

Global Workshop on Conjunctive Management of Surface Water and Groundwater: National to Transboundary Level

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Knowledge as a Subsidy for the Conjunctive Use and Management of Surface Water and Groundwater



Centro Regional
para la Gestión
de Aguas Subterráneas
en América Latina y el Caribe

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Initial comment

Knowledge serves as a valuable subsidy for the conjunctive use and management of surface and groundwater resources by providing the information, tools, and insights necessary for sustainable and equitable water management practices. It enables decision-makers to address water challenges effectively and ensure the long-term availability of water resources for various uses.

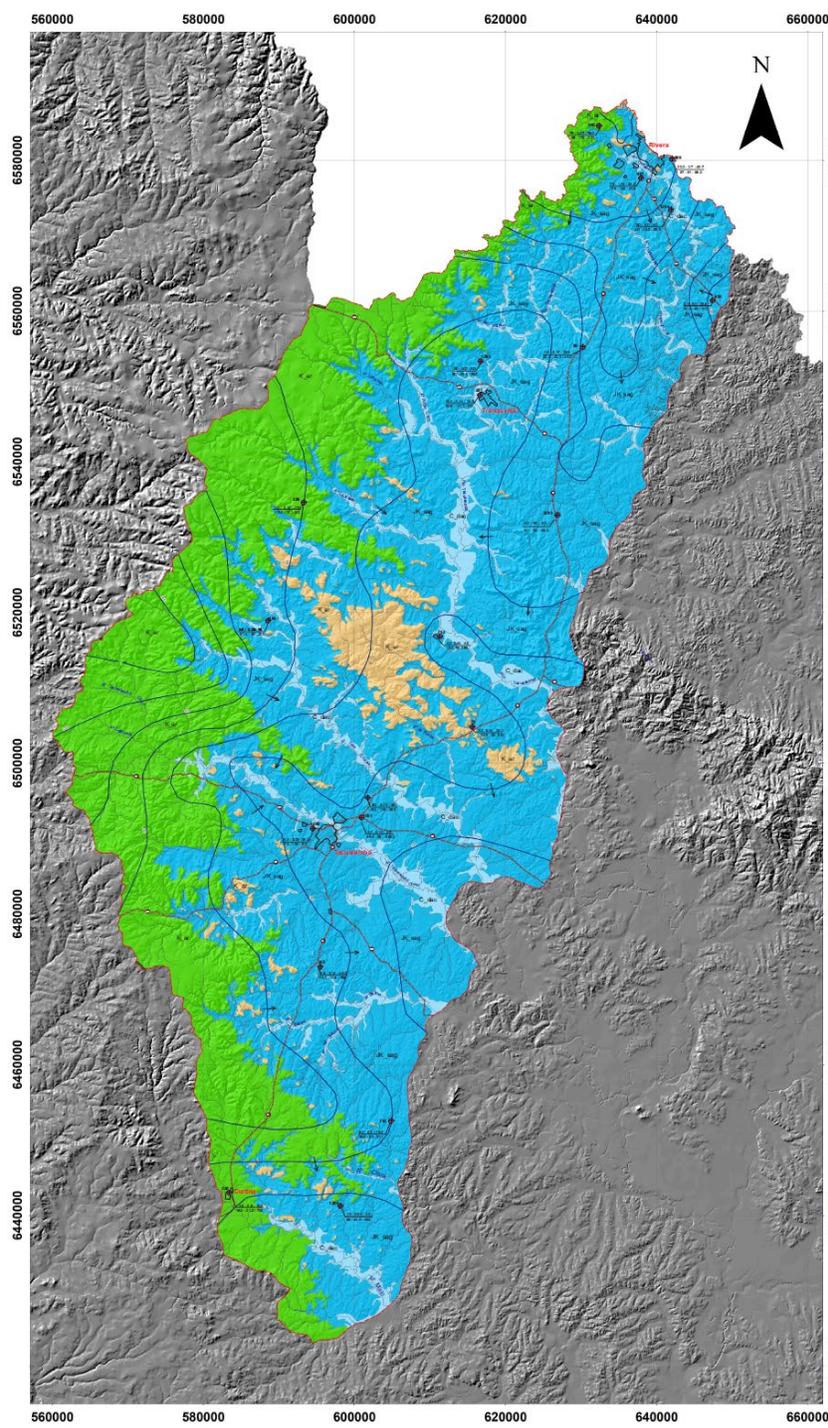
This knowledge must include at least:

- Hydrogeological Understanding
- Water Availability Assessment
- Monitoring and Data Collection
- Legal and Regulatory Frameworks
- Modeling and Simulation
- Stakeholder Engagement
- Environmental Considerations
- Climate Change Adaptation
- Technological Advancements
- Education and Capacity Building

La Plata river basin



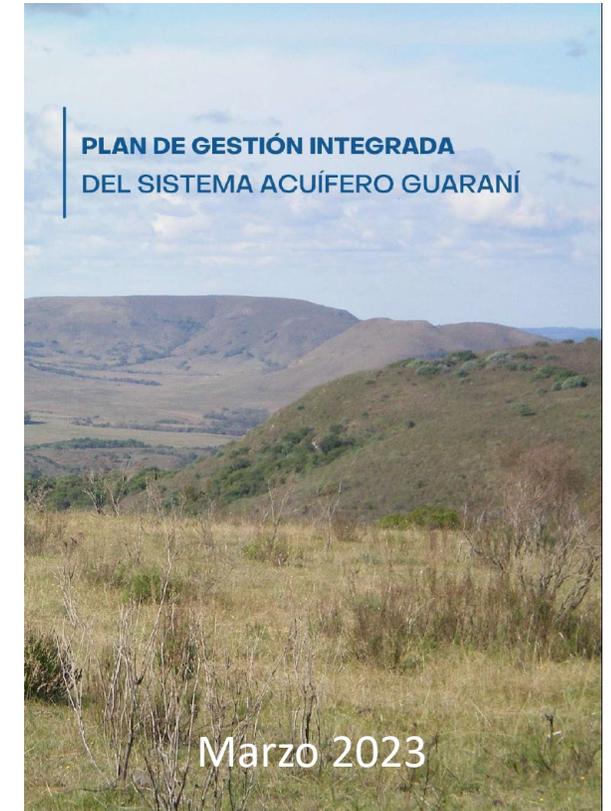
Guarani Aquifer System



Example of a national study

Outcropping area of the Guarani Aquifer System in Uruguay

- Surface water – groundwater link
- Lack of knowledge regarding quantification
- Unplanned conjunctive use
- There is no conjunctive management



<https://www.gub.uy/ministerio-ambiente/comunicacion/publicaciones/publicaciones/plan-gestion-integrada-del-sistema-acuifero-guarani-pgisag>

Sustainable Management of the Water Resources of the la Plata Basin with Respect to the Effects of Climate Variability and Change.

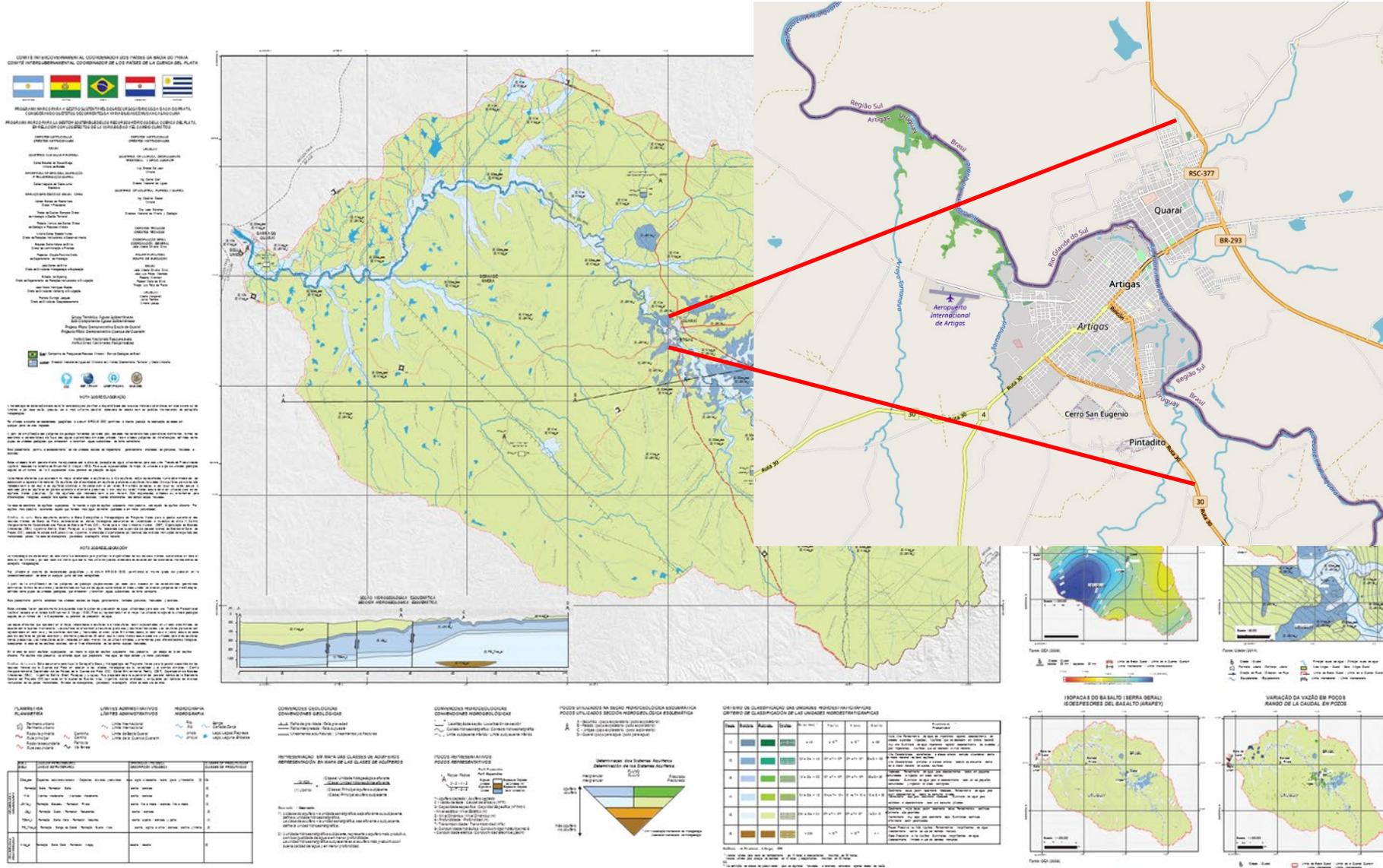
Cuareim-Quarai Basin Pilot Project

Example of transboundary study

The largest volumes of groundwater extraction in the Cuareim-Quarai basin are associated with the public supply of the cities of Artigas and Quaraí, and some other smaller towns. In the rest of the basin, the use of groundwater is aimed at watering livestock and satisfying domestic needs.

The extraction of groundwater has a very low impact on the water balance of the basin

- Conjunctive use
- Conjunctive management ?



Hydrogeological Map

Final remark

Knowledge of historical data and future projections of water availability, including surface water flows, groundwater levels, and precipitation patterns, is critical to assessing overall water availability in a region. This information helps design water allocation plans and manage water resources in a conjunctive and sustainable manner.

Thank you for
your attention



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