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CONAGUA
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WATER RESERVES PROGRAM

A strategy for adaptation to climate change

In recent years, the WWF–FGRA (Fundación Gonzalo Río Arronte I.A.P.) Alliance, in collaboration with the National Water Commission (CONAGUA), has developed a number of pilot-projects to determine environmental flow (e-flow) requirements and feasibility of implementation in Mexico. The results show that it is possible to strike a sustainable balance between water use and environmental conservation of flows. CONAGUA - a leader in the regional dialogue on water and climate change in Latin America – is advancing an agenda that is supporting the creation of a water adaptation community at a global scale. One of the principle messages in this dialogue is that the incorporation of an ‘environmental dimension’ in the water management process is imperative in order to reduce safeguard ecological functionality and effective adaptation to climate change.

Drawing on the broad experiences in the realm of e-flows, the WWF-FGRA Alliance

and CONAGUA intend to amplify this approach and have conducted a scoping study that identifies potential water reserves throughout Mexico. These water reserves are defined as watersheds with favorable conditions - high biological richness and high conservation values, availability of water and low pressure for water users - for ensuring ecological flows as stated under the National Water Law.

The study identified 189 basins where water reserves could be established (Map 1), nominated to be the main target of the **National Water Reserves Program**. The goals of the program are: i) establish a national system of water reserves; ii) demonstrate that water reserves ensure a healthy functioning of the water cycle, as well as the environmental services they provide; and iii) build capacity in the implementation of e-flows backed by official national guidelines throughout the country.



Lagoons and mangroves in the Marismas Nacionales Biosphere Reserve, Nayarit, Mexico. © Jaime Rojo / WWF

The benefits of water reserves are:

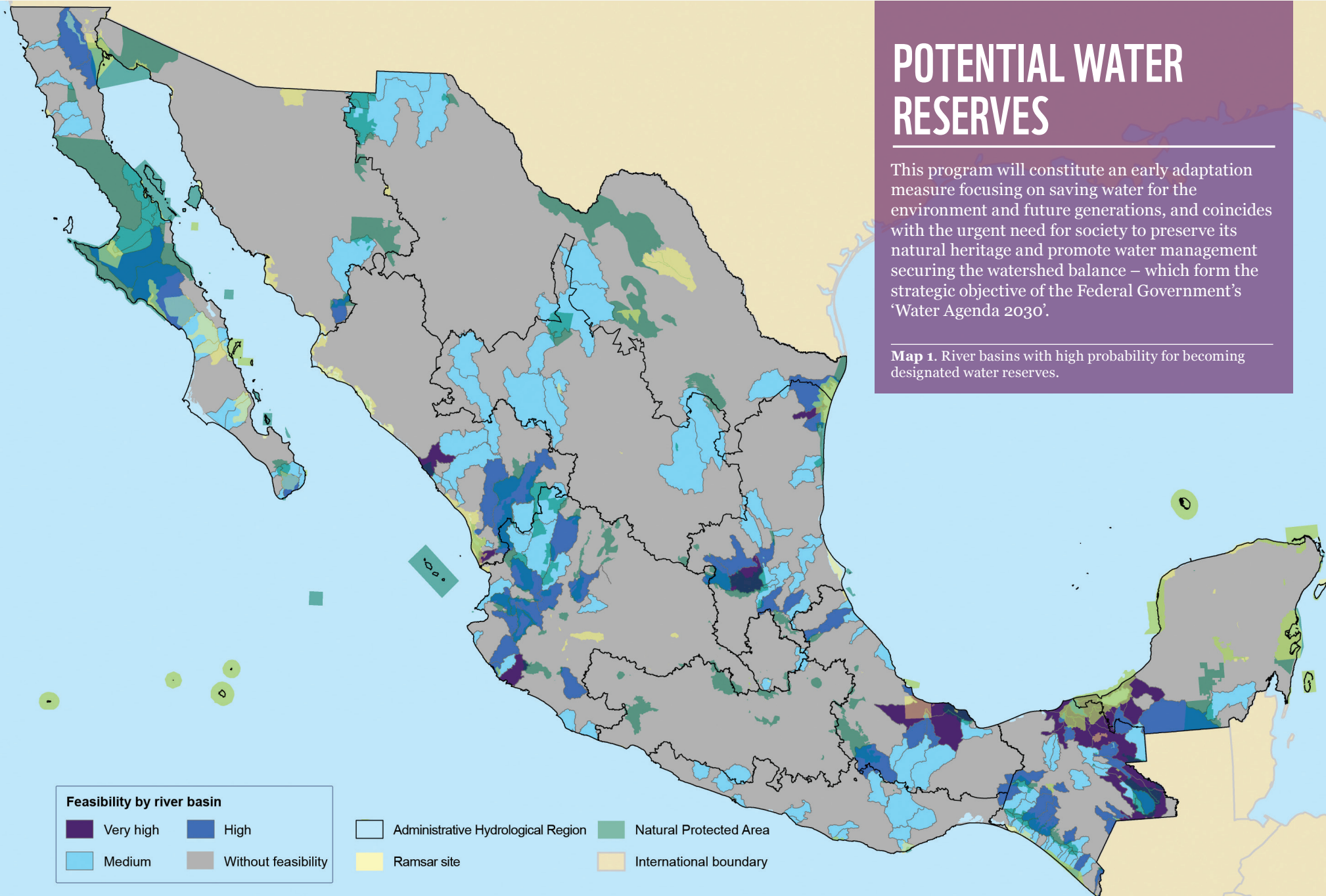
- Definition of sustainable limits on water availability, which foster the principle of saving water and managing the demand placed on this resource, and thus reducing risk from water scarcity and conflicts.
- Guarantee the connectivity of the entire basin and to conserve ecosystems and maintain environmental services such as storing, conducting and supplying water, improving water quality, and protection from extreme events.
- The introduction of integrated planning and management of both subterranean and surface water; especially in regions with little surface water, such as in the north of the country.
- The preservation or controlled release of peak flows to prevent the interruption of river channels, invasion of river beds, and as a consequence, diminish the risk against extreme events.
- Reinforcement of the strategy for the conservation of the nation's most important ecosystems and their environmental benefits: 97 Natural Protected Areas, 55 Ramsar sites, and additional 78,500 km² of river basins.

This new integrated system of water reserves includes representation of all types of hydrological zones, terrestrial ecoregions and freshwater ecosystems in order to guarantee resilience of ecosystems and society and prevent water shortages, and therefore create a dedicated strategy to adapt to the impacts of climate change.

POTENTIAL WATER RESERVES

This program will constitute an early adaptation measure focusing on saving water for the environment and future generations, and coincides with the urgent need for society to preserve its natural heritage and promote water management securing the watershed balance – which form the strategic objective of the Federal Government's 'Water Agenda 2030'.

Map 1. River basins with high probability for becoming designated water reserves.



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