

# Knowledge and research on the role of ecosystems, the science - policy gaps. Perspectives from CAF

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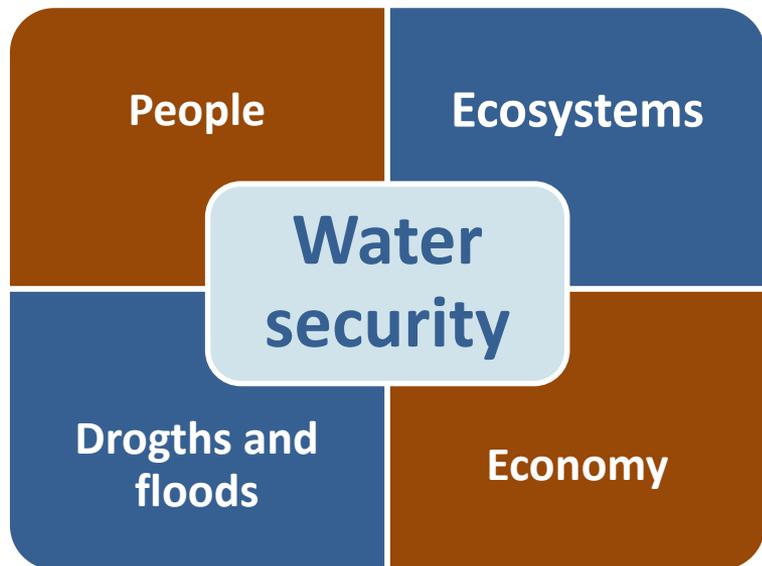


**Más oportunidades, un mejor futuro.**

# CONTENT

1. CAF water strategy
2. Main Challenges Information gaps and difficulties
3. Enabling factors in the use of research and information

# Supporting the countries of Latin America to achieve water security is the strategic vision of the VDS/CAF in Agua



Promote the safe access of the populations to drinking water and sanitation, and to contribute to the productive development of the countries through the use of water. As well as reducing water pollution, preserving ecosystems and protecting against disasters related to shortages or excesses.

# Water security starts with securing the watershed, by conserving and investing in the natural infrastructure that supplies water

## The Challenges:

- **Potable water services still show significant deficiencies**, especially in rural and urban marginal areas.
- **The wastewater treatment of** is a challenge at the regional level.
- **The poor sanitary quality of drinking water** has an impact on the rates of chronic child malnutrition.
- **Urban drainage is a problem that tends to worsen** in Latin America as a result of climatic variability.
- **Efficient use of water in agriculture**, the key sector for regional socioeconomic development.

## The region exceeded the projected investment to achieve universalization, but sector results do not meet the expectations

- Between 2011 and 2015, total investment in potable water and sanitation in Latin America was US \$74.037 million, equivalent to 0.26% of regional GDP
- Development banks financed \$10 billion of public investment, 16.9% of total public investment in the period. (IDB 48%, CAF 34%, BM 18%)
- Brazil concentrated 51.47% of the investment, Mexico with 9.47%, Argentina 9.21%, Colombia 8.84%, and Peru 8.75%, represent 87.47% of the total investment in the region
- The results in terms of quality of service and investment do not meet the expectations of Governments and citizens
- The sanitary quality of the water, the continuity and pressure of the supply, the purification of the wastewater, and also the attention to the citizen are the subject of social claims

# How can science and technology contribute more effectively to achieving society's goals

- Hydrology and ecosystems are becoming more complex
  - ✓ Increasing demand due to urbanization
  - ✓ Infrastructure designed under unprecise hydrology
  - ✓ Historical records are no longer valid for hydrological design
  - ✓ Uncertainty of watershed responses to changes in land use
- Disconnection between policy (conceptual) and benefits to end-users
- Scarce systems for basic data collection.
- Research and application on non-converging tracks

# Still lots of unsolved questions that research should help to understand

- Are historical records meaningful under changing climate conditions?
- What is the time horizon for climate change significantly affecting project design and operation?
- Can data limitations be overcome and how? Can remote sensing and satellite-based data be used successfully for that purpose?
- What are the best methodologies for planning and design water infrastructure under data limitations?
- How can ecosystem protection be incorporated into utilities strategies and plans?
- Can the time-lag between science and practice be shortened and how?

- **What can the CAF do to best make the connection between water scientists and water practitioners?**

## **Ecosystems and hydrology Scientific Knowledge**

**Need to develop a better understanding of how scientific knowledge in hydrology, ecosystems and water resources can help to inform policy and operational dialogue; and support project decisions to cope with rising challenges**

**Design of policy  
and improve  
institutions**

**Better  
programs  
and Projects**

# Some enabling factors in the use of research and information with results in policies and projects

- **Knowledge co-production**, engaging a broad range of actors with divergent interests and agendas.
- **Social capital**, built trust and relation among the actors facilitate the commitment of stakeholders
- **Policy champions**, who take active role in connecting different actors and promoting the ecosystem services approach
- **Intellectual capital**, level of knowledge and expertise of managers and decision makers on ecosystem services as well as technological resources and tools, such as databases,
- **Develop clear links between research and improvements**, local practitioners keen to adopt the concept of ecosystem services and work with the researchers to find management options