



# Water Security – Facing the Challenge in Latin America

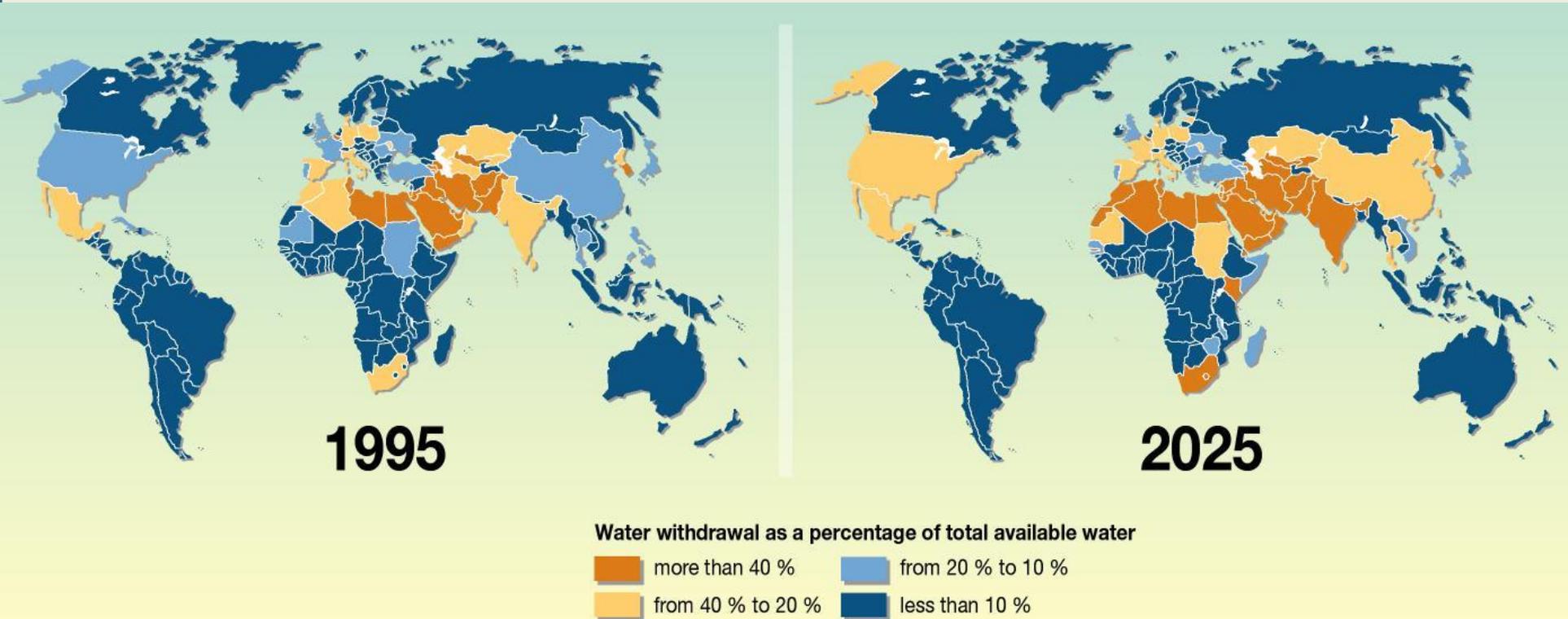
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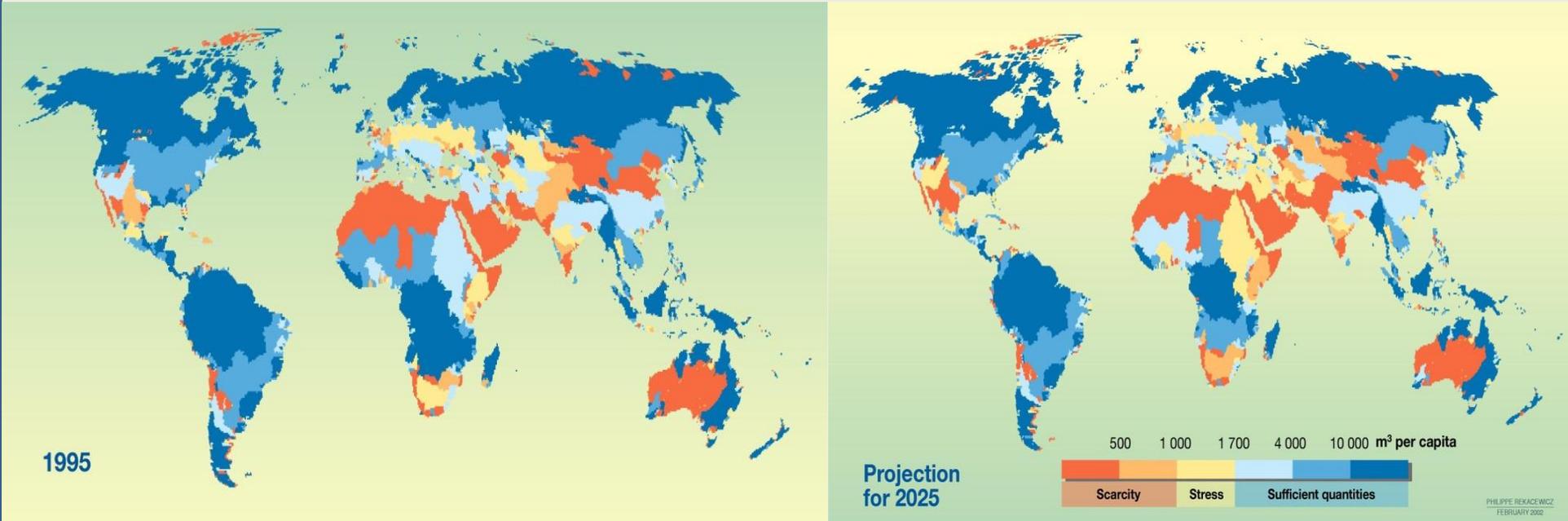
# Water Rich

31% of world's freshwater resources, 8% of the population



# One third already living in deserts or semi-arid areas

More people expected to live in water stressed areas



80% living in cities  
+ 60 cities over 1 million  
+ 600 M by 2030



# Demand Drivers



Economic growth



Food production

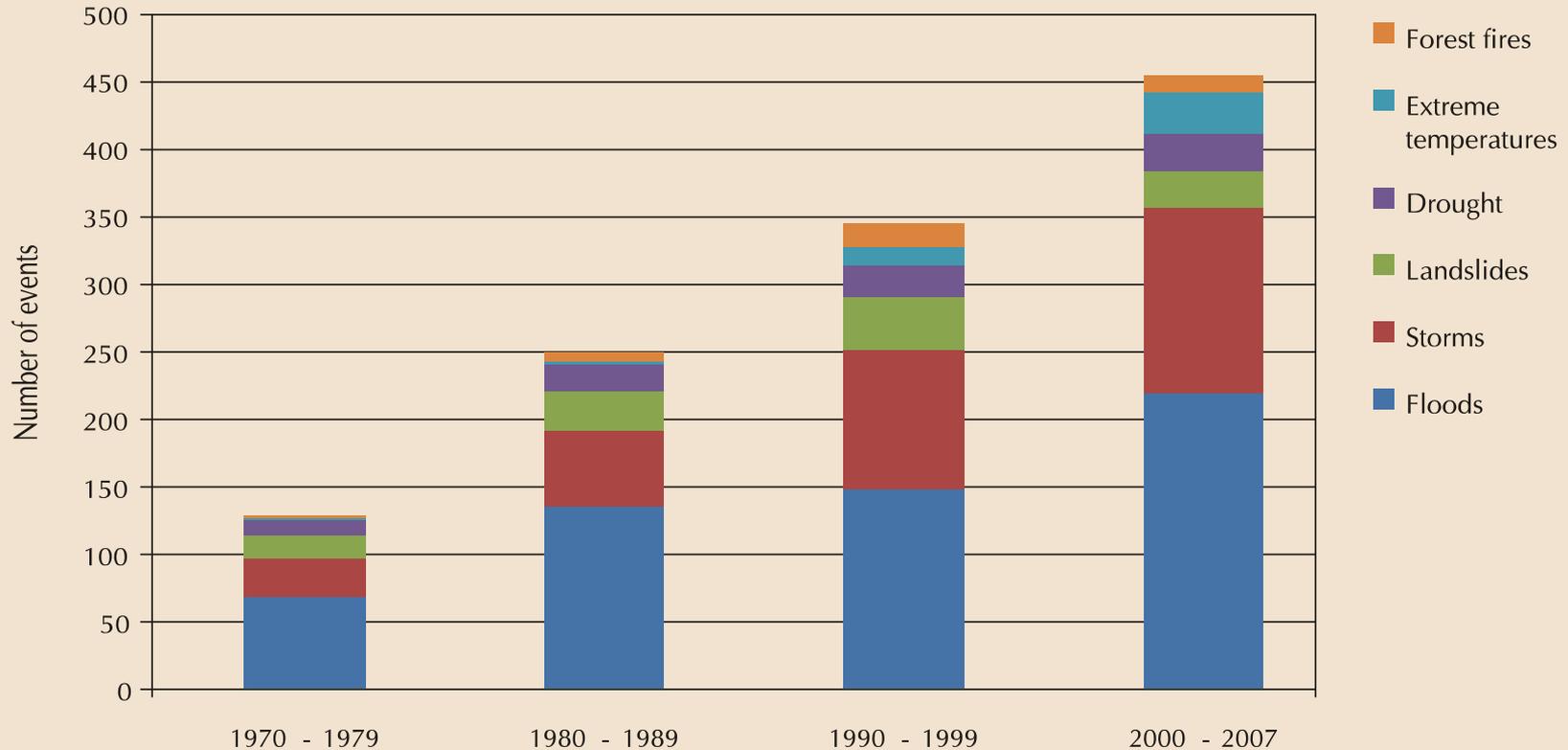


Energy generation

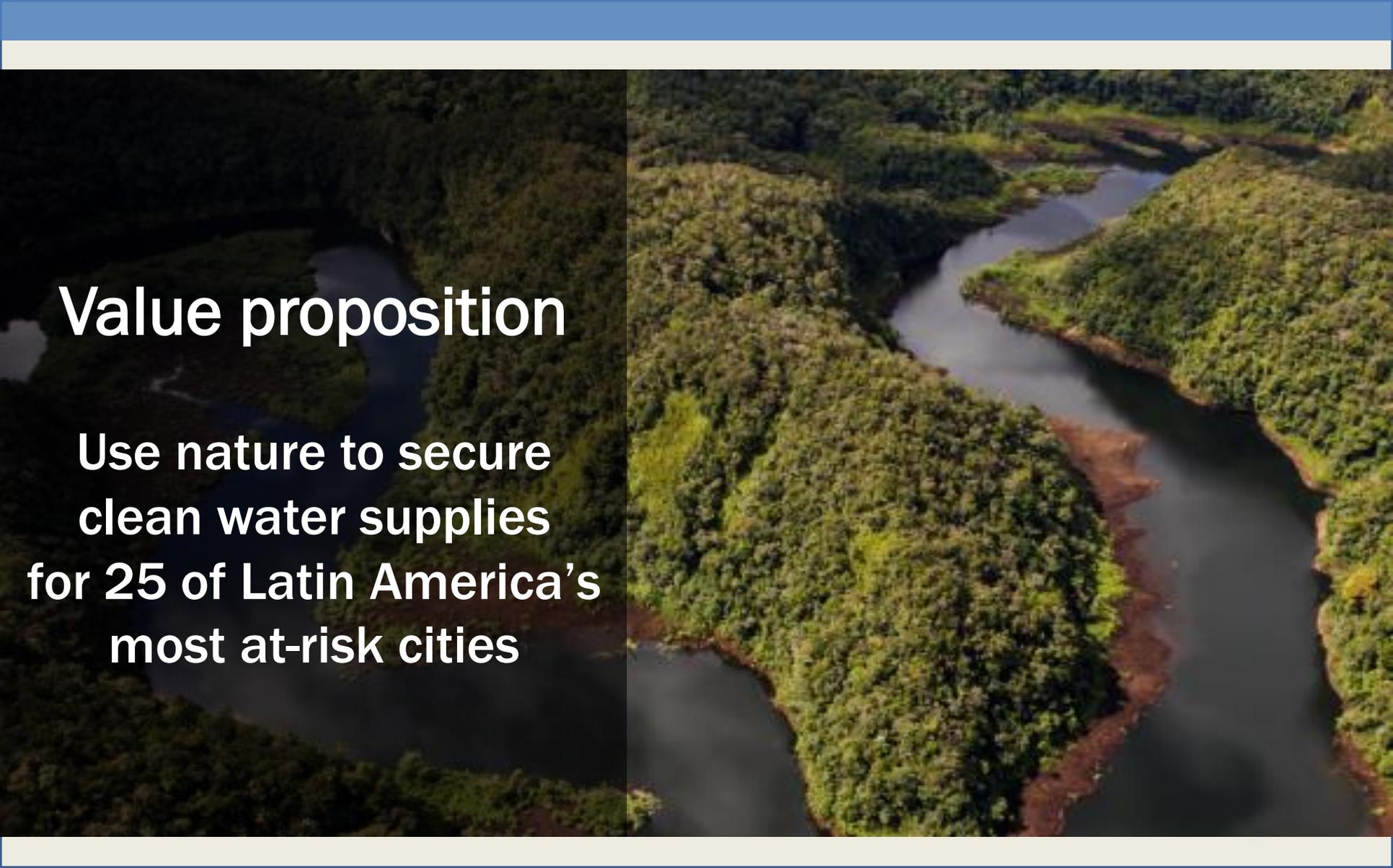
# Climate Change

## The Big Question

### Latin America and the Caribbean: Frequency of Hydrometeorological events, 1970-2007



Source: Prepared by UNEP with data from ECLAC, 2009a.

An aerial photograph of a river meandering through a lush, green forest. The river is dark and reflects the surrounding trees. The forest is dense and covers the entire landscape. The image is split vertically, with the left side being darker and the right side being brighter.

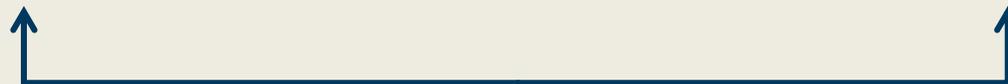
## **Value proposition**

**Use nature to secure  
clean water supplies  
for 25 of Latin America's  
most at-risk cities**

# What we are going to do

**Water Security Indicator**  
% Improvement

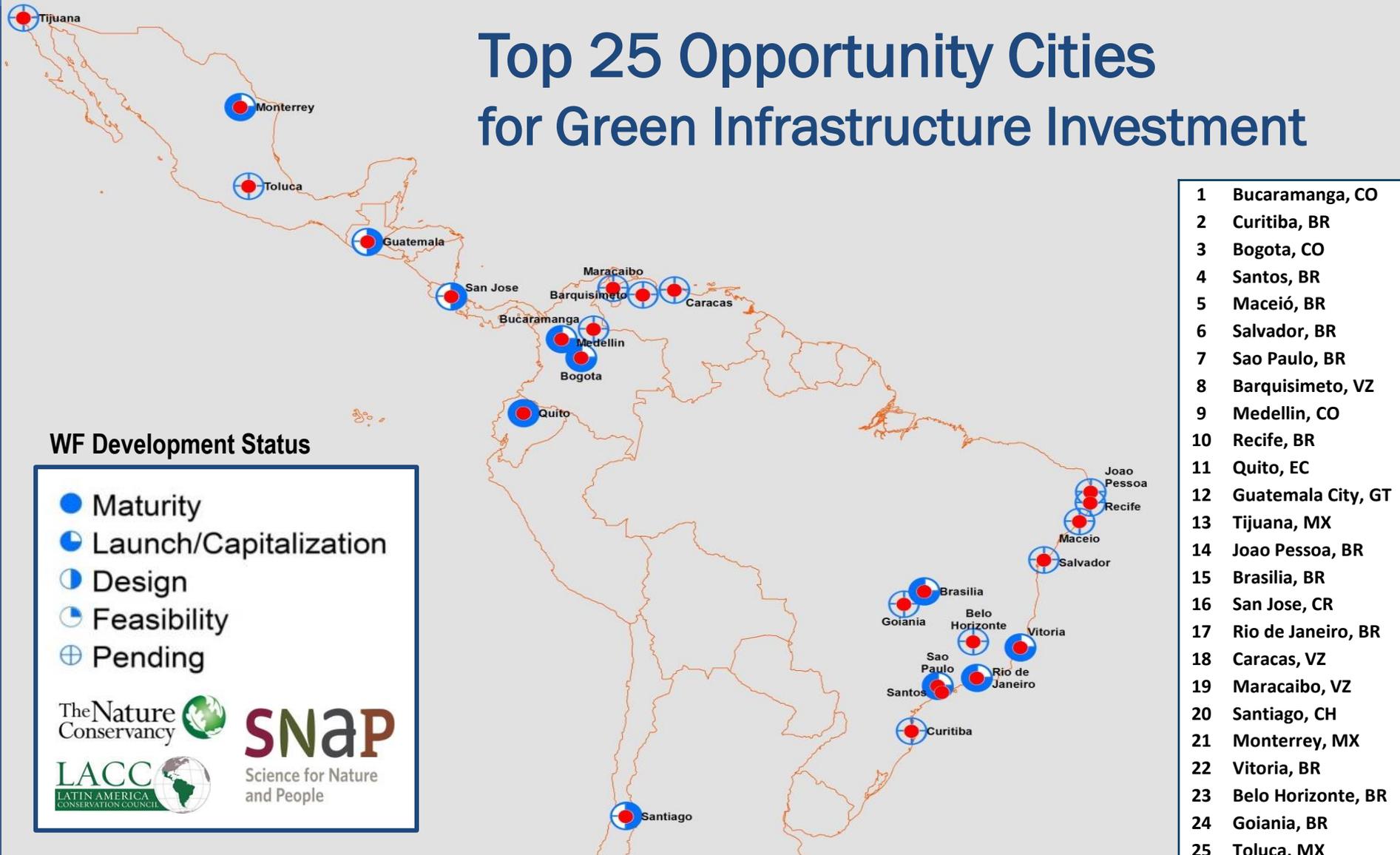
**Water Used in Production**  
% Neutralized as % of Production



**Water Funds**  
“Use nature to secure water  
supplies for 25 most at risk  
Lat Am Cities”

**Corporate Water Balancing**

# Top 25 Opportunity Cities for Green Infrastructure Investment



- 1 Bucaramanga, CO
- 2 Curitiba, BR
- 3 Bogota, CO
- 4 Santos, BR
- 5 Maceió, BR
- 6 Salvador, BR
- 7 Sao Paulo, BR
- 8 Barquisimeto, VZ
- 9 Medellin, CO
- 10 Recife, BR
- 11 Quito, EC
- 12 Guatemala City, GT
- 13 Tijuana, MX
- 14 Joao Pessoa, BR
- 15 Brasilia, BR
- 16 San Jose, CR
- 17 Rio de Janeiro, BR
- 18 Caracas, VZ
- 19 Maracaibo, VZ
- 20 Santiago, CH
- 21 Monterrey, MX
- 22 Vitoria, BR
- 23 Belo Horizonte, BR
- 24 Goiania, BR
- 25 Toluca, MX

## WF Development Status

-  Maturity
-  Launch/Capitalization
-  Design
-  Feasibility
-  Pending

The Nature Conservancy



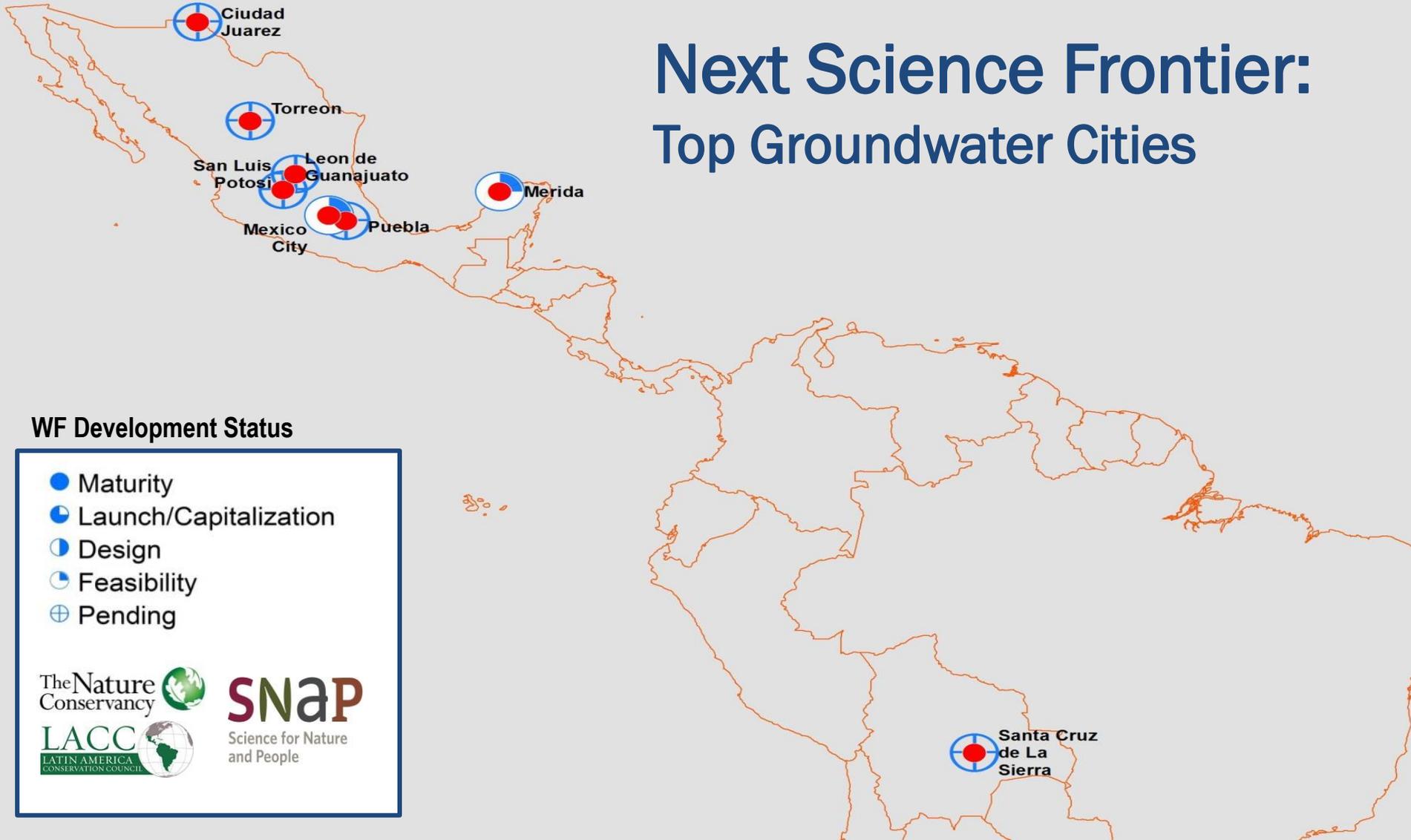
**SNAP**

Science for Nature and People

LACC  
LATIN AMERICA  
CONSERVATION COUNCIL



# Next Science Frontier: Top Groundwater Cities



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SNAP

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# Tactics

- 1) **Policy** – water cost includes conservation
- 2) **Corporate Practices** – risk mitigation & neutrality
- 3) **Public funding** – multilateral water loans
- 4) **Public Awareness** – consumer participation





## Some results

- 44 Water Funds initiatives in Latin America across 14 countries
- 17 created and operating, 17 in-design and 10 under evaluation by TNC and partners

# What is our competitive edge?

## Decision Oriented Science

## Convening Capacity



### RIOS Resource Investment Optimization System

Designing cost-effective investments in watershed services

**Water Scarcity**  
Water is one of the scarcest resources on the planet, and pressure on it will only grow as demands on water supplies grow and climate changes. Every year, \$400 billion is spent on water infrastructure. People are starting to recognize that investments in nature, as part of a comprehensive approach for water management, are a cost-effective way to secure clean water for the future.

**How RIOS can help**  
RIOS is a free and open source software tool that supports the design of cost-effective investments in watershed services. RIOS can help people optimize watershed investments to improve multiple water-related benefits such as sustaining water supplies, maintaining quality, and reducing flood risk. It can also help direct investments to simultaneously maximize biodiversity or other social goals.

The Natural Capital Project designed RIOS to provide a standardized, science-based approach to watershed management in contexts throughout the world. It combines biological, social, and economic data to help users identify the best locations for protection and restoration activities in order to maximize the ecological return on investment, within the bounds of what is socially and politically feasible.

**Generalized tool, flexible approach**  
RIOS was developed through an extensive stakeholder engagement process, including input from more than 70 water funds watershed investment programs across Latin America. The tool has been tested in diverse ecological, social and political contexts. Early tests of the RIOS approach in the Cauca Valley of Colombia resulted in watershed investments up to six times more effective than typical investment approaches. RIOS enables watershed investors to use a systematic, transparent, and data-driven approach to evaluate projects, making it easier to track the places where their investments are most needed and most effective.

**What are Water Funds?**  
Water funds are conservation financing mechanisms that gather investments from water users and direct the funding toward the protection and restoration of key lands upstream that filter and regulate water supply. At the same time, water funds enable the preservation of habitat for native plants and wildlife. Water funds vary from place to place depending on local opportunities and regulations. Investors – primarily large businesses and government agencies – see the funds as a smart way to minimize treatment costs and reduce the chance of water shortages in the future.

### InVEST Integrated Valuation of Ecosystem Services and Tradeoffs

A Powerful Tool to Map and Value Ecosystem Services

InVEST is a suite of modeling tools that map, measure and value the goods and services that sustain human life.

Nature supports human health, livelihoods and economies in countless ways: ecosystems store carbon to slow climate change, purify and regulate water supplies, and provide foods, medicines and opportunities for spiritual and cultural experiences. Despite their value, ecosystem services are not normally included in resource decisions, often because practical, credible information about them is lacking or inaccessible.

InVEST is free and open source. Its modular toolkit enables users to quantify, visualize and compare the delivery of ecosystem services under different scenarios of land, water, and marine use. Model outputs can describe natural resources in terms of their biophysical supply, the service they provide humans, or their projected value.

**Who Should Use InVEST?**  
Governments, companies, non-profits, and multilateral development institutions that manage natural resources employ InVEST to evaluate the impact of their decisions on the environment and on human well-being, and to inform planning efforts.

Using InVEST, decision makers can assess the tradeoffs associated with alternative policy options and identify areas where investment in ecosystem services can enhance human development and conservation of terrestrial, freshwater, and marine ecosystems. InVEST can help inform policy and program design, such as land use and marine spatial plans, strategic environmental assessments, payment for ecosystem services, climate adaptation strategies, and restoration efforts.

**What are ecosystem services?**  
Ecosystems yield a flow of services that are vital to humanity, including the production of goods (e.g. food), life support processes (e.g. water purification, life-filling conditions in air, land and freshwater), and the conservation of options (e.g. genetic diversity for future uses). Despite their importance, ecosystem services are poorly understood, scarcely monitored, and, in many cases, undergoing rapid degradation and depletion. InVEST empowers users to account for ecosystem services in their decisions and preserve their benefits to human well-being.



The Nature Conservancy presents  
**3 Replenishment Workshops**

Promoting sustainable corporate practices to mitigate water-related risks

- Monterrey, México  
11-12 September
- Medellin, Colombia  
18-19 or 25-26 September (TBD)
- São Paulo, Brazil  
16-17 October

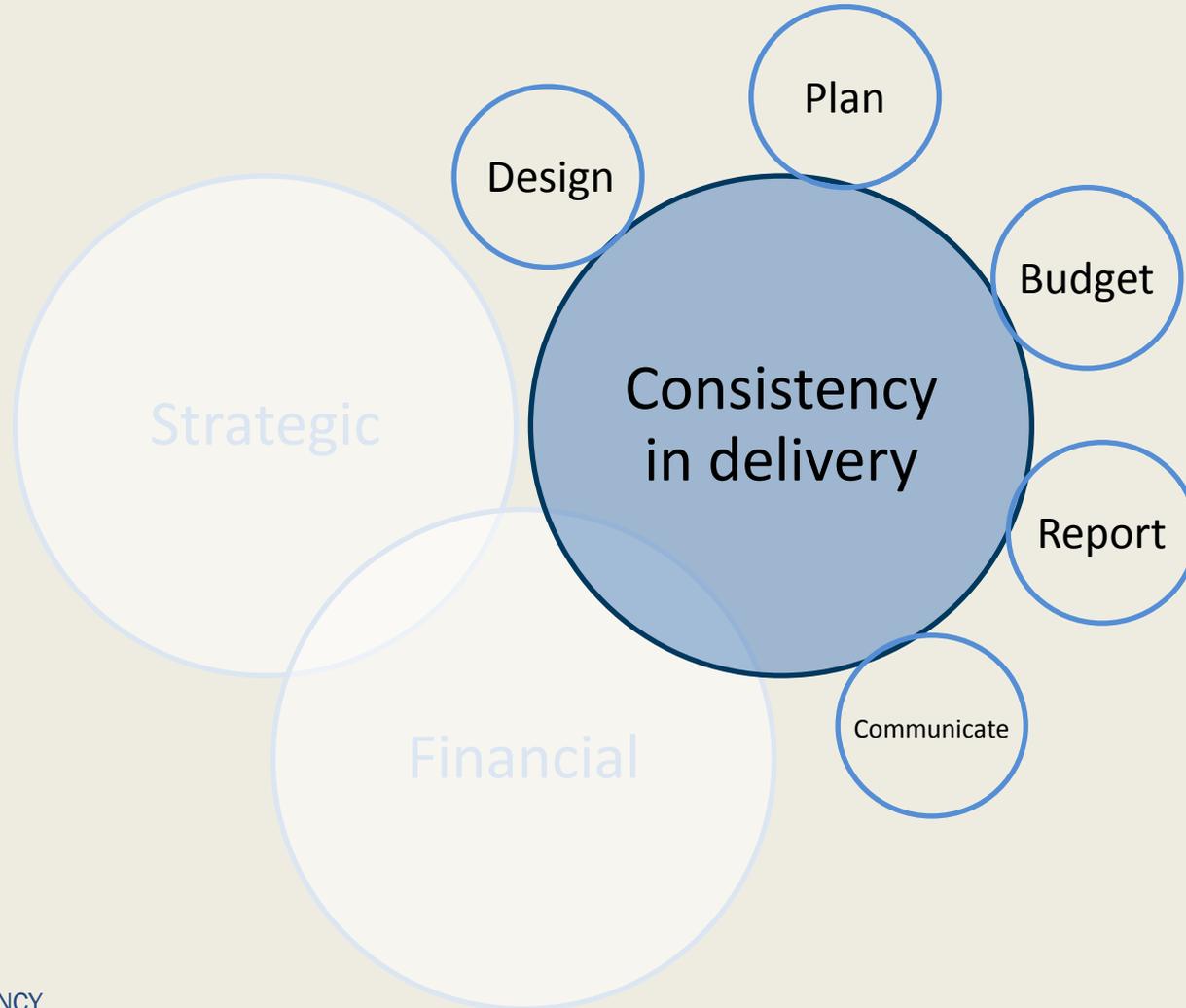
For more details, contact:  
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# Challenges









# What does success look like?



# Why is our work important?

