with new legislation):
 - At least 1
- Engagement of Energy sector in watershed management (# of Sites with Hydro sector as key strategic and/or funding partner):
 - At least 2
- Increased technical capacity for third parties to establish WFs (# of third-party WF initiatives underway):
 - at least 1

Project Components

COMPONENT 1: Water Fund Design and Monitoring.

This Proposal requests funding for key elements in different phases of the WF cycle.

1. Feasibility

The Feasibility phase provides an initial response to the question "is a Water Fund an appropriate conservation tool for addressing the water issues that have been identified"? The Feasibility phase will review the environmental, legal, economic, and social conditions that ultimately affect the viability and performance of a Water Fund in a specific project area. This analysis of enabling conditions requires access to pertinent information and data, such as details for existing payment for ecosystem services programs, institutional structures, water users, and the biophysical conditions in the project's targeted watersheds. Project deliverables related to this phase:

- 1 Feasibility Report (Argentina) - This report is a complete viability assessment to understand at greater depth the water security problem is, who's affected, what are the enabling conditions/barriers, and what are the chances the Water Fund can help.

2. Design

The Design phase establishes the scientific, economic, and socioeconomic case for a given water fund and plan for its creation and operation. The main purpose is to (1) engage key stakeholders and formalize a Steering Committee, (2) develop a series of technical studies and plans that form the scientific basis of the Water Fund, (3) develop a monitoring strategy and plan, (4) establish the economic case and financial plan for the water fund, (5) develop a long-term fundraising strategy, and (6) develop a long-term strategic plan for the fund's creation and operation. Project deliverables related to this phase:

- 3 Demonstrative Projects (Curitiba, Cali, Guatemala) - Conservation activities implemented on the field that will serve as example of the type of interventions the water fund will put in place in the future
- 3 Strategic Plans (Cali, Mendoza, Santiago) – Defines a WFs context, identifies priorities, goals and objectives and how to achieve them including a fundraising strategy
- 3 Marketing and Communication Plans (Curitiba, Guatemala, Santiago)
- 3 Monitoring Design and Baseline Studies (Curitiba, Guatemala, Santiago) - This work establishes the methodology on how the water fund will measure its contributions to its goals, and a baseline towards which progress will be measured
- 2 Optimized Portfolio Studies (Mendoza, Santiago) – Defines the optimal proportions of various activities/areas the WF could undertake
- 2 Governance/Institutional and Legal Study (Mendoza, Santiago) - Establishes the legal contract and how

the governance of the water fund will work

- 1 Ecosystem services modelling - problem/solution modelling analysis (Guatemala) - This models hydrological ecosystem services (supply and demand), includes ground water when relevant , identify green infrastructure solutions to address water security, compare land-use change/climate change scenarios, select best portfolio for investment (optimized interventions portfolio)
- 1 Monitoring Plan (Cali) - This work establishes the methodology on how the water fund will measure its contributions to its goals

3. Creation

The Creation phase includes the official public launch of the water fund and is an opportunity to attract membership, investors, and communicate the vision for the fund to the general public. The main activity of the Creation phase is the launch event, which is typically the first large, public-facing event under the Water Funds Project Cycle.

4. Operation

The Operation phase is the stage of the Water Funds Project Cycle where all conservation strategies are implemented. As such, this phase is distinct in that it includes a series of actions related to the implementation of conservation strategies, monitoring, financial management, communications, reporting, and engagement. This phase is important because it is focused on implementation, whereas previous phases were primarily focused on planning and preparing for the Operation Phase.

5. Maturity

In assessing whether a WF can or has reached maturity, a review of the overall structure of the WF is done to determine if it has developed a sustainable legal, financial, and institutionalized operational structure. In particular, this review should consider what the core needs of stakeholders are and their respective responsibilities in maintaining the water fund. This review assists in determining the overall role that specific partners are fulfilling. The process by which a determination is made to indicate that a fund is 'maturity' is improving as the global experience with water funds grows with time and enhanced analytics are applied to specific contexts (e.g. key performance indicators).

COMPONENT 2: Technical Assistance (TA)

TA is one of the most effective methods for building the capacity of an organization. Funding requested under this Component will be used to finance the technical secretariat of the WFs, launching events and technical support in the creation and strengthening of the WFs, demonstrative projects and the creation and sharing of financial sustainability tools. This targeted support helps ensure that the Program activities and finances are developed and/or maintained.

COMPONENT 3: Training, Knowledge, and Capacity Building

Water funds can scale source water protection by increasing participation based on a solid value proposition. They provide an attractive vehicle for pooling and deploying revenue in watersheds from the diverse beneficiaries of watershed services. Nonetheless, to get to scale, water funds need greater diversity and surety of cash flows. Opportunities to do so include:

- Strengthening public funding flows based on a value proposition for water and other values
- Diversifying buyers by bridging into new sectors

Strengthening Public Funding Flows

To address the first point above on funding flows, we request funding for developing 2 tools

1) Green Infrastructure Regional Water Tariff Tool

Regulations regarding payments for ecosystem services vary across countries and may prevent, allow or encourage WF mechanisms. Like other multi-stakeholder programs, having certain legal and institutional characteristics in place will enable creation and management of a WF. Some countries or states supportive of source water protection, such as Peru, encourage the establishment of WF-type mechanisms by requiring utilities to invest a portion of their user fees in source water protection or by recognizing source watersheds as part of water supply infrastructure. As these types of mechanisms become more common across the region, it is likely that regulations will adapt to meet the demand for source water protection and better support mechanisms like WF.

A key strategy to support all WFs is to enable them to advocate for policy changes that support long-term implementation and financing of source water protection. TNC aims to replicate its work in Peru where Lima's WF worked in partnership with Peruvian water regulator SUNASS (Superintendencia Nacional de Servicios de Saneamiento) on a new tariff structure by using a costing methodology. This first of its kind methodology resulted in an innovative new tariff structure, creating a reserve fund for watershed conservation, restoration and management.

It is this supportive policy environment that funding in this Project seeks to replicate by developing a Regional Water Tariff Tool developed in partnership with ADERASA (Asociación de Entes Reguladores de Agua y Saneamiento de las Americas), the region's association of national water regulators. This tool will facilitate a WF's technical and policy ability to enable the local supportive policy environment. This includes driving science-based policy design to implement water tariffs, taxes or transfers into cash flows that could support long-term payments to source water protection. The tool developed with ADERASA will provide water regulators throughout the region the know-how of using source water protection to reduce vulnerability and exposure to the risks of climate change and facilitate the process to internalize watershed conservation costs into the water tariffs of the water agencies they oversee.

2) WF Financial Sustainability Tool & Workshop

WF obtain funding from diverse sources with investment coming primarily from water utilities and other public-sector entities. Support from the private sector is growing but remains limited. Legislation or public policy may be the most effective mechanism to guarantee long-term funding but endowment or trust funds may serve as other sustainable and secured financing approaches. But when an opportunity exists to grow an endowment, combining legislation, endowments, and voluntary contributions may provide the greatest security and transparency of funding sources for the long-term (Bremer).

It is with this objective that this Proposal requests funding to develop a WF Financial Sustainability tool and a corresponding dissemination workshop. The tool will provide WFs with the process and ability to analyze, design and develop a comprehensive long-term financial sustainability plan that considers the different funding options and opportunities given the specific conditions and context of a WF.

Diversifying buyers by bridging into new sectors – Engaging Hydropower sector towards WFs

To address the second point on diversifying buyers by bridging into new sectors we request funding for a pilot project connecting watershed conservation and the Hydropower Sector. In addition to closing gaps in policy and governance, an additional regional effort to increase capacity to deliver and create economies of scale in implementation includes expanding into new sectors. Other sectors could benefit from source water protection but have not entered the market strongly. For example, there is a clear case for the return on investment to hydropower companies. A number of water funds, such as those of Nairobi and Quito, are in operation and on-track to provide direct benefits to hydropower facilities. Specific to this Proposal, a detailed cost-benefit analysis predicts a positive return on investment for reforestation efforts upstream of Colombia's Calima Dam.

Cloud forests are unique tropical montane ecosystems featuring persistent ground-level clouds. They provide significant hydrological services downstream from the tropical mountain headwaters where these ecosystems are found. Their watershed benefits include stream flow regulation, additional precipitation inputs from fog-

and wind-driven rain capture and significant avoided sedimentation potential.

These benefits help downstream hydropower operators who stand to gain increased revenues through the optimization of reservoir operations resulting from cleaner, more regular and often additional water inputs to reservoirs, as well as likely significant decreased costs from a reduction in sediment management expenses.

Approximately 55 percent of hydropower-contributing watersheds in Latin America contain cloud forests, and these include an estimated 60 million hectares of degraded forests. This overlap generates a unique hydropower–cloud forest nexus for cloud forest restoration and more sustainable hydropower generation both across Latin America and globally where hydropower plants also rely on headwaters covered with cloud forests. Given that roughly 60 percent of cloud forests in Latin America have been lost due to factors such as agriculture and forest conversion to pasture, linking hydropower generation to cloud forest restoration provides a potentially meaningful and scalable restoration platform.

To date, water utilities have been the primary sector backing water funds and are largely motivated by water quality issues, while other sectors have not yet participated at the same level in source water protection programs. This effort is part of a strategy to help water funds get to scale by providing more predictable cash flows. It is a tangible opportunity for cash flow growth by diversifying and bridging into new sectors and positioning natural infrastructure as a smart option for infrastructure investment (beyond O&M).

In this Proposal, we request funding to design and implement a Demonstrative project that measures the ecosystem benefits provided by cloud forests to the Calima Dam (adjacent the Cauca Valley Water Fund in Colombia) and its owner, Celsia Energia, via increased flows and avoided sedimentation. We plan to leverage Celsia Energia's existing \$2mm/year ReverdeC initiative to selectively target two high-value 100-acre plots and validate ecosystem benefits models, thereby creating a Return on Investment track record that can be refined and scaled via innovative financial mechanisms.

D) INCREMENTAL/ADDITIONAL COST REASONING; CO-FINANCING

Incorporating the environmental services provided by ecosystems through appropriate economic instruments in a way that the value of maintaining the health of these ecosystems has not been successfully mainstreamed. The LAWFP and WFs work at different and complementing levels to overcome the challenges toward this goal. One approach the LAWFP and WFs apply is by engaging the private sector and local authorities in investing in water resource management and watershed protection, as well as having baseline information upon which to evaluate conservation benefits. Another approach by the LAWFP and WFs is to enable better communication, tools and science among stakeholders towards more coordinated and informed water resource management. As existing WFs have shown, without the interventions they performed, the existing watershed protection mechanisms are limited in harnessing the potential for slowing or avoiding the loss of freshwater ecosystems at a larger scale. The LAWFP and WF help the private sector and water utilities reduce their impacts on watersheds, the general public value environmental services, and build public and private sector confidence in sustainable water management.

The Co-Financing identified demonstrates the multiple sectors involved and interested in scaling the use and capabilities of WFs. Different entities and sectors are interested in funding specific work and/or activities. With the 5 phases of a WFs cycle, this requires alignment of a combination of funding sources. Section C's table highlights the importance of bringing together international grant funding. Because of the broad set of studies of the WF design phase coupled with the low or negligible conservation impact achievable during such phase, it is most often difficult to raise all funds for this phase from one source. The additionality of GEF funding for this phase is evident in so much that it tops the funding requirement for their cycle phase.

E) GLOBAL ENVIRONMENTAL BENEFITS

Direct and indirect global environmental benefits that WF activities provide

Global Environmental Benefit	Applicable Project Sites
Biodiversity (Direct) - Conservation of globally significant biodiversity - Sustainable use of the components of globally significant biodiversity	Curitiba, Guatemala
Climate Change Mitigation - Conservation and enhanced carbon stocks in agriculture, forest, and other land use	Curitiba, Cali
Land Degradation - Improved provision of agro-ecosystem and forest ecosystem goods and services	Curitiba, Cali, Guatemala, Santiago
(International) Waters (Direct) - Multi-state cooperation - Reduced pollution load in (international) waters from nutrient enrichment and other land-based activities - Reduced vulnerability to climate variability and climate-related risks, and increased ecosystem resilience	Curitiba, Cali, Guatemala, Mendoza, Santiago
Sustainable Forest Management - Maintenance of the range of environmental services and products derived from forests; - Enhanced sustainable livelihoods for local communities and forest-dependent peoples	Curitiba, Cali

F) INNOVATION, SUSTAINABILITY AND POTENTIAL FOR SCALING UP

On the innovation front, the WF model has proven to be a innovative financing and governance mechanism. To continue innovation, particularly on sourcing large-scale financing and replicability for watershed conservation, TNC is working on a variety of initiatives that will impact WFs in this Project, including:

- **Watershed Conservation in Water Loans.** Collaboration in Brazil with the Pernambuco state Environmental Agency, the state Water and Climate Agency and the Companhia Pernambucana de Saneamiento water utility to design the green infrastructure component required in an IDB water infrastructure loan. This is the first of its kind financial instrument in the LAC and will create a pathway to scale financing for watershed conservation.
- **Water Funds Accelerator.** TNC is working with partners such as 100 Resilient Cities to develop a WF Accelerator with the purpose of scaling the adoption/development of WFs throughout the world. TNC and partners are currently in early stages of developing an Incubation Fund that will i) create momentum/WF movement, ii) provide a toolbox and facilitate and, iii) catalyze innovation.
- **Tariff & Financial Sustainability Tools.** Component 3 of this Project will develop new tools to be applied all existing and new WFs to grow revenue sources and investment in watershed conservation.
- **New Sectors.** Component 3 of this Project will collaborate on a new initiative engaging the hydropower sector through a demonstrative project opening the possibility to engage the energy sector as a key funding partner to protect cloud forests in LAC and globally.

Scaling goes hand in hand with innovation and financing. Water funds can scale source water protection by increasing participation based on a solid value proposition. Water funds provide an attractive vehicle for pooling and deploying revenue in watersheds from the diverse beneficiaries of watershed services. Nonetheless, to get to scale, water funds need greater diversity and surety of cash flows. Opportunities to do so include:

- Strengthening public funding flows based on a value proposition for water and other values;

- diversifying buyers by bridging into new sectors; and
- positioning source water protection as a smart option for infrastructure investment beyond operations and maintenance (O&M) savings.

Public funding will continue to be critical to source water protection efforts. Water funds with a strong ROI for water treatment or climate adaptation, for example, can pool a percentage of water tariffs, taxes or transfers.

Other sectors could benefit from source water protection but have not entered the market strongly. For example, there is a clear case for the return on investment to hydropower companies. A number of water funds, such as those of Nairobi and Quito, are in operation and on-track to provide direct benefits to hydropower facilities. A detailed cost-benefit analysis predicts a positive return on investment for reforestation efforts upstream of Colombia's Calima Dam. As identified above and in Component 3, this Project will deepen that collaboration with the hydropower sector.

Equally important is the case for source water protection as a complement to gray infrastructure to capture investments into water funds. In the case of Lima, Peru an analysis of anticipated costs and related dry-season flow benefits found source water protection to be preferable to gray infrastructure in eight-of-ten cases.

If monetized, the benefits will help scale source water protection by enabling upfront financing. With enough diverse and stable payers contributing to water funds, upfront financing becomes possible and could dramatically increase the rate of deployment under the right conditions

In addition to overcoming financial barriers, there are a number of gaps that, if addressed, could accelerate the development and implementation of water funds to help achieve the global impact described here. These include gaps in policy and governance, adequate capacity to deliver, economies of scale in implementation, social acceptance, science and general awareness of source water protection's full potential

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

N/A

3. *Stakeholders.* Will project design include the participation of relevant stakeholders from civil society organizations (yes /no) and indigenous peoples (yes /no)? If yes, elaborate on how the key stakeholders engagement is incorporated in the preparation and implementation of the project.

The identification of stakeholders early-on in the WFs development process is a key factor for success. WF consider a variety of elements in their stakeholder analysis and engagement.

Key stakeholders must be highly involved in a WF to achieve the long-term benefits that they are seeking to achieve for people and for nature. These stakeholders may be from a wide range of backgrounds, such as local people who live off the land, corporations interested in sustainable development, communities that value the benefits of biodiversity, or governments seeking innovative conservation mechanisms for freshwater conservation. The WF stakeholder analysis is a systematic process for gathering and analyzing information to determine who should be engaged in the design and operation of a WF by accounting for and incorporating the needs of those who have a 'stake' in the project. The analysis provides an improved understanding of i. Key stakeholders within a project area, ii. Stakeholders' respective interests in water resources within the project area, iii. Divergent viewpoints within a project area on water use and water management, iv. Potential or existing conflicts between water users in the project area, and v. Potential strategies for negotiating with stakeholders with opposing perspectives (e.g. via the identification of interests or shared-benefits, etc.), that will ultimately reduce the potential for delay and increase costs by incorporating competing interests into an integrated solution.

Large users of water in the project area are critical stakeholders in WFs. Participation of these large users is key whether it is for reducing treatment costs or the interest of guaranteeing the availability and quality of

water for a specific use, such as industry, energy, agriculture, or human consumption. These large users, who can be either from the public or private sector, often form the basis of the fund in terms of providing the main financial resources for its establishment. Accordingly, one of the lessons learned from setting up WFs is the importance of first consulting with large water users to determine if the right conditions are present to invest additional resources in the watershed. This consultation is important as it helps to avoid the creation of false expectations among other stakeholders and ensure that there is clear demand for the ecosystem services being promoted.

The process used to identify stakeholders varies depending on the context in which a WF is being proposed (e.g. geographic region, scope of WF, etc.). There are a wide range of considerations that may influence the identification of stakeholders, including the political, economic, legal, and environmental conditions in which the water fund will be located (e.g. local, regional, national). Whatever the reason for their interest, potential stakeholders will need to agree on a strategy for the design of the water fund.

The Social Basin

The social basin is a useful concept that may help to clarify the range of potential stakeholders for a given WF. The social basin refers to an area that encompasses all ecosystem features extending from the headwaters of rivers to the lands where water “naturally” flows (or where water is transferred through canals). It is the complex combination of both the geographic boundaries of project watersheds and the areas of influence, as determined by local water users.

Social Safeguards

Nearly all conservation work now engages people as key stakeholders, actors, beneficiaries, or potentially negatively impacted individuals or groups, so a review of safeguards at the beginning of any project is important. While social safeguards are commonly thought of when working with indigenous communities (i.e. Indigenous peoples have collective rights recognized under international law), there are many other groups that should be considered under this analysis. TNC's Conservation by Design 2.0 guidance document provides a full list of considerations that help with the incorporation of social safeguards into conservation planning work.

The multi-stakeholder structure has proven to be an effective mechanism for ensuring transparency and accountability in the operation of WFs and long-term financial sustainability. While it ranges depending on the local context, the different stakeholders that might be interested in participating in a WF can be classified in the following groups:

Urban leaders should take a full inventory of the economic benefits that would accrue to the city through source water protection. These would include reduced water supply operation and maintenance costs and potential avoidance of capital infrastructure and other co-benefits such as climate change mitigation and the conservation of biodiversity and open spaces that have significant positive impacts. City administrations are the most natural participants in the water fund platform, and through policy design, can help intermediate water tariffs, taxes or transfers into cash flows that could support long-term payments to source water protection and help finance conservation activities.

National leaders should explore how a source water protection portfolio can optimize multiple goals and public investment. In particular, countries may be able to meet a portion of national climate, biodiversity and Sustainable Development Goal targets through source water protection efforts that also address regional economic development goals and support water security for municipalities, states, and provinces.

Public and private financiers and donors are critical as we move from innovation to expansion of WFs. Getting the science and tools to a local scale is essential. Investing in landscape assessments and WF feasibility studies is a key gap. Ultimately, the scale-up of WFs will also require their development as financial vehicles that can connect capital from mainstream capital markets and institutional investors into the

watersheds and their benefits. This will require significant innovation and trial to build a reliable track record for what is effectively a new asset class.

Corporations, as core beneficiaries of water security, are key champions and leaders in water security efforts. Corporations should explore where they face business risks related to water quality or availability, including indirect use such as the power their operations depend upon or regions where their agricultural inputs are grown, and partner with the civil and government sectors to establish WFs in those locations. Corporations might also explore where their own business operations might be expanded to deliver some of the components required to achieve source water protection.

The scientific and non-governmental communities. These communities should continue efforts to build the understanding of how and when WFs, and more generally source water protection efforts, will be successful, as well as exploring new policy, governance and financial approaches to implementing them.

Upstream land stewards and local communities should know the value of their land and understand the impacts of their practices on downstream water quality and quantity. By evaluating the benefits that may be offered through the establishment of a WF, upstream landowners have an opportunity to improve their lives and livelihoods while improving downstream water quality.

Citizens of the cities that depend on source watersheds should be advocates for their water. The public should know where their water comes from and what's impacting its long-term security. People can advocate for leadership to protect water at its source through policy changes and programs like water funds that put in place long-term implementation capacity.

Indigenous Peoples

Activities by WFs and its partners at sites in this Project actively engage Indigenous communities. Engagement usually implies that it either comes from a legally binding obligations (as is the case for governmental agencies) or to their location within the territory (like some civil society organizations). WF projects regularly hold open discussion with the potential beneficiaries so as to know their land-based needs and discuss with them about possible conservation agreements that can promote the conservation or restoration of sites. In almost all cases, TNC. WFs and our partners this engagement is done in their native tongue, which is often Not Spanish.

4. *Gender Equality and Women's Empowerment.* Are gender equality and women's empowerment taken into account (yes /no)? If yes, elaborate how it will be mainstreamed into project implementation and monitoring, taking into account the differences, needs, roles and priorities of women and men.

TNC and WFs it develops strives for equal opportunities for reaching out to both men and women as potential beneficiaries of WF direct field actions. TNC and WFs encourage our partners to employ women for the projects we implement. This helps improve engagement with local communities that might find a bit of resistance in having a male-only staff. In planning, there is special interest in keeping women involved in the reception of both direct and indirect benefits. WF conservation projects promote active participation of women heads of families, mostly in the negotiation of interventions in the farms (restoration, reforestation, productive systems) but also in the intervention activities to improve women's empowerment by leading tree nurseries and planting activities.

5. *Benefits.* Describe the socioeconomic benefits to be delivered by the project at the national and local levels. Do any of these benefits support the achievement of global environment benefits (GEF Trust Fund) and/or adaptation to climate change?

The analysis of socioeconomic conditions is an integral aspect of designing a WF. The socioeconomic study evaluates how the monetization of watershed services will affect society in financial terms, and delineates who

the key actors are and how a WF might present risks and benefits to existing livelihood strategies and social structures. The approach is aimed to build trust with community members and then understand what the current situation is and what the main threats are to identified ecosystem services in the watershed. Once these threats and drivers are identified, appropriate interventions are designed around that understanding. For the proposed sites of this Project, socioeconomic benefits will be specific to the local conditions and will be identified by the socioeconomic technical studies undertaken during the Project.

This Proposal requests funding to establish four WFs that engage in source water protection for decades beyond the 3 year life of this Project. Protecting and restoring the natural infrastructure of source watersheds will directly enhance water quality and/or quantity depending on the specific conditions of each watershed. We can expect the conservation work of the four WFs will result in one or more of the following benefits:

- Improve water quality by reducing sediment or nutrient pollution by a meaningful amount through forest protection, pastureland reforestation and agricultural best management practices (BMPs) as cover crops.
- Improve water quantity by enhancing infiltration and increase critical base flows in streams. For example, an analysis of the watersheds supplying water to six of Colombia's largest cities shows that source water protection activities could increase potential base flow up to 11 percent. This is critical in watersheds predicted to experience decreases in annual precipitation by mid-century.
- Maintain or improve groundwater resources by targeting aquifer recharge zones or other sensitive areas of the landscape. Land-based programs protecting aquifer recharge areas avoided pollution impacts.

The value of source water protection goes beyond water security and includes climate change mitigation and adaptation, biodiversity, and human health and well-being co-benefits. The findings of each local technical study will determine the specific benefits WF activities will have. Based on experience they may include the following:

Climate Change Mitigation benefits

- Carbon storage: 64 percent (143 gigatonnes) of the total carbon stored in above-ground biomass in all tropical woody vegetation globally was held within urban source watersheds. From 2001 to 2014, more than 6.6 gigatonnes of carbon (24.3 gigatonnes of CO₂) were emitted as a result of tropical forest loss in the source watersheds, equivalent to 76 percent of all carbon emitted as a result of tropical forest loss over that same time (TNC).

With reforestation, forest protection and agricultural BMPs implemented across source watersheds as WFs do, the climate change mitigation potential at this project's source watersheds could be achieved. Mitigation potential could be realized via city investments in source water protection activities at a level required to achieve meaningful sediment or nutrient reductions. Other actors can go beyond and capture additional climate change mitigation potential through programs motivated by water security or other co-benefits.

Climate Change Adaptation benefits

- Better soil retention: Source water protection activities, including but not limited to agricultural BMPs and restoration, can help to mitigate soil erosion. These activities will have almost universal relevance, as 83 percent of source watershed areas are predicted to increase in erosivity by mid-century due to climate change (TNC). Erosion not only leads to water pollution, but reduces soil productivity and thereby reduces the resiliency of farming communities.

Human Health and Well-Being benefits

- Improved Livelihoods through improved income, wealth, and employment

- Avert micronutrient deficiency: Over 75 percent of the world's crop species depend on pollination by bees, butterflies and other species to produce the foods we consume. The annual value of global crops directly affected by pollinators is US\$235 billion to US\$577 billion (TNC). Pollination is vital for fruit and vegetable crops that serve as the source of essential micronutrients (e.g., vitamin A, iron, folate). Approximately 2.6 billion people live in source watershed areas where greater than 10 percent of micronutrient supply would be lost without the benefits of pollination. By avoiding the loss of important pollinator habitat close to agricultural lands, source water protection could avert the loss of 5 percent of agricultural production's economic value globally from pollinator loss alone.

Biodiversity benefits

- Avoided extinction: The risk of regional extinctions—loss of a species within a given ecoregion—would be reduced for thousands of terrestrial species, if reforestation opportunities were fully implemented within source watersheds.
- Habitat protection: Targeted land protection is critical for sustaining both aquatic and terrestrial biodiversity. Target for protection of lands and inland waters could achieve that target through protection of natural habitat that sits outside existing protected areas. One-quarter of those could reach the target by protecting just 10 percent or less of remaining natural land cover outside protected areas (TNC).

The water security benefits and co-benefits of source water protection are not being captured systematically today. Despite overwhelming benefits to cities, most exert little influence over how sources are managed. The barriers to implementation generally fall into three main areas:

- There is often a mismatch between the jurisdictions of the problem owners and problem solvers. Urban water users, such as municipalities, urban water managers or industries, have limited jurisdiction and cannot easily reach beyond those jurisdictional borders. Rural land stewards are making decisions that affect urban users but have little to no incentive to reduce their impacts.
- Knowledge transfer is lacking on how investments in source water protection can achieve specific water security outcomes or other benefits.
- Replicable mechanisms that allow for a diversity of funding flows, based both on a supportive policy environment and on specific financial structures, are lacking.

WFs focus on resolving these issues by bridging science, jurisdictional, financial and implementation gaps. The LAWFP Biennial is a dedicated effort to build capacity and disseminate science and knowledge both within the WFs community and among those interested in using natural infrastructure to improve water security. This sharing of science and knowledge and capacity building is key to effectively replicating WFs and scaling up the impact of their activities.

6. *Risks*. Indicate risks, including climate change, potential social and environmental future risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks:

Risk	Level of Risk	Mitigation Measure
Lack of local institutions/partners or their inability to cooperate with or form part of the Water Fund	Low	Begin with not every stakeholder on board and develop the key business case arguments focused on the missing stakeholder's perspective. Keep inviting them along the way. Evaluate other potential options and/or determine WF's "go no-go" deadline should key stakeholder remain unengaged.
Partners unable to invest in the Water Fund	Low	Show to potential partners (main water users) the benefits of investing in the watershed conservation based on the feasibility studies developed
Study shows that green infrastructure will be unable to contribute to	Low	Identify new areas and/or combined green/gray approaches that might respond better to the watershed challenges

the health of the watershed.		
Limited applicability/relevance of knowledge products	Low	Structured review of ToR institutionalized quality control. Make studies actionable and/or tie to ongoing body of work/activities
Lack of long-term commitment from public sector to secure consistent funding	Low	Demonstrate effectiveness of natural infrastructure by providing evidence of success with data and propose long term commitment agreements.
Inability to meet 1:4 Co-Financing requirement	Low	Preliminary assessment of potential donor sources and key stakeholders made before selecting the beneficiary watersheds. Additionally, TNC will continue identifying relevant partners to leverage more resources, and will design and implement a comprehensive communications and awareness campaign to encourage all users to contribute to the WFs

7. *Cost Effectiveness*. Explain how cost-effectiveness is reflected in the project design:

WFs target specific water-related benefits to achieve preestablished objectives based on the scientific studies conducted. A WF is designed to cost-effectively harness nature’s ability to capture, filter, store and deliver clean and reliable water. The multiple co-benefits for health, the economy, society and the environment further exemplify the more efficient and cost-effective solution of this approach than more traditional means.

Forty percent of source watershed areas show high to moderate levels of degradation. The impacts of these changes on water security can be severe. Nutrients and sediment from agricultural and other sources raise the cost of water treatment for municipal and industrial users. Loss of natural vegetation and land degradation can change water flow patterns across the landscape and lead to unreliable water supplies, with implications for both upstream and downstream users. According to the World Bank, some regions could see their growth rates decline by as much as 6 percent of GDP by 2050 as a result of water-related losses in agriculture, health, income and property—sending them into sustained negative growth. Aspirational goals to see livelihoods improve, like those set in the Sustainable Development Goals (SDGs), are beyond reach without a more water-secure world.

Natural infrastructure approaches show financial advantages through a reduction in initial capital expenses and on-going operational expenses. It has also been used to recapitalize ageing resources. Evidence suggests that nature-based solutions can help reduce capital costs and in some cases be more cost-effective than gray infrastructure. In seven U.S. cities that maintain high-quality water due to protection or restoration of their source watersheds, the savings from avoided water treatment infrastructure costs could be up to US\$6 billion. An econometric study in the developing world found that the value of virgin (unlogged) forests in upstream source watersheds was equivalent, on average, to more than one-third of the water treatment plants’ aggregate expenditures on priced inputs (labor, energy, chemicals and maintenance). In many cases, the value of green infrastructure assets increases over time—in stark contrast to gray infrastructure—and can help prolong the life of gray infrastructure.

The ecosystem services analyses undertaken by each WF define the understanding of the ecosystem services identified in the Pre-Feasibility Study. This analysis specifies the condition of ecosystem components that provide the identified services, potential threats to that condition, and where the most strategically advantageous locations would be to protect, restore, or maintain those services. This analysis is important for supporting other analyses, particularly as it relates to expected benefits and costs of different management strategies. The ecosystem services analysis will further assist in validating the area of influence for the prospective WF. By doing so, the project team is positioned to

analyze the overall supply, how use is allocated, existing and potential conflicts, and current and potential threats, which in turn will determine where conservation investments should be focused to guarantee the ecological integrity and availability of those ecosystem services

The analysis determines the feasibility of a WF from perspective of ecosystem services and the results and recommendations are included in the WF's Conservation Plan. In this Plan, the identified conservation activities are prioritized so that resources can be allocated or raised appropriately and priority actions can be completed first. The conservation plan will serve as the central guidance document for the water fund that supports the framing of annual or multi-annual operative plans.

8. *Coordination.* Outline the coordination with other relevant GEF-financed projects and other initiatives [not mentioned in 1]:

WFs in this Project are in or beginning Design phase. Stakeholders and initiatives are being identified and engaged. Local TNC and WF staff and managers have the responsibility for ensuring effective communications with related initiatives. All WF, including those in this Project will coordinate with all strategic alliances and projects active in freshwater protection, biodiversity and conservation finance, from the public and private sectors (national and international), bilateral and multilateral, (e.g. National Water Agencies, Water Fees Regulating Agencies, GEF, UNEP, UNDP, UN Water). The initiative will collaborate with programs and projects the Inter-American Development Bank's Water and Sanitation Division, the IIC, the 2030 Water Resources Group, the Latin America Conservation Council.

The Management Team and Country Teams will determine best opportunities for linkages with existing programs and will ensure complementarity and avoid duplication of efforts. To date, local teams have identified the following projects with potential for coordination.

Guatemala:

- GEF Project 9059 - Promoting Sustainable and Resilient Landscapes in the Central Volcanic Chain
- GEF Project 5765 - Integrated Transboundary Ridges-to-Reef Management of the Mesoamerican Reef

Colombia:

- GEF Project 5680 - Consolidation of the National System of Protected Areas (SINAP) at national and regional levels
- GEF Project 4849 - Sustainable Management and Conservation of Biodiversity in the Magdalena River Basin. TNC is involved in this project.

Chile:

- GEF Project 5135 - Protecting Biodiversity and Multiple Ecosystem Services in Biological Mountain Corridors in Chile's Mediterranean Ecosystem. TNC is involved in this project.

9. *Institutional Arrangement.* Describe the institutional arrangement for project implementation:

The Executing Agency (EA) of the TC will be The Nature Conservancy (TNC), the leading conservation non-profit organization in the world. It was created 64 years ago, works in 69 countries, and has more than 600 scientists. TNC has more than 15 years working with WFs. TNC executed the operation GRT/CF-12631-RG before the estimated time and accomplished all expected outcomes and outputs .

This Program will rely on similar executing mechanisms as the operation GRT/CF-12631-RG. For execution purposes, the IDB and TNC will sign a non-reimbursable technical cooperation agreement. TNC will be responsible for the administration of the resources provided by the Bank, in accordance to Bank policies and procedures. TNC will execute the technical aspects of the TC through its Latin America Region Operating Unit.

A Regional Project Manager will be designated. The finance unit of TNC Worldwide Office (TNC HQ) will have the overall responsibility for the financial administration of the funds and the financial systems, processes and training. At the national/local level, TNC's Country Offices will be responsible for the technical monitoring of the activities in coordination with the Regional Project Manager

The program management, selection criteria, implementation plan, safeguard policies, disbursement, procurement, knowledge management system, and financial management will be described in further detail in an Operations Manual to be developed in coordination with the IDB. The Manual will detail the performance indicators, as approved by the IDB. It will also provide guidance on how this Platform implementation will help address those obstacles to effectiveness that the GEF has identified to payment for environmental service approaches, i.e. non-compliance, poor administrative selection, spatial demand spillovers, and adverse self-selection.

The Operations Manual will be completed after the proposal receives the no-objection from GEF's Council and in preparation for CEO endorsement. Grant disbursement will be conditioned on the approval of the Operations Manual by the IDB as the GEF Executing Agency.

Operations Manuals will be developed for each Water Fund that will be expected to help contribute to knowledge management.

10. Knowledge Management. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Knowledge Management

Knowledge management on WFs is led at two levels, one at TNC across the LAC by the regional water security team, while the other is led by local WF technical team. Through a knowledge management plan, reports, memories and any technical or communications material are organized and filed as part of the documentation of a WF. Every quarter, TNC asks WFs for updated information on key indicators (hectares intervened, family's beneficiaries, linear kilometers protected, and others) to feed TNC's dashboard, a platform of information for every Water Fund in Latin-America. Monitoring efforts with detailed technical components (data collection, data management and interpretation, databases about water quality and quantity) is also managed by TNC and local WFs and local partners.

Knowledge Exchanges/Workshops

At the national level, WF network workshops are held to promote WFs best practices exchange. At the regional level, bi-annual regional workshops are held to connect all Water Funds in Latin America. Current WFs have over 120 local partnerships across 8 countries. The LAWFP systematically collects lessons learned from new and operating WFs and organizes knowledge exchanges at the biannual summit for hundreds of internal and external stakeholders. Trainings, workshops and exchange of lessons learned are systematically incorporated across the summit's agenda.

WF Toolbox

TNC has completed a WF Toolbox. It is a comprehensive, multimedia, interactive web-product to provide guidance and resources needed to fill a capacity gap. The Toolbox offers authoritative recommendations on how best to scope, design, operate, and monitor a WF. The Toolbox is an opportunity to further synergize the capacity of TNC staff and partners across the world. The results of this work benefit people, nature, and the TNC by:

- Reducing WF advocates' reliance on a single organization by providing robust guidance tools and by building an active Community of Practice that is comprised of WF experts;
- Synthesizing the wealth of existing knowledge held by TNC staff and partners involved in WFs and fostering knowledge sharing with third parties; and

- Formalizing standards for best practice in WF creation that could eventually be attached to training and incentives.

The toolbox effort will help set up another indicator to measure the impact of this Program and the GEFs support for WFs. As third parties use the WF Toolbox to establish WFs, the impact, scaling and leveraging of resources because of this Program will grow in the LAC and globally

11. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPs, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

GUATEMALA

As part of NAP, Guatemala has made progress in the creation of its own National Climate Change Law (2013), placing within it the priority of developing the National Plan for Mitigation and Adaptation to Climate Change (PNCC). This plan is in its last phases of approval by the National Council on Climate Change chaired by the Presidency of the Republic. The PNCC incorporates a series of actions to improve the information, planning and management of water resources, from the scenario of temperature increase and the decrease in rainfall up to 20% by 2050. The actions of TNC in support of the local WF, are framed in the principles of the MDGs and PNCC.

In addition, the work to support the actions of the WF, particularly those aimed at protecting the forest remnants of the GMR (including the improvement of some protected areas, public and private) and the restoration actions of corridors, contribute to the formation of the "Green Belt of the RMG", as a territorial operational tool of the National Biodiversity Strategy and consolidation of the Guatemalan System of Protected Areas (SIGAP). This National strategy responds directly to the guidelines of the International Convention and its guidelines expressed in the NBSAPs and the principles of Aichi. It is important to mention that the WFs work in Guatemala has a strong relationship with some of the Strategic Objectives of the NBSAPs. Objective 2: Awareness and Appreciation mentions that work should be done in order to generate information on uses and services of biodiversity. The WF has advanced in building information on biodiversity in the region (bird inventory, plant inventory) and expect that this information can help generate awareness among landowners but also among the rest of the society. Also, the WFs field implementation is expected to showcase productive alternatives that can consider conservation but also productivity of the ecosystem, that other stakeholders can consider as options for improving their own livelihoods. The WFs work aligned with Objective 3: Sustainable productive landscapes and territorial planning for conservation, has involved working with private corporations (who have been donors) to promote the sustainable use and conservation of biodiversity. TNC expect that it can also provide some of the municipalities involved with valuable tools for territorial planning. Objective 4: Restoration of biological diversity and its ecosystem services has been perhaps the objective most in line with current work. TNC expects to continue with actions in locations deprived of forest cover that are important not only for our main objective of reducing surface runoff but also for biodiversity restoration and conservation, promoting the concept of 'bio-cultural landscapes' where we can promote the interactions between biological and cultural diversity, based on sustainable and culturally appropriate development

CURITIBA:

Brazilian National Climate Change Adaptation Plan (NAP) was listed in a Ministerial order (#150) and its Actions Plans (NAPAs) are arranged through 11 Sectoral themes (Agriculture, Water Resources, Food and Nutritional Security, Biodiversity and Ecosystems, Cities, Disaster Risk Management, Industry and Mining, Infrastructure, Vulnerable Populations, Health and Coastal Zones). Originally, adaptation was part of the Climate Change National Policy's Action Plans, arranged by other sectoral classification. Biodiversity national strategies are listed in the National Biodiversity Politics Implementation Action Plan (PAN-Bio, Brazilian NBSAP).

The Curitiba WF is aligned with these two main plans, considering the use of natural infra structure (specially through vegetation restoration and protection, and best practices on soil management) as a drive to help to prevent water unavailability for Curitiba's Metropolitan Region inhabitants in near future. And the use of natural infrastructure needs to be defined under an Ecosystem Based Approach, as we are facing climate change effects in Brazil Southern Region.

For the NAP, TNC's Curitiba WF activities have direct link to Agriculture, Water Resources, Biodiversity and Ecosystems, Food and Nutritional Security. Disaster Risk Management and Vulnerable Populations Sectoral Plans. For the PAN-Bio, activities and goals proposed to Curitiba WF can contribute to priorities and guidelines components (consolidated activities 10, 13 and 16 of Biodiversity Knowledge; 5 of Biodiversity Conservation, 4, 14 and 15 of Biodiversity Impacts Monitoring, Evaluation, Prevention and Mitigation).

CALI

The WF program in Colombia aligns with the country's NAP (PNACC) including some of the prioritized actions identified such as the use of mechanisms for water resource management that internalize variability and climate change in the key watersheds of the country.

Another prioritized action that WFs monitoring and adaptation activities may contribute to includes the National Indicator System. WF objectives in line with the country's planned adaptation measures of the PNACC include land use change, ecological restoration and source water protection, and the implementation of adaptation actions. Cali Water Fund will support restoration/protection of key ecosystems responsible for the water provision in the city of Cali, such as Paramos and High Andean Forest, aiming to reduce anthropogenic pressures and maintain natural ecosystems in adequate conditions and reduce vulnerability given extreme events. Ecosystems based adaptations measures promoted by the WF will consider City of Cali planning guidelines about watershed management and monitoring systems will be set up to consistently follow up on impacts in water quality and water quantity, and socioeconomic conditions in beneficiary communities.

Colombia's NBSAP (PANB) allows the implementation of the country's CBD strategy and put in practice its Integrated Management of Biodiversity and Ecosystem Services (PNGIBSE) policies to pursue Aichi targets. Among the aligned targets with WF activities include the national plan to increase protected areas, restoration and protection of key ecosystem services including water related. Cali Water Fund will closely work with Farallones National Park, key area where most of the water sources of the city of Cali are located (National parks agency is already a Water Fund partner). Actions expected to be supported by the Water Fund include strengthen Farallones National Park by providing financial and technical assistance to reduce pressures (land use change) by working with local communities located in the Natural Park buffer areas.

A parallel funding Program to this Proposal seeks to strengthen the Ecosystem-Based Adaptation (EBA) component of WFs. Those efforts will directly contribute to Colombia's efforts along Target 15 by contributing to building resilience and using EBA as an effective strategy also aligned with the PNACC.

MENDOZA

TNC's work in Argentina is new and set to begin with the WF. Research is ongoing on plans and conventions in order to lay the groundwork for the Mendoza WF to align in the most effective manner.

Mendoza is one of the 23 provinces and the autonomus city of Buenos Aires. As a federal country, the provinces follows the laws sanctioned by the National Congress, among them and related with Biodiversity and Wetlands conservation are: the Convention on Biological Diversity (Law 24375), Convention on International Trade in Endangered Species of Wild Fauna and Flora (Law 22344); Ramsar Convention (Law 23919). In relation with Climate Change, Argentina supports under the 24295 Law of the United Nations Convention on Climate Change, Kyoto Protocol (Law 25438) and the Environmental General (Law 25675) that support among other regulations, the minimum budgets for the achievement of a sustainable and adequate management of the environment, the preservation and protection of biological diversity and the implementation of sustainable development. Law 24701 supports the International Convention against desertification. In particularly the Mendoza Province create, under the Environmental Secretary the resolution N°399/2008, the Climate Change Agency that propose, among different goals and under hydrological resources, the recommendation and assistance in the adoption of 33

adaptation measures to predict and regulate the behavior of the hydrological cycle dependent on the system of Andean basins and glaciers in the province of Mendoza, improving their use in order to maintain the provision of water to urban areas in expansion, prevent the degradation of soils, avoid the loss of biodiversity and moderate the impacts that would occur on productive activity, in particular on the development of agriculture and viticulture.

SANTIAGO

As the WF begins to take shape in Santiago, that program's objectives are consistent with the NAP. Among the objectives of the WF are promotion of sustainable productive practices for the adaptation to climate change in biodiversity and the maintenance of ecosystem services, and the strengthening of the National System of Protected Areas and implementation of measures to adapt to climate change at the level of ecosystems and species.

Alignment with the National Climate Change Adaptation Plan for Biodiversity also exists principally through the design and development of a monitoring network for terrestrial biodiversity and aquatic both continental including high Andean wetlands. Additionally the preservation of high Andean wetlands as an adaptation measure to improve or maintain freshwater availability and quality.

In line with the National Climate Change Adaptation Plan for freshwater resources, the WF will educate people by promoting the culture of water conservation in the community and actions for the efficient use of the resource, and the sustainable management of water resources, which allows adequate protection of the quantity and quality of water.

The National Strategy for Climate Change and Vegetation Resources led by the National Forestry Corporation (CONAF) and the Ministry of Agriculture, which recognizes climate change impact on Chile's hydrological resources. The WF work also aligns with the climate change adaptation research program in the Maipo watershed led by the Universidad Catolica's Global Change department and financed by Canada's International Development Research Centre. This is a project that TNC has collaborated over the last few years.

Additionally, Santiago is one of the Rockefeller Foundation's 100 Resilient Cities and a C40 platform Innovator City. Santiago's Metropolitan Municipality has recently launched the Santiago Resilient Strategy. Among the objectives of this strategy are to increase protected areas within the region and to design and implement a Water Fund

12. M & E Plan. Describe the budgeted monitoring and evaluation plan.

Monitoring Results and Evaluation: project monitoring and evaluation will be conducted in accordance with idb and gef procedures, at three levels: (i) project outcomes and impacts as stated in the projects' results framework; (ii) delivery of project outputs in accordance with the annual operating plan (aop); and (iii) monitoring of project implementation and performance through two project evaluations.

The executing agency (tnc) will prepare reports on progress and the results of the activities of the program. the monitoring and evaluation arrangements will include: (i) the procurement plan; (ii) the program execution plan; (iii) the annual work plan; (iv) annual verification of fulfillment of the targets established in the results matrix; and (v) semiannual reports that will contain: (a) activities during the period, progress in their execution, problems and solutions; (b) evaluation of the results matrix, the procurement plan, the annual work plan, and the risk matrix; and (c) analysis of the project monitoring report, for which it will evaluate the fulfillment of targets for the output and outcome indicators included in the results matrix. it will evaluate the execution of the current period and planning for the next six-month period.

Two evaluations are planned for the project: a mid-term evaluation, after 1.5 years of project execution or when 50% of idb/gef contribution has been disbursed, whichever comes first, and will analyze progress with respect to outcome and output indicators, the relevance of actions to control execution risk, and identify the pertinent adjustments in order to achieve the objectives. the final evaluation will take place after 90% of the resources³⁴

have been disbursed and will focus on the overall achievement of results and the perceived impact of the project, as well as fulfillment of the project's objectives. **COMPONENT 4 OF THE PROJECT CONTAINS THE US \$50,000 SET ASIDE FOR THE M&E ACTIVITIES.**

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. Record of Endorsement¹⁵ of GEF Operational Focal Point (S) on Behalf of the Government(S): (Please attach the *Operational Focal Point endorsement letter(s)* with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Ms. Angelica Maria Mayolo Obregon	Head of International Affair Office	MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT	03/08/2018
Mr. Carlos Fernando Coronado Castillo	Vice Ministro de Recursos Naturales y Cambio Climatico	MINISTERIO DE AMBIENTE Y RECURSOS NATURALES	02/14/2018
Mr. Miguel Stutzin	GEF Operational Focal Point	MINISTRY OF ENVIRONMNET	02/16/2018

¹⁵ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies¹⁶ and procedures and meets the GEF criteria for a medium-sized project approval under GEF-6.

Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Juan Pablo Bonilla IDB-GEF Executive Coordinator		03/26/2018	German Sturzenegger	2026233332	germanstu@iadb.org

¹⁶ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF, and CBIT

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (*Applicable only to newly accredited GEF Project Agencies*)

For newly accredited GEF Project Agencies, please download and fill up the required GEF Project Agency Certification of Ceiling Information Template to be attached as an annex to this project template.

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

Attached to project submission

ANNEX B: CALENDAR OF EXPECTED REFLAWS (if non-grant instrument is used)

Provide a calendar of expected reflaws to the GEF/LDCF/SCCF/CBIT Trust Funds or to your Agency (and/or revolving fund that will be set up)