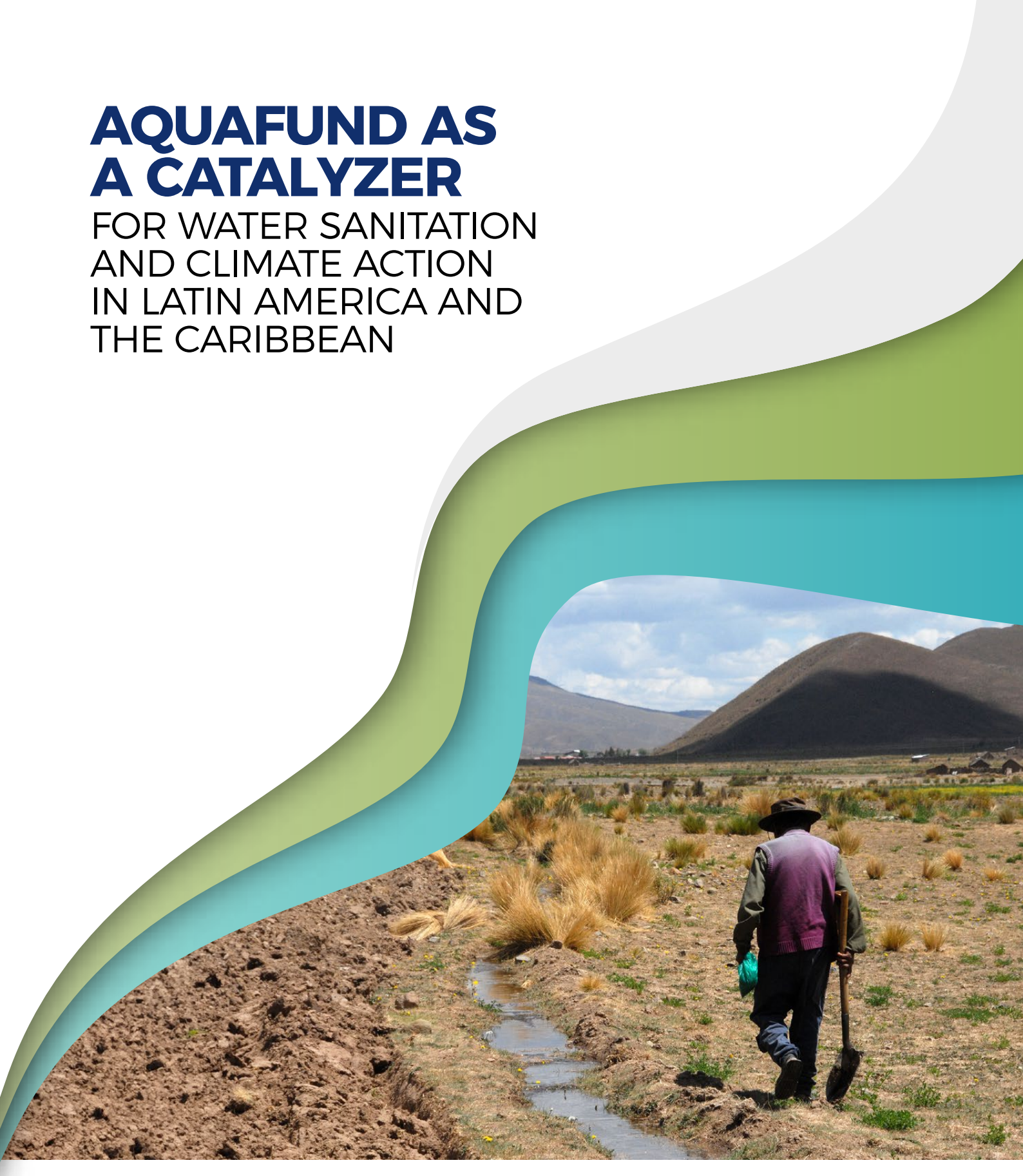
AQUAFUND AS A CATALYZER

FOR WATER SANITATION AND CLIMATE ACTION IN LATIN AMERICA AND THE CARIBBEAN



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AQUAFUND AS A CATALYZER FOR WATER SANITATION AND CLIMATE ACTION IN LATIN AMERICA AND THE CARIBBEAN

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Inter-American Development Bank
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This document has been financed through the AquaFund Multi-Donor Fund, a fund of the Inter-American Development Bank for water and sanitation supported by the Spanish Agency for International Development Cooperation (AECID, by its Spanish acronym), the Austrian Ministry of Finance, the Swiss Cooperation through the State Secretariat for Economic Affairs (SECO), and the Swiss Agency for Development and Cooperation (COSUDE), and the PepsiCo Foundation.

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PREFACE

Water plays a pivotal role in sustaining ecosystems, strengthening economies and improving the quality of life of communities around the globe. In the Latin America and the Caribbean (LAC) region, which holds 30 percent of the world's freshwater resources, these ties are particularly evident. Water is not only an important resource for the region, but also a catalyst for sustainable growth.

However, as the world is increasingly witnessing the rapidly accelerating effects of climate change, challenges surrounding water availability, quality and distribution are further exacerbated. From droughts that parch fertile lands to floods that inundate vulnerable communities, the impacts of climate change are vividly illustrated through the lens of water.

As a donor committed to supporting sustainable development and climate resilience, Austria greatly welcomes this timely report, which delves into the intricate relationship between water and climate action in the LAC region and explores how effective management of water can serve as a catalyst for sustainable and equitable growth in the region. The report also showcases how the Inter-American Development Bank – IDB's AquaFund, together with its development partners, has successfully fostered transformative solutions that benefit communities, economies and ecosystems alike since 2008. Furthermore, it also sheds light on the crucial role of multilateral actors, such as the IDB, in building and disseminating knowledge on this global challenge. We look forward to continuing our long-standing partnership with the IDB on this urgent issue.

Elisabeth Gruber

Director – International Financial Institutions
Ministry of Finance, Austria

IDBStrategy+

In 2023, the IDB Group approved a new institutional strategy to maximize the scale and impact of its work, called *Transforming for Scale and Impact* (IDBStrategy+), which provides a roadmap for guiding the IDB Group over the next seven years (2024-2030), aligning with the world's 2030 Agenda for Sustainable Development.

The new IDBStrategy+ selectively chooses to prioritize three critical objectives in line with a new vision for the region, which are:

1. Reducing poverty and inequality.

2. Addressing climate change.

3. Bolstering sustainable growth.

With regards to addressing climate change, the IDB Group is dedicated to combating it through initiatives such as striving for zero deforestation in the Amazon, curbing greenhouse gas emissions, preserving nature and biodiversity, and strengthening countries' climate resilience and adaptation capabilities, including disaster risk management.

Within the new context of the IDBStrategy+, and its focus on climate change and increasing both impact and scale of the IDB Group through innovative ways to approach financial goals, this publication becomes more relevant than ever because of the importance of the AquaFund role as a catalyst of climate finance.

Latin America and the Caribbean (LAC) is a privileged region in terms of water, accounting for 30 percent of the world's freshwater resources (The World Bank, 2013). Water plays a pivotal role in the population's health and quality of life. Water is also the basis for the economic growth of the region.

Key exports, such as coffee, meat, mining or tourism, depend entirely on water. More than 70 percent of agricultural production in LAC is supplied by rainwater, and around 60 percent of the electricity comes from hydroelectric sources (Villalobos et al., 2017). However, extreme events combined with water scarcity could threaten the economic growth of Latin America soon.

First, even counting many freshwater resources, water availability remains one of the crucial issues in the Region. A study conducted by the Inter-American Development Bank (IDB) on the availability of water resources considering climate scenarios and the path of socioeconomic development[1] shows that a hundred years from now, the Region's problem with water scarcity will be due to population growth and economic development, which implies an increase in the consumption and demand of water and biodiversity services. There are over 140 cities that are growing at a faster population rate than megacities, and this population is expected to double in 20 years. In addition to the exponential growth, the LAC region is very vulnerable to the effects of climate change, with an increase in intensity and frequency in droughts and floods (UN, 2020).

Over **140** cities are growing at a faster population rate than megacities in the Region

1 Shared Socioeconomic Pathways. *Modelaje multisectorial regional integrado* (GCAM-LAC).

Second, not only are droughts and floods becoming more common, but they are also becoming more severe. Extreme events in the Region, such as severe droughts, have been increasingly common lately. For example, La Paz-El Alto, in Bolivia, suffered the worst drought in history in 2017 (Martinez, 2017). The historic drought in Sao Paulo in 2014-2016 left millions in danger. The Dry Corridor in Central America is experiencing one of the worst droughts of the last 10 years, with over 3.5 million people in need of humanitarian assistance (UN, 2020). The diminishing water availability in specific areas means a higher concentration of certain minerals and pollutants, which would be harmless if the quantity of water were standard but can impose a threat to public health when the water levels are low.

The costs related to extreme events are increasing. A warming planet makes weather patterns more destructive, with a significant increase in natural disasters in the Region. About 90 percent of all-natural disasters are related to water; 43 percent of all documented natural disasters since 1995 have been floods (UNDRR, 2017). Climate change damages in the Region could cost $100 billion annually by 2050 (Martinez, 2017). Moreover, the International Labor Organization (ILO) estimates that 2.5 million LAC jobs could be lost to heat stress alone by 2030 (Hirsch, 2019).

For example, in Central America, storm seasons have been relentless in the past few years. Already struggling under the economic toll of COVID-19, the developing region was battered by Hurricane Eta in early November 2020, and one week after, with no time to recover, Hurricane Iota hit. The latest numbers indicate that 4.6 million people were affected and 1.3 million children needed urgent support. This shows the enormous costs of climate-induced sea level rises, storm intensity and frequency, heat stress, water shortages, agricultural losses, and disease outbreaks.

In sum, water availability, combined with increasing extreme events in the region, are the two main sources of concern for Latin America's economic growth and safety in the near future. In this context, AquaFund (AQF) has played a leading role in financing and providing technical expertise for water management, adaptation and mitigation policies to generate more resilient economies in the region.

In the following sections, this report aims to address the upcoming topics:

1. **A Snapshot of Climate Finance Tracking at the IDB (Inter-American Development Bank)**
2. **The AquaFund and Climate Financing (2018-2022)**
3. **The AquaFund Actions in Climate Change Mitigation and Adaptation**
4. **The AquaFund's Contribution to Climate Governance and Finance**
5. **Future opportunities for AquaFund and Climate Finance, and the IDB's Climate Change Action Plan (CCAP) for the upcoming years (2021-2025)**

This report targets the period between 2018 and 2021 as one of the capitalization periods of the AquaFund.

1 Climate Finance Tracking at the IDB

The increased efforts to tackle the effects of global warming were recognized in 2016, when countries around the world ratified the Paris Agreement to reinforce their commitment to ensure the availability of financing for climate action. While climate finance has reached record levels, the action is still well below what is needed in a 1.5˚C scenario.

Climate Policy Initiative studies estimate a required investment between $1.6 trillion to $3.8 trillion for mitigation and adaptation activities per year globally, to be on track to control global warming below 1.5˚C. However:

Only **$546** billion are invested

80 % of these resources are invested in mitigation practices

and only **20 %** in adaptation activities (Buchner et al., 2019)

Even worse, **80 %** of these resources come from industrialized countries to invest in their own countries (energy and transport sectors)

Only **20 %** is invested in developing countries, which are the most vulnerable to climate change

The IDB Group has also committed to climate change mitigation and adaptation actions in the development projects they finance

The IDB Group's Climate Change Action Plan (CCAP) for 2021–2025 understands the need for all countries to reach its commitments to net-zero emissions by 2050 (IPCC - Intergovernmental Panel on Climate Change, 2018), by bringing together public, private and innovative actions.

The IDB Group has also committed to climate change mitigation and adaptation actions in the development projects they finance, and have agreed to track it through the Multilateral Development Banks (MDB) Climate Finance Methodology. Tracking climate finance is not an easy task, and for that reason, in 2016, a group of Multilateral Development Banks (MDB) adopted the Climate Finance Tracking Methodology. The MDB methodology is a common approach that quantifies MDB financial flows which support climate change mitigation and adaptation activities, and has been used by the Bank for monitoring its climate finance in loans and Technical Cooperations (TCs).

The MDB Climate Finance Methodology classifies mitigation finance as the volume of resources dedicated to projects or activities that intend to reduce, limit, or sequester greenhouse gas (GHG) emissions. The methodology is based on a list of activities (see Annex I)

compatible with low-emission pathways. Therefore, the focus is the type of activity executed and not its purpose, the origin of the financial resources, or its actual results. The following sectors offer opportunities for climate mitigation finance:

Wastewater Treatment

Solid Waste Management

Cross-cutting issues supporting mitigation policies/planning/ action plans/institutions dedicated to mitigation activities

On the other hand, adaptation finance is the volume of resources in projects or activities that aim to lower the current or future risks or vulnerabilities posed by climate change. The methodology for adaptation finance tracking is driven by an analysis of the local context of vulnerability and the nature of the proposed adaptation measures. Thus, the resulting climate finance estimations derive not from an exact, mathematical calculation but from an assessment that entails a certain degree of subjectivity. Annex II illustrates project vulnerabilities in the water and sanitation sector by climate hazard without intending to be an exhaustive list of vulnerabilities.

2 The AquaFund's Contribution to Climate Finance

Intending to increase the financing of climate change-related projects, AquaFund established in its Result Framework 2018-2021 a climate change financing target of 30 percent, aligned with the IDB's institutional goal. This would be tracked with the MDB's Climate Finance Methodology.

Figure 1 below shows the percentage of climate financing relative to the total amount of the projects supported by AquaFund from 2018-2022, based on the MDB methodology.

When considering the previous period – between 2009 and 2015 –, and applying the Climate Finance Methodology to the portfolio at that time, it was found that:

The portion of climate finance in operations financed by the AquaFund was at an annual average of **18%**

12% is the annual average to which this rate dropped over the 2016–2018 period.

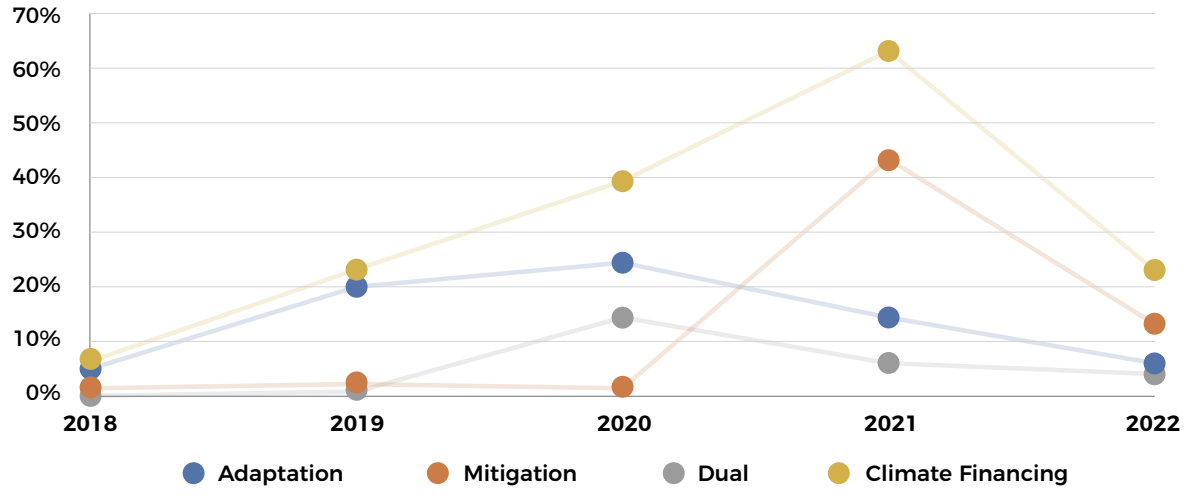
The latter raised concerns, given the many opportunities for mitigation and adaptation actions in the Fund portfolio, and considering the inextricable link between Water and Climate.

The AQF team analyzed the Fund's portfolio and found some project documents did not reflect sufficient levels of disaggregation among activities to enable the identification of specific mitigation and adaptation activities, and their respective costs. Moreover, project teams have different views on what activities were considered for climate finance instead of those considered exclusively for development finance. In 2019, the AQF team worked on improving this aspect with the projects' teams, which resulted in a significant and rapid increase in climate finance to 41 percent of resources financing climate change activities by the Fund in the 2019 approved portfolio.

As shown in Figure 1, the percentage of climate financing has increased steadily since 2018, which represents a 6 percent total funding of AquaFund, reaching its highest point in 2021 to 63 percent and a deep decline of 23 percent in 2022.

These changes are still being analyzed so that improvement measures can be taken to stabilize it to the committed 30 percent.

Figure 1 - AquaFund's Climate Finance



Beyond climate finance tracking, climate change is fully embedded in the IDB Water and Sanitation Division Sector Framework, and the AquaFund's strategic and operation work, both in the day-to-day projects and in specific initiatives such as:

1. The Optimal Sanitation
2. The Water Security Program
3. Transboundary Waters
4. Solid Waste
5. Circular Economy

Concrete actions will be presented in the following sections.

AquaFund has also played a key role in leveraging international funds to water and its link to climate change. AquaFund's capacity to mobilize climate finance, both from internal and external sources, has reached co-financing levels of more than $3 million yearly from climate funds within the Bank's active portfolio. This financing comes from the Bank's internal climate funds, such as:

1. The Ordinary Capital Strategic Development Program for Sustainability (SUS)
2. The Accelerator Multi-Donor Trust Fund (ACL)
3. The Sustainable Energy and Climate Change IDB Special Program (SCI)
4. The Emerging and Sustainable Cities Program (ESC)

In addition, the AQF support has helped to mobilize international climate funds, such as financing from the Global Environment Facility (GEF) to scale up interventions like the CREW, Water Funds, and the Pantanal special initiatives. Moreover, AQF's support to the Water Funds has been vital to access financing from the International Climate Initiative (IKI), the largest source of climate funding from the Government of Germany. In 2020, resources allocated to the Pantanal and the Amazon region began mobilizing funds from the Green Climate Fund (GCF). This shows how the Fund is a catalyzer, bringing climate finance to the water and sanitation sector.

Over $3 million annually in co-financing from climate funds is mobilized by AquaFund within the Bank's active portfolio, showcasing its strong ability to attract climate finance from both internal and external sources

3 The AquaFund Actions in Climate Change

Extreme events related to water and climate change, such as floods and droughts, are the primary channel through which the impacts of climate change will be felt on the world economy, human health, river basins and biodiversity. The effects from extreme events and climate change can be addressed based on two main policy actions:

The AquaFund aims to mainstream climate change issues in its portfolio through all its thematic areas

1 Adaptation

Climate change adaptation policies and interventions involve adjusting systems and practices to minimize harm, or take advantage of opportunities presented by changing climate conditions. It focuses on resilience and reducing vulnerability.

2 Mitigation

In contrast, climate change mitigation aims to reduce or prevent the emission of greenhouse gases, targeting the root causes of climate change.

The AquaFund attempts to mainstream climate change issues in its portfolio through all its thematic areas, including activities that support client countries on:

- **Water Security**
- **Solid Waste**
- **Wastewater Management**
- **Disaster Risk Management Issues**

Additionally, its support includes multiple levels of governments, such as national adaptation plans for vulnerability assessments, and building adaptive capacity or specific local policies to reduce greenhouse gases (GHGs) derived from solid waste and wastewater management.

In the following sections, we will focus on two main policy actions through which AquaFund has addressed extreme events: mitigation and adaptation interventions.

AquaFund's Adaptation Interventions in the Region

Water Security

In 2019, the AquaFund funded the Water Security Strategy for Latin America and the Caribbean[2], to support countries in the implementation of an integrated vision of water and ecosystems to slow down climate change, and at the same time, to help them adapt to the inevitable effects of climate change. This Strategy also aims at sustaining the provision of water services for all social and economic activities in an environmentally sustainable manner. Today, the Water Security Strategy has become the backbone of the Bank's interventions to adapt to climate change, and has taken the form of an "umbrella program." Many emblematic initiatives, such as Water Funds, Transboundary Waters and HydroBID, are framed within the Water Security program, and are a vital opportunity to innovate on water security policies in the region.

The Water Security Strategy has become the backbone of the Bank's interventions to adapt to climate change, and has taken the form of an "umbrella program"

The AQF support to this umbrella Water Security program has consisted of developing multi-sector investment plans at basin, national and transboundary levels. To date, with $2.7 million[3], AQF has leveraged over $9.5 million from external partners to finance the development of investment programs in:

10 National Watersheds of the Region, Located at:

3 Transboundary Watersheds:

Source: Strategy for the Water Security for Latin America and the Caribbean

2 RG-T3158 Strategy for the Water Security for Latin America and the Caribbean. Link: https://www.iadb.org/en/project/RG-T3158

3 RG-T3352 Integrated Watershed Management and Support for the Design and Operation of Water Infrastructure: https://www.iadb.org/en/project/RG-T3352 - RG-T3476 Facing the Water Security Challenge: Developing Water Security and Drought Management Plans for LAC Countries: https://www.iadb.org/en/project/RG-T3476 - RG-T3294 Management of Water Resources in the Pilcomayo River Watershed: https://www.iadb.org/en/project/RG-T3294 - BR-T1448 Support the Implementation of the Water Resources Management Plan for the Paraguay River Hydrographic Region (PRH Paraguay): https://www.iadb.org/en/project/BR-T1448 - RG-T3776 Regional Action Plan for Drinking Water, Basic Sanitation and Solid Waste Management Organization of the Amazon Cooperation Treaty: https://www.iadb.org/en/project/RG-T3776

AQF also supports the program by promoting the use of science and technology to develop data, strengthening governance and capacity building, and promoting innovative interventions for the implementation of nature-based solutions. AquaFund supports watershed modeling tools, known as HydroBID tools, and their Support Center (CeSH) in LAC. HydroBID is a major initiative focused on data and science to address Water Security, and the HydroBID Support Center has become a reference center for Water Security and Climate Resilience in the region.

HydroBID provides a regionally consistent tool for water resources analysis across Latin America, and currently supports 26 member countries to enhance the Sustainable Management of Water Resources by identifying potential new loans in the region for sustainable infrastructure. The watershed modeling tools offered by HydroBID includes:

26
member countries are currently supported by HydroBID to enhance the Sustainable Management of Water Resources

Hydrology and Climate Analysis Modules
To estimate freshwater availability in the Region.

Economic Analysis
To estimate the costs and benefits of adaptive measures for better decision making.

In addition, the HydroBID Support Center (CeSH) offers customized tools, analytical services, training, education, and specific solutions for the integral management of water resources. The CeSH has four lines of action:

1. Regional, national and local support
2. Operational support
3. Development and Knowledge
4. Community of Practice

Based on these lines of action, the CeSH has promoted the strengthening of integrated and intersectoral water resources management through specialized advisory, technological tools, modeling, and technical capacity development in the Region.

Within the scope of the Bank's Transboundary Water initiative, the AQF has financed the development of technical studies to preserve water-dependent ecosystems in the two largest and most important biodiversity hotspots of the Region:

1. THE PANTANAL

It is **one of the largest wetlands** in the world, which produces ecosystem services valued at up to **$112 million** a year

The National Water Agency of Brazil (ANA, by its Portuguese acronym) developed an **Investment Plan for the Pantanal** estimated at **$500 million**

It covers an area of **158,000km²** within the territories of **Bolivia, Brazil** and **Paraguay** (Alpizar, et al., 2020)

Wetlands have been shown to provide a local **cooling effect of at least 1-3°C** (Filho et al., 2017)

AQF has supported the ANA-Brazil in implementing strategic actions for the Pantanal, to leverage **an investment program that will benefit Brazil, Paraguay and Bolivia**

It faces a series of environmental pressures that include:

- Rapid changes in land use
- Alteration of water flows
- Contamination from industrial, mining and agricultural activities
- Human pollution due to poor low wastewater treatment

These resources have unlocked over **$8.4 million** from external donors like:

The Global Environment Facility (GEF): to develop the first transboundary diagnosis and strategic plan in the Pantanal

The Latin America Investment Facility (LAIF, by its Spanish acronym): to develop the water balance of the Pantanal basin

2. THE AMAZON

The world's largest tropical forest is facing unprecedented development pressures:

- Changes in land use that lead to large-scale deforestation
- Oil and gas exploration and extraction
- Dam construction
- Mining
- Pollution

The **Amazon Cooperation Treaty (ACT)** gave rise to the Amazon Cooperation Treaty Organization (ACTO) to help the region improve the integrated management of water resources and reduce the structural inequality gaps, with emphasis on water quality through strategic planning in the provision of:

- **Drinking water services**
- **Basic sanitation**
- **Solid waste management**

In 2020, **AQF financed the first transboundary Technical Cooperation**[4] for the Amazon region through the Cooperation Treaty Organization (ACTO)

ACTO leveraged additional resources from key climate partners like the GEF and the Green Climate Fund (GCF)

In parallel, the **IDB is leading the first institutional fund** for the Amazon

4 RG-T3776 Regional Action Plan for Drinking Water, Basic Sanitation and Solid Waste Management Organization of the Amazon Cooperation Treaty. Link: https://www.iadb.org/en/project/RG-T3776

Other relevant AquaFund interventions related to adaptation policies and water security include actions focused on the basins of the main rivers in the Region:

Management of Water Resources in the Pilcomayo River Watershed[5]: it updated the master plan for the Pilcomayo River Watershed in Argentina to provide and satisfy the demands of water for the population in the short-medium and long term, by improving the resilience of the system and strengthening the transboundary cooperation.

The Water Resources Management Plan for the Paraguay River Hydrographic Region[6]: it consolidated a detailed multisectoral master plan which includes water, sanitation, irrigation, tourism, land protection and conservation.

The Master Plan for the Integrated Management and Sustainable Use of the Magdalena River Basin[7]: it supported the implementation of a water resources management system for the large Magdalena River basin, and included a support system for monitoring the navigable channel through HydroBID.

AquaFund also focuses efforts on coastal areas, such as with the project of Water Security for the Coastal Area of the Department of Canelones[8], which developed studies to ensure the provision of potable water services with excellence and efficiency projected to 2045 on the Gold Coast of Uruguay, to meet the emerging needs of population growth for the next 20 years.

Extreme Events: Droughts and Floods

The AquaFund has played a significant role in adapting to the effects of water-related extreme events and climate change in the Region.

A key aspect for flood control is drainage systems, and AquaFund has supported this area. For example, through the Technical Cooperation Urban Water Management and Sustainable Urban Drainage Systems, that assisted countries in:

AquaFund has played a significant role in adapting to the effects of water-related extreme events and climate change in the Region

5 RG-T3294 Management of Water Resources in the Pilcomayo River Watershed. Link: https://www.iadb.org/en/project/RG-T3294

6 BR-T1448 Support the Implementation of the Water Resources Management Plan for the Paraguay River Hydrographic Region (PRH Paraguay). Link: https://www.iadb.org/en/project/BR-T1448

7 CO-T1598 Implementation of Water Resource Management Systems in Support of the Master Plan for the Integrated Management and Sustainable Use of the Magdalena River Basin. Link: https://www.iadb.org/en/project/CO-T1598

8 UR-T1220 Water Security for the Coastal Area of the Department of Canelones. Link: https://www.iadb.org/en/project/UR-T1220

- Managing urban waters more efficiently
- Designing green infrastructure projects for flood control
- Strengthening their capabilities in sustainable drainage

The AquaFund also supported a Technical Cooperation that designed Water Security and Drought Management plans for LAC countries by tailoring a drought management plan to improve resilience capacity in the project area.

AquaFund has also contributed to the management of droughts in the region with several Technical Cooperations[9] to strengthen the capacity building of prevention and management of water crisis in Sao Paulo, Brazil; and the implementation of the Integrated Water Management Program in Urban Areas[10] to help manage drought effects in El Alto, Bolivia.

The AquaFund also supported a Technical Cooperation that designed Water Security and Drought Management plans for LAC countries

9 BR-T1351 Strengthening of Capacity Building for Prevention and Crisis Management Hidricas by the State of Sao Paulo. Link: https://www.iadb.org/en/project/BR-T1351

10 BO-T1319 Support for the Preparation and Implementation of the Integrated Water Management Program in Urban Areas. Link: https://www.iadb.org/en/project/BO-T1319

AquaFund's Mitigation Interventions in the Region

The AquaFund also offers a multi-faceted approach to climate change mitigation, focusing on reducing environmental impacts through the management of food loss and waste, solid waste, and the promotion of circular economy practices across Latin America and the Caribbean. Projects like the Food Loss and Waste Reduction Program[11] tackle food loss and waste by implementing innovative pilot projects and policy development strategies. This not only improves food security but also aligns with global sustainability goals, and directly contributes to the reduction of greenhouse gas emissions from food production, transport and decomposition.

Aiming to further enhance these mitigation efforts, AquaFund has financed projects[12] with a focus on municipal solid waste management by encouraging the adoption of circular economy policies and the development of digital platforms for better waste data management. These projects aim to transition municipalities towards sustainable waste practices, increasing recycling rates, and integrating informal waste workers into formal economies, thus reducing landfill use and associated emissions. The approach is holistic, aiming at both environmental sustainability and social inclusiveness.

Projects like Structuring of the Public-Private Partnership Modality for Landfill Management in Northern Haiti showcase the AquaFund's commitment to improving waste management infrastructure and sanitation systems

Additionally, projects like Structuring of the Public-Private Partnership Modality for Landfill Management in Northern Haiti[13] and Improved Waste Management and Sanitation Systems in Uruguay[14] showcase the AquaFund's commitment to improving waste management infrastructure and sanitation systems. By establishing partnerships for landfill construction and enhancing waste management models, these projects not only mitigate flood risks and environmental contamination but also promote resource efficiency and waste valorization. Through these comprehensive strategies, the AquaFund directly contributes to climate change mitigation by fostering a transition towards more sustainable and resilient waste management practices in the Region.

11 RG-T3229 Food Loss and Waste Reduction Program for Latin America and the Caribbean. Link: https://www.iadb.org/en/project/RG-T3229

12 CO-T1598 Implementation of Water Resource Management Systems in Support of the Master Plan for the Integrated Management and Sustainable Use of the Magdalena River Basin. Link: https://www.iadb.org/en/project/CO-T1598

13 UR-T1220 Water Security for the Coastal Area of the Department of Canelones. Link: https://www.iadb.org/en/project/UR-T1220

14 UR-T1255 Improved Waste Management and Sanitation Systems. Link: https://www.iadb.org/en/project/UR-T1255

4 AquaFund's Contribution to Governance and Finance

AquaFund not only provides Technical Cooperation assistance to mitigate and adapt to climate change, but also offers a long-term approach by improving governance capabilities in the Region. As an example, in 2017, the AquaFund co-financed a Technical Cooperation[15] to promote the design and monitoring of Water Funds (WFs). These organizations design and promote financial and governance mechanisms, articulating public, private, and civil society actors to contribute to:

- Water Security, through the Integrated Water Resources Management (IWRM) at the watershed level
- The implementation of Nature-Based Solutions (NBS)

By bringing together public, private and civil society organizations, the WFs help to build agreements and a common understanding about the main problems faced within the watershed, or area of influence defined by the Fund (UN, 2021). Also, the Water Funds initiative includes the development of:

In 2017, the AquaFund co-financed a Technical Cooperation to promote the design and monitoring of Water Funds (WFs), responsible for designing and promoting financial and governance mechanisms, and articulating public, private, and civil society actors

15 RG-T2751 Water Funds: A Conservation/Climate Resilient Model for Stressed Watersheds in Latin America and the Caribbean. Link: https://www.iadb.org/en/project/RG-T2751

- Hydrological and environmental studies
- Socioeconomic, legal analysis
- Demonstrative projects (NBS on on-site)

To date, these resources have unlocked more than $16 million from partners like the FEMSA Foundation (by its Spanish acronym), The Nature Conservancy, the Global Environmental Facility (GEF), and the International Initiative of Climate (IKI). These resources have reached impressive numbers in terms of:

To date, Water Funds resources have unlocked more than $16 million from key partners

Implementation of conservation activities in **more than 305,000 hectares**

Involvement of more than **200 public and private organizations**

More than **97 million families** benefited from supplies provided by the watersheds intervened by the initiative

Additionally, the implementation and structuring of Resilience and Restoration Bonds (Resbonds)[16] in the LAC region, which helped assist national and local governments by mobilizing new sources of financing to fund climate resilient water and sanitation sector investments through the utilization of innovative financial instruments. Finally, an intervention in Brazil[17] that resulted in strengthening the regulation in the field of Integrated Water Resources Management aligned with the Sustainable Development Goals (SDGs).

16 RG-T3605 Support to the Structuring and Implementation of Resilience and Restoration Bonds (Resbonds) in the LAC Region. Link: https://www.iadb.org/en/project/RG-T3605

17 BR-T1450 Strengthening the Regulation in the Field of Integrated Water Resources Management Aligned with the Sustainable Development Goals. Link: https://www.iadb.org/en/project/BR-T1450

5 AquaFund's Future Opportunities

Supporting actions and seizing opportunities for the AquaFund in the Region require for the Fund to continue mobilizing resources towards adaptation and mitigation activities, either through strengthening public policies, building capacity, supporting mainstreaming of climate change considerations in master plans and the design of sustainable infrastructure, or using nature-based solutions as a cost-efficient measure for adaptation to climate change. Events such as the COVID-19 pandemic or extreme hydroclimatic events are not isolated occurrences; therefore, AquaFund will continue to be a valuable tool to support our client countries in building more resilient infrastructure and services, and contributing to build a more sustainable development for the Region.

Specifically, AquaFund supports the implementation of the sector's Water Security Strategy. One of the biggest challenges for the water and sanitation sector, and in general for the economic development of the countries in the Region, is water security. Hydroclimatic events (such as droughts and floods), exacerbated by climate change, are increasingly frequent and intense. Resilient infrastructure plays a key role, along with non-structural measures, to, on one hand, prevent and/or mitigate the effects of these events (water infrastructure); and, on the other hand, the design of the infrastructure itself that, when considering climate change, can prevent infrastructure failures and

One of the biggest challenges for the water and sanitation sector, and in general for the economic development of the countries in the Region, is water security

service interruptions, ensure the continuity of services, and avoid considerable economic damage to a country's economy.

Soon, AquaFund aims to continue supporting mitigation and adaptation efforts to alleviate the effects of extreme events in the Region, the efficient and effective use of water resources and its impact on the sustainable development of the Region, and providing financial support for interventions aiming at achieving water security.

AquaFund has supported interventions such as Too Good to Waste, with a total leverage of $3.5 million. This initiative aims to accelerate the implementation of solid waste management (SWM) projects to reduce methane emissions. A key aspect of this intervention is evidencing the link between transitioning into a circular economy in waste management and mitigating climate change impacts. AquaFund's future interventions also aim to strengthen the Innovation and Sciences for Water Security. For example, the RG-T4288 regional intervention aims to protect the Amazon Biodiversity within the framework of the Amazon Regional Observatory (ORA, by its Spanish acronym). The objective of this TC is to support the Amazon Cooperation Treaty Organization (OTCA, by its Spanish acronym) in the development of analytical capabilities and Knowledge Products complementary to its Amazon Regional Observatory, with focus on applied research products in the interconnection between the axes of water security, forest management and protection of biodiversity.

AquaFund will continue its efforts to leverage more finance for water and climate change, aiming for a more resilient Latin America and the Caribbean.

AquaFund aims to continue supporting mitigation and adaptation efforts to alleviate the effects of extreme events in the Region, the efficient and effective use of water resources and its impact on sustainable development, and providing financial support for interventions focused on achieving water security

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This document has been financed through the AquaFund Multi-Donor Fund, a fund of the Inter-American Development Bank for water and sanitation supported by the Spanish Agency for International Development Cooperation (AECID, by its Spanish acronym), the Austrian Ministry of Finance, the Swiss Cooperation through the State Secretariat for Economic Affairs (SECO), and the Swiss Agency for Development and Cooperation (COSUDE), and the PepsiCo Foundation.

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ANNEX I

ACTIVITIES ELIGIBLE FOR CLASSIFICATION AS CLIMATE MITIGATION FINANCE

Applicable through Dec. 31, 2020. Slight clarifications are likely during 2019 and 2020 but no substantive changes until 2021, as agreed among MDBs (Multilateral Development Banks) due to the establishment of baselines and targets according to the joint MDB methodology.

Category	Sub-Category	Eligible Activities
1. Renewable Energy	1.1 Electricity Generation	Wind power
		Geothermal power (only if net emission reductions can be demonstrated)
		Solar power (concentrated solar power, photovoltaic power)
		Biomass or biogas power (only if they result in net reductions in emissions, considering production, processing and transportation)
		Ocean power (wave, tidal, ocean currents, salt gradient, and so on)
		Hydropower plants (only if net emission reductions can be demonstrated)
		Renewable energy power plant retrofits
	1.2 Heat Production or other Renewable Energy Application	Solar water heating and other thermal applications of solar power in all sectors
		Thermal applications of geothermal power in all sectors
		Wind-driven pumping systems or similar applications
		Thermal applications of sustainably produced bioenergy in all sectors
	1.3 Measures to Facilitate Integration of Renewable Energy into Grids	New, expanded and improved transmission systems (lines, substations)
		Storage systems (battery, mechanical, pumped storage) that facilitate the integration of renewables, or increase renewable energy production
		New information and communication technology, smart-grid and mini-grid

Category	Sub-Category	Eligible Activities
2. Lower-Carbon and Efficient Energy Generation	2.1 Transmission and Distribution Systems	Retrofit of transmission lines, or substations and/or distribution systems to reduce energy use and/or technical losses, including improving grid stability/reliability (in case of capacity expansion, only the portion of the investment that is reducing existing losses is included)
	2.2 Power Plants	Thermal power plant retrofit to fuel switch from a more GHG-intensive fuel to a different, and less GHG-intensive fuel type[1]
		Conversion of existing fossil-fuel-based power plants to cogeneration[2] technologies that generate electricity in addition to providing heating or cooling
		Energy-efficiency improvement in existing thermal power plant
3. Energy Efficiency[3]	3.1 Energy Efficiency in Industry in Existing Facilities	Industrial energy efficiency improvements through the installation of more efficient equipment, changes in processes, reduction of heat losses and/or increased waste heat recovery and/or resource efficiency
		Installation of cogeneration plants that generate electricity in addition to providing heating/cooling
		Replacement of an older facility (old facility retired) with a more efficient facility
	3.2 Energy Efficiency Improvements in Existing Commercial, Public and Residential Buildings	Energy efficiency improvement in lighting, appliances and equipment
		Substitution of existing heating/cooling systems for buildings by cogeneration plants that generate electricity in addition to providing heating/cooling
		Retrofit of existing buildings: architectural or construction changes that enable reduction of energy consumption
	3.3 Energy Efficiency Improvements in the Utility Sector and Public Services	Energy efficiency improvement in utilities and public services through the installation of more efficient lighting or equipment
		Rehabilitation of district heating and cooling systems
		Reduction of heat loss in utilities and/or increased recovery of waste heat
		Improvement in utility-scale energy efficiency through efficient energy use and loss reduction, or resource efficiency improvements
	3.4 Vehicle Fleet Energy Efficiency	Existing vehicles, rail or boat fleet retrofit or replacement (including the use of lower-carbon fuels, electric or hydrogen technologies, and so on)
	3.5 Energy Efficiency in New Commercial, Public and Residential Buildings	Use of highly efficient architectural designs, energy-efficient appliances and equipment, and building techniques that reduce building energy consumption, exceeding available standards, and complying with high energy efficiency certification or rating schemes
	3.6 Energy Audits	Energy audits of energy end-users, including industries, buildings and transport systems

1 Excluding replacement of coal by coal.

2 In all cogeneration projects, energy efficiency is required to be substantially higher than separate production of electricity and heat.

3 The general principle for brownfield energy efficiency activities involving the substitution of technologies or processes is that: (i) the old technologies are substituted well before the end of their lifetime, and the new technologies are substantially more efficient; or, (ii) the new technologies or processes are substantially more efficient than those normally used in greenfield projects.

Category	Sub-Category	Eligible Activities
4. Agriculture, Forestry and Land-Use	4.1 Agriculture	Reduction in energy use in traction (e.g., efficient tillage), irrigation, and other agricultural processes
		Agricultural projects that improve existing carbon pools (such as rangeland management; collection and use of bagasse, rice husks, or other agricultural waste; reduced tillage techniques that increase carbon contents of soil; rehabilitation of degraded lands; peatland restoration, and so on)
		Reduction of non-CO_2 GHG emissions from agricultural practices (for example, paddy rice production, reduction in fertilizer use)
	4.2 Afforestation and Reforestation, and Biosphere Conservation	Afforestation (plantations) and agroforestry on non-forested land
		Reforestation on previously forested land
		Sustainable forest management activities that increase carbon stocks or reduce the impact of forestry activities
		Biosphere conservation projects and restoration projects (including payments for ecosystem services) seeking to reduce emissions from the deforestation or degradation of ecosystems
	4.3 Livestock	Livestock projects that reduce methane or other GHG emissions (for example, manure management with bio-digesters and improved feeding practices to reduce methane emissions)
	4.4 Biofuels	Production of biofuels, including biodiesel and bioethanol (only if net emission reductions can be demonstrated)
5. Non-Energy GHG Reductions	5.1 Fugitive Emissions	Reduction of gas flaring or methane fugitive emissions in the oil and gas industry
		Coal mine methane capture
	5.2 Carbon Capture and Storage	Projects for carbon capture and storage technology that prevent the release of large quantities of CO_2 into the atmosphere from fossil fuel use in power generation, and process emissions in other industries
	5.3 Air Conditioning and Refrigeration	Retrofit of existing industrial, commercial and residential infrastructure to switch to a cooling agent with a lower global warming potential
	5.4 Industrial Processes	Reduction in GHG emissions resulting from industrial process improvements and cleaner production (for example, of cement or chemical), excluding carbon capture and storage

Category	Sub-Category	Eligible Activities
6. Waste and Wastewater	6.1 Wastewater	Portion of treatment of wastewater that reduces methane emissions (only if net GHG emission reductions can be demonstrated, and if not a compliance requirement to meet; for example, a performance standard or safeguard requirement)
	6.2 Solid Waste Management	Waste management projects that capture or combust methane emissions
		Waste to energy projects
		Waste collection, recycling, and management projects that recover or reuse materials and waste as inputs into new products, or as a resource (only if net emission reductions can be demonstrated)
7. Transport	7.1 Urban Transport Modal Change	Urban mass transit
		Non-motorized transport (bicycles and pedestrian mobility)
	7.2 Transport-Oriented Urban Development	Integration of transport and urban development planning (dense development, multiple land-use, walking communities, transit connectivity, and so on) leading to a reduction in the use of passenger cars
		Transport and travel demand management measures dedicated to reducing pollutant emissions, including GHG emissions (such as high-occupancy vehicle lanes, congestion charging/ road pricing, parking management, restriction or auctioning of license plates, car-free city areas, low-emission zones)
	7.3 Inter-Urban Transport	Railway transport ensuring a modal shift of freight and/or passenger transport from road to rail (improvement of existing lines or construction of new lines)
		Waterways transport ensuring a modal shift of freight and/or passenger transport from road or air to waterways (improvement of existing infrastructure or construction of new infrastructure)
	7.4 Infrastructure for Low Carbon Development	Charging stations and other infrastructure for electric vehicles, hydrogen or dedicated biofuel fueling
8. Low-Carbon Technologies	8.1 Products or Equipment	Projects producing components, equipment, or infrastructure dedicated to the renewable and energy efficiency sectors, or low carbon technologies
	8.2 Research and Development	Research and development of renewable energy or energy efficiency technologies, or low carbon technologies

Category	Sub-Category	Eligible Activities
9. Cross-Cutting Issues	9.1 Support to National, Regional or Local Policy, through Technical Assistance or Policy Lending	National, sectoral, or territorial mitigation policies/planning/ action plans/institutions dedicated to mitigation, such as NDCs (Nationally Determined Contributions), NAMAs, and plans for scaling up renewable energy
		Energy sector policies and regulations leading to climate change mitigation or the mainstreaming of climate action, such as energy efficiency standards or certification schemes; energy efficiency procurement schemes; renewable energy policies, power market reform to enable renewable energy
		Systems for monitoring the emissions of greenhouse gases
		Efficient pricing of fuels and electricity (such as subsidy rationalization, efficient end-user tariffs, and efficient regulations on electricity generation, transmission, or distribution, and in carbon pricing)
		Education, training, capacity building, and awareness-raising on climate change mitigation or sustainable energy or sustainable transport; mitigation research
		Other policy and regulatory activities, including those in non-energy sectors, leading to climate change mitigation or mainstreaming of climate action, such as fiscal incentives to low carbon vehicles, sustainable afforestation standards
	9.2 Carbon Finance	Carbon markets and finance (purchase, sale, trading, financing, and other technical assistance); includes all activities related to compliance-grade carbon assets and mechanisms
	9.3 Supply Chain	Measures in existing supply chains dedicated to improvements in energy efficiency, or resource efficiency upstream or downstream, leading to an overall reduction in GHG emissions
10. Miscellaneous	10.1 Other Activities with Net Greenhouse Gas Reduction	Any other activity, if agreed by MDBs, may be added to the Joint Typology of Mitigation Activities if the results of ex-ante GHG accounting (undertaken according to commonly agreed methodologies) show emission reductions that are higher than a commonly agreed threshold, and are consistent with a pathway towards low greenhouse gas emissions development

ANNEX II

PROJECT VULNERABILITIES IN THE WATER AND SANITATION SECTOR BY CLIMATE HAZARD

Certain hazards brought about or intensified by climate change are present throughout the Latin America and Caribbean region. The following table illustrates project vulnerabilities in the water and sanitation sector by climate hazard, without intending to be an exhaustive list of vulnerabilities:

Climate Hazard	System Impacts	Project Vulnerabilities
Sea-Level Rise and Storm Surge	Increased Flood Risk	Flooding may damage conveyance structures and/or disrupt operations directly and indirectly
	Saltwater Intrusion	• Reduced water quality • Additional treatment required, higher maintenance costs • Stress on treatment infrastructure
	Coastal Flooding	Physical damage to water and wastewater treatment facilities (direct and indirect disruptions such as power outages)
	Coastal and Storm Surge Flooding	• Flooding could physically damage pipes, increasing maintenance costs and causing leaks, or disrupting service • Saline water in collection and conveyance systems could reduce capacity, increase risks posed by untreated sewage discharge and degraded pipes
Increase in Precipitation or Increased Frequency of Extreme Precipitation	Increased Erosion, Turbidity, and Transport of Pathogens and Other Pollutants	Larger sediment loads may result in more rapid sedimentation of storage reservoirs
	Shorter, Higher Intensity Storms May Reduce Groundwater Recharge	Reduced reliability of water supply
	Increased Risk of Flooding	• Physical damage to water and wastewater treatment facilities (direct and indirect disruptions, such as power outages) • Physical damage to sewerage • Combined sewer overflow • Open-air storage tanks and basins exposed to potential contamination

Climate Hazard	System Impacts	Project Vulnerabilities
Temperature Increase	Increased Algae Bloom and Pathogen Levels in Bodies of Water; Reduced Dissolved Oxygen Levels	Reduced water quality, resulting in health impacts to local communities and deterioration of adjacent ecosystems
	Increased Evaporation and Glacial Melting; Decreased Seasonal Snow Cover	• Reduced reliability of water supply, increased competition for a limited supply • Increased losses of treated water due to evaporation from open-air storage tanks and basins • Additional water treatment is required due to minerals dissolved in melted glacial ice
	Increased Water Demand	Need for additional storage capacity
	Reduced Water Quality in Water and Wastewater Treatment Facilities	• Additional treatment requirements and higher maintenance costs • Stress on treatment infrastructure
Decreased Precipitation, Prolonged Drought	Reduced Streamflow and Inflows to Reservoirs and Aquifers	• Diminished effectiveness of extraction; increased pumping costs • Wastewater streams will be more concentrated, increasing treatment requirements and costs • Reduced reliability of systems; less water available for flushing and cleaning pit latrines and septic tanks
	Higher Concentration of Pollutants	Reduced water quality at extraction/source
	Altered Soil and Rock Conditions May Increase Ground Movement or Differential Settlement	Increased ground movement may damage buried assets, potentially causing leaks and disrupting service, and increased maintenance costs

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