

## **UNSG 2019 Climate Summit: proposal submission information.**

### **1. TITLE /HEADING**

Water Reserves as Ecosystem-based Adaptation Instruments for Latin America Countries.

### **2. Context and rationale**

Water is a strategic resource linked to the development of all nations. But, unsustainable development is placing pressure on water resources; by 2030, global demand for water is expected to increase by 50%. The combined effects of growing populations, rising incomes, and expanding cities will see demand for water rising exponentially, while supply becomes more erratic and uncertain due to climate change.

Water extractions and river basin modifications are increasing constantly without adequate consideration given to environmental and human needs. Evidence demonstrates growing degradation and loss of the adaptive capacity of many river basins in Latin America and around the world, due to disruptions in the hydrological cycle, over-extraction, and loss of ecosystem functions that sustain healthy freshwater ecosystems.

Around the world, securing water for people and nature is still a pending action and an extremely urgent issue. In Latin American countries, where only 10% of water resources have been allocated, securing a preventive provision of water for the environment offers a huge opportunity for immediate action, setting a new framework for future developments that guarantees water for nature and people.

### **3. An overview of the contribution**

The Water Reserve Initiative is a regional effort aimed at safeguarding freshwater to meet environmental needs now and in the future in Latin American countries. A “water reserve” is a science-based allocation policy that ensures a volume of water (i.e. environmental flow) that must constantly run freely through a river course to maintain the ecological functions of freshwater and coastal ecosystems that benefit millions of people.

The initiative aims to protect at least 30% of water flows in the region’s most important water producing areas such as the Amazon headwaters, Cerrado-Pantanal and the Mayan Rainforest. Securing water for people and nature will benefit 329 Ramsar sites in the next decade, and close to 200 million people, including river communities—often indigenous—important stewards of land and water resources in the region. Furthermore, Water Reserves contribute significantly to achieving the Sustainable Development Goals (SDG) as they secure water and ecosystem functions that sustain food security, good health and overall social wellbeing.

This initiative is currently underway in Mexico, and at the startup phase in Peru, Ecuador, Bolivia and Guatemala, and will expand to other five countries where WWF aims to promote this innovative mechanism and transform the way freshwater is managed in Latin America. Project expansion is envisioned, from Mexico to four countries in 2020 (Tier 1 countries) and scaled-up in 2025 to other five countries (Tier 2 countries) for a total of ten.

#### **4. How the contribution leverages living natural systems as a solution to avert climate change?**

A water reserve consists of a total water volume susceptible to concession in a basin, which is designated for an exclusive function, in this case for ecological protection. This water volume should remain and run freely in the environment and cannot be allocated for any use. Water reserves create a hydrological capacity (buffer) to cushion the impact of extreme events that would affect the hydrological cycle and therefore favor a resilient and less vulnerable management. Water reserves favor ecosystem resilience to adapt to new climate conditions.

#### **5. How might the contribution support both climate, mitigation and adaptation as well as other important co-benefits and social, economic and environmental outcomes in coming years. They may include: Reduction in carbon emission and carbon capture (GTonnes), Increasing climate resilience, Social impact (job increase; poverty reduction; Just transition, etc.), Net economic impact (total in US\$; how was it achieved?), Impact on realization of the 2030 Agenda for Sustainable Development (in particular SDGs 1,2,6,12,13,14,15,16), Food security, Minimising species extinction and ecological losses and fostering an increase of biodiversity.**

Water Reserves are a comprehensive contribution to SDGs. For poverty reduction, water reserves maintain ecosystem services that sustain and increase family income above poverty levels. Regarding food security, water reserves for the environment secure water for flood plain farmland, fishing and oyster production. For clean water and sanitation, water reserves maintain river and wetlands capacity to assimilate pollution and to transport clean water to scatter communities. As a climate action, water reserves strengthen water security as a sound adaptive capacity for biodiversity and society. They improve water access, connectivity, and capacity to deal with extreme events.

Water reserves is also a strong biodiversity conservation strategy, they strengthen natural protected areas, and are an opportunity to set upfront rules for infrastructure development. Thus, they contribute to water governance.

#### **6. Which countries and organizations are involved in the contribution?**

The Water Reserves Initiative builds on the Mexican experience where 50% of the nation's water is now protected by presidential decrees conserving water resources for the next 50 years. This is a unique experience in the world that was applied at a national level in Mexico, demonstrating that it is possible to develop a strong network of partners including government, local communities, NGOs, academic sector, private foundations and multilaterals, along with country-based scientific developments and capacities.

Currently, it is at the at the startup phase in Peru, Ecuador, Bolivia and Guatemala, where strong relationships between WWF and the government has been developed in each of the countries, particularly with the following policy making and regulatory water and environmental agencies:

Mexico: National Water Commission (CONAGUA in Spanish); Wetlands coordination of the Natural Protected Areas Commission (CONANP in Spanish).

Ecuador: Secretaria del Agua (SENAGUA) and Ministerio del Ambiente (MAE)

Perú: Autoridad Nacional del Agua (ANA); Ministerio del Ambiente (MINAM); Superintendencia Nacional de Servicios de Saneamiento (SUNASS); Pontificia Universidad Católica del Perú (PUCP)

Bolivia: Ministerio Medio Ambiente y Agua (MMAyA); Ministerio de Relaciones Exteriores, Departamental and Municipal Governments.

Guatemala: Ministerio de Ambiente y Recursos Naturales (MARN)

Since 2012, The Interamerican Development Bank (IDB) became a key supporter of the Mexican program through two Technical Cooperation Agreements (TCAs), and is interested to support a startup phase of this regional initiative.

**7. How have stakeholders (for example local communities, youth and indigenous peoples, where applicable) been consulted in developing the contribution?**

This contribution in LAC is at the early stages of the development, therefore local communities and indigenous people haven't been consulted. They will be consulted once the regions/watersheds for the establishment of a water reserve are selected. Other stakeholders such as decision makers from the water and environmental agencies of each of the countries, have been involved in early stages of developing the contribution.

**8. Where can the contribution be put into action?**

The Water Reserves initiative can be put into action at a national level, in any watershed with availability of water and low pressure for water users, and with high biological richness and conservation values. This framework offers an opportunity to innovate on allocation mechanisms according to each country needs, and then a strong guidance on developing/adjusting regulatory frameworks and building capacities in each country.

**9. How the contribution will be delivered? How will different stakeholders be engaged in its implementation? What are the potential transformational impacts?**

The contribution will be delivered as a national system of water reserves in each of the participant countries. Stakeholder engagement (decision makers, academics and communities) will be necessary at all stages of the contribution. Decision makers will set the proper regulations to ensure the establishment of the water reserve, academics and decision makers will be particularly involved in environmental flow estimates and other technical aspects, and decision makers and communities as part of the vigilance and monitoring.

The Water Reserves Initiative is about allocating water to the environment in low-stressed river basins. It represents a major conceptual shift for most water planners and government authorities as it transforms the traditional water management paradigm that considers water as a resource only for human needs into an approach that considers the environment's water needs first, rather than as an afterthought, shifting the perspective from risk to opportunity. Furthermore, the approach focuses on protecting the natural infrastructure that basins provide for storing and regulating water flow, rather than building reservoirs or other water storage solutions.

The Water Reserves Initiative offers a unique opportunity to implement a preventive water allocation for the environment that has the potential to trigger transformation of water management practice. This transformation considers not only planning for the short- or even medium-term - but recognizes that we also need to plan for the long-term now, since otherwise, we may be too late.

**10. Is this initiative contributing to other Climate Action Summit workstreams (industry transition; energy transition; climate finance and carbon pricing; infrastructure, cities and local action; resilience and adaptation; youth and citizen mobilization; social and political drivers; mitigation strategy)?**

The implementation of water reserves ensures the permanence of a volume of water in the environment that becomes a significant damping of natural and man-induced climate variability, particularly in the face of changes in water availability. Additionally, water reserves ensure the provision of diverse ecosystem services contributing to the reduction of vulnerability and increase the resilience of watersheds and their populations to the negative impacts of climate change.

**11. How does this contribution build upon examples of experience to date? How does the contribution link with different ongoing initiatives?**

This contribution is built upon Mexico's experience in implementing environmental flows as strategy for water resources conservation. For over 15 years, WWF Mexico and Mexico's National Water Agency, CONAGUA, have been working to build a strong Mexican water management framework – The National Water Reserves Program that aims to protect environmental flows (eflows) in 356 river basins by 2020. As of today, the government of Mexico has reserved water for the environment in nearly 300 river basins, which represents the conservation of almost 50% of Mexico's surface water.

The Water Reserves initiative has been considered a nature-based adaptation strategy. Its implementation is part of the commitments established by Mexico's federal administration 2014-2018, in the Special Climate Change Program (Strategy 2.6, action line 2.6.1). Internationally, it has been submitted to the Nairobi Work Program of the Climate Change United Nations Framework Convention, as a case study of ecosystems-based adaptation.

This is a regional initiative contributes to WWF's Freshwater Practice. As a startup for this contribution, WWF-Mexico launched a Regional Workshop on Water Reserves on June 2017, with close to 40 participants from WWF offices and government agencies linked to water management in Argentina, Bolivia, Chile, Colombia, Ecuador, Guianas, Guatemala, Mexico, Paraguay and Peru, and participants from WWF International's Water Practice, LAC Secretariat and WWF US Freshwater Program.

**12. What are the mechanisms for funding (with specific emphasis on potential for partnerships)?**

Funding for this initiative is based on WWF-Mexico IADB collaboration. WWF-Mexico has run its program for more than 10 years with a mix of funding sources. Particularly since 2012, IADB became a key supporter of the program in Mexico through two Technical Cooperation Agreements (TCA) requested by the Mexican Government and assigned to WWF as implementing organization. For this regional initiative, the IADB is interested to support a startup phase (2020 – 2025) and a larger

and more comprehensive funding strategy will be developed to complete a ten-year implementation process. It will aim to tap all potential private multilateral and bilateral funding sources, including the Global Environmental Facility (GEF), Global Climate Fund etc.

Since 2016, WWF-US, the LAC Secretariat and WWF-Mexico have invested resources to develop a preliminary assessment for this regional initiative, including a regional convening. Currently, Peru and Bolivia have been raised seed grants, to start developing working plans and for training processes with different stakeholders.

### **13. What are the means of stewardship, metrics for monitoring?**

Number of watersheds within a water reserve initiative, conserved water volumes, # of hectares of conserved natural protected areas and Ramsar sites (by ensuring ecosystem water needs), # of municipalities with a water reserve strategy.

### **14. What is the communication strategy?**

It will consist of a communication process with social networks and media, to reach a large variety of decision makers and general public, with a strong focus on local communities.

### **15. What are the details of proponents (indicating the degree of commitment among the countries and organizations that are named)**

The Water Reserve Initiative in Mexico was part of the National Water Plan 2014-2018, where it took the form of the National Water Reserves Program. Currently, there are conversations underway to define the future of the program with the current administration 2018-2024. There are positive prospects to continue the program and to adopt water reserves in 461 river basins, covering the entire country.

In Peru, the concept is considered of high interest. Environmental flows and wetland conservation in upper basins are mandatory by law, and the Peruvian Government is responsible for enforcing it. The water reserves concept is aligned with the Ministry of Environment strategy of conserving water for the environment, and is also a useful instrument for conservation in line with the climate change policies and the existing legal framework. The Water Management Authority (ANA) is quite interested in implementing a Water Reserves program in the country, and there have been conversations among WWF-Mexico, WWF-Peru and ANA to develop a working plan for the next years.

In Ecuador, the government is also very interested in be part of this regional initiative. A water reserves program is highly relevant, since the country has the legal framework, the necessary institutions, and environmental flow regulations in place, although these have only been applied in a few pilot sites. A water reserves program will benefit significantly from the solid experience gained through several years of implementing water funds across the country.

In Bolivia, it prevails the interest in the determination of methodologies to estimate environmental flows. This offers an interesting opportunity to continue working with the Bolivian authorities on determining e-flows, which would be instrumental in establishing a nation-wide water reserves program over the next years. WWF-Bolivia, is currently working at the startup phase with training

workshops and the development of a pilot project for e-flow estimation in a watershed in Santa Cruz.

Initiative lead contact: Mariana Nava – [mnav@wwfmex.org](mailto:mnav@wwfmex.org)