

**How can Energy Production revenues be used
to strengthen WEFE nexus in such a way that
they result in enabling support of
transboundary cooperation and management
activities in a Basin?**

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Global Workshop on Funding and Financing Transboundary Water
Cooperation and Basin Development

UNECE, Geneva 5-6 December 2023

Binational Entity ITAIPU



ITAIPU Treaty

Entered into by Brazil and Paraguay in 1973 for:

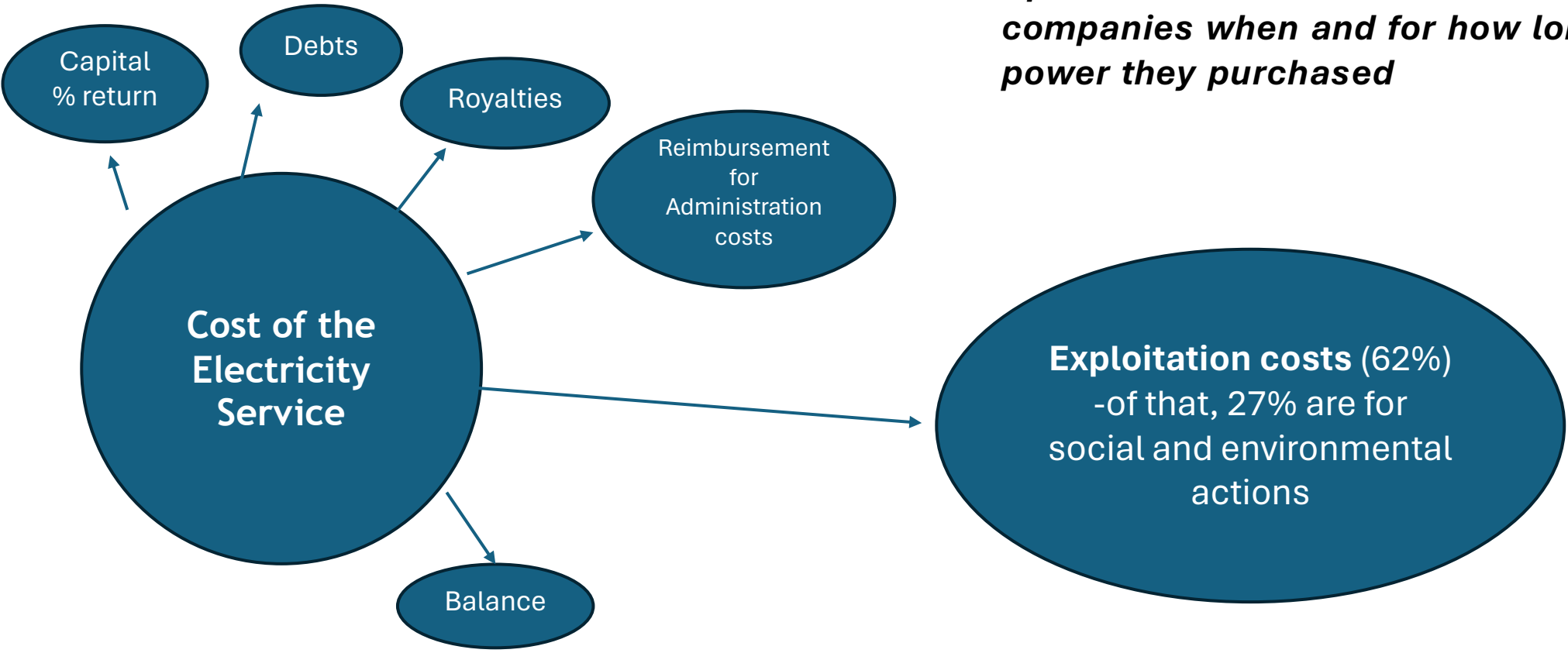
-The Economic Advantage that could be obtained from the use of the Parana river, by the construction of a dam to produce hydro-electric power.



ENERGY PRODUCTION REVENUES

Power=Energy divided by time

Up to the two countries national electricity companies when and for how long to use the power they purchased



Cost / total available power (*potencia*) per year = Annual tariff

Water Management services

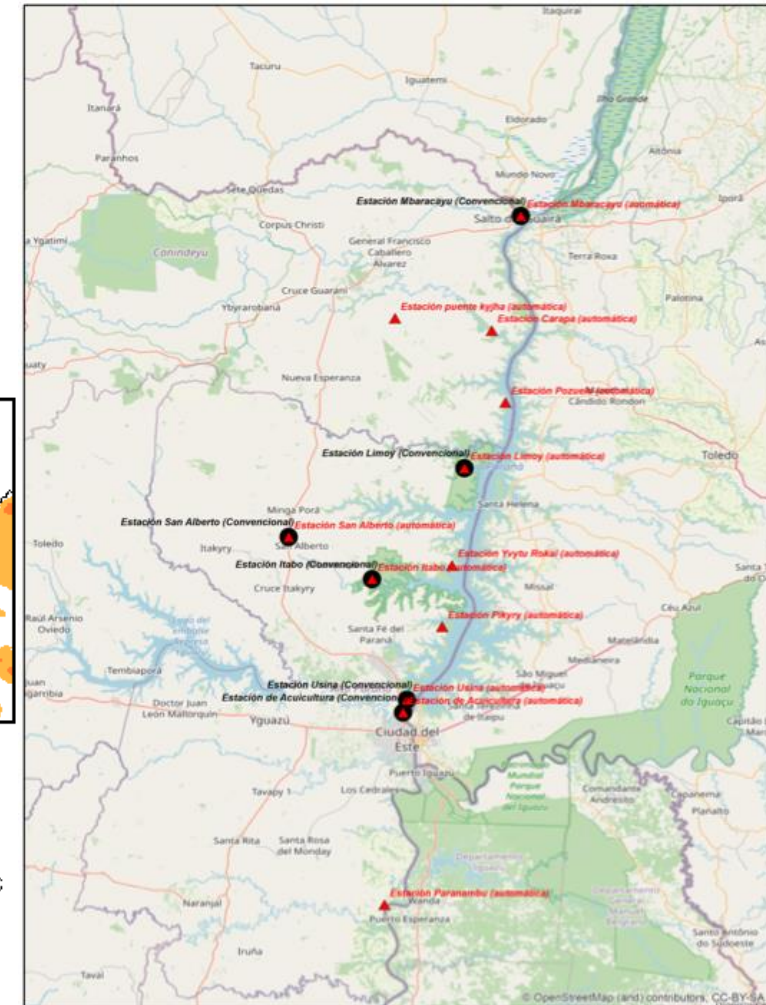
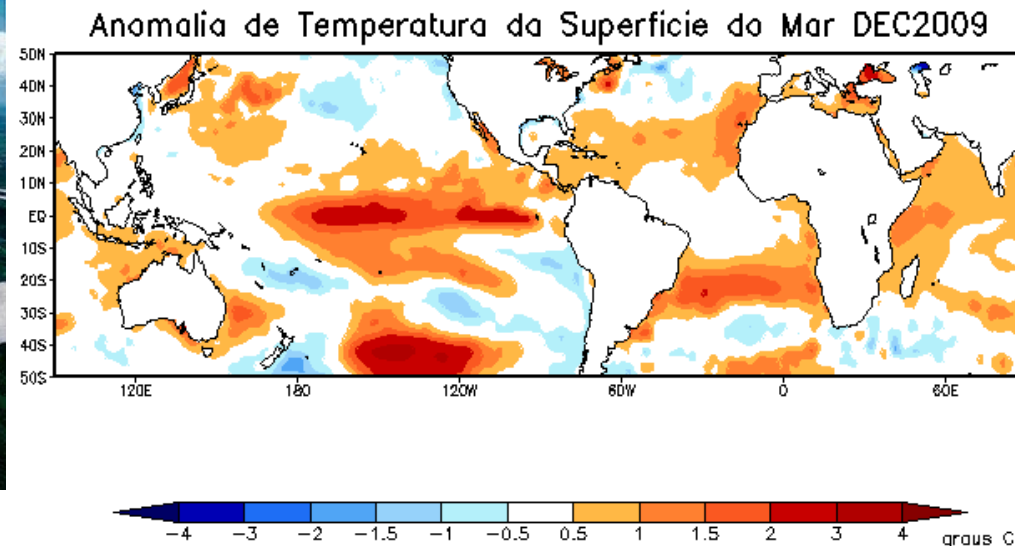
1) Flow of water monitoring and control

Estimations are crucial for energy production planning

Water availability (upper river)

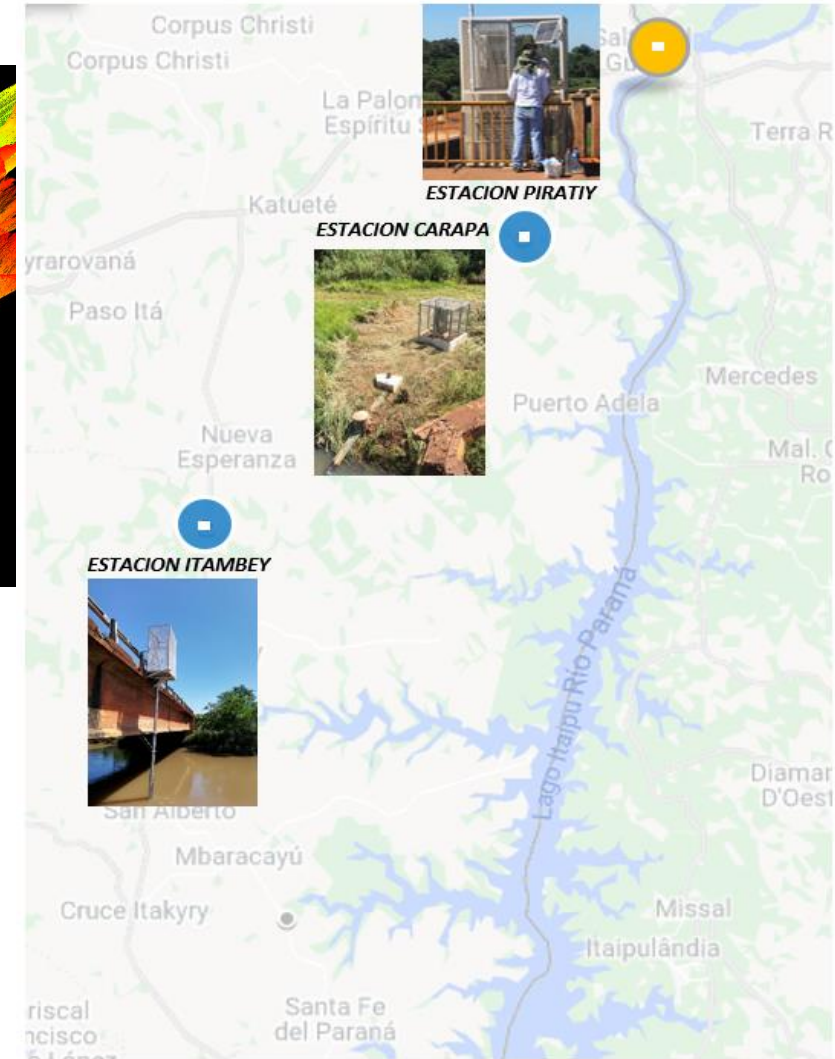
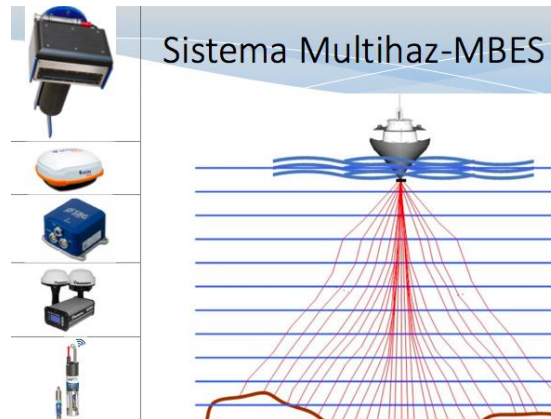
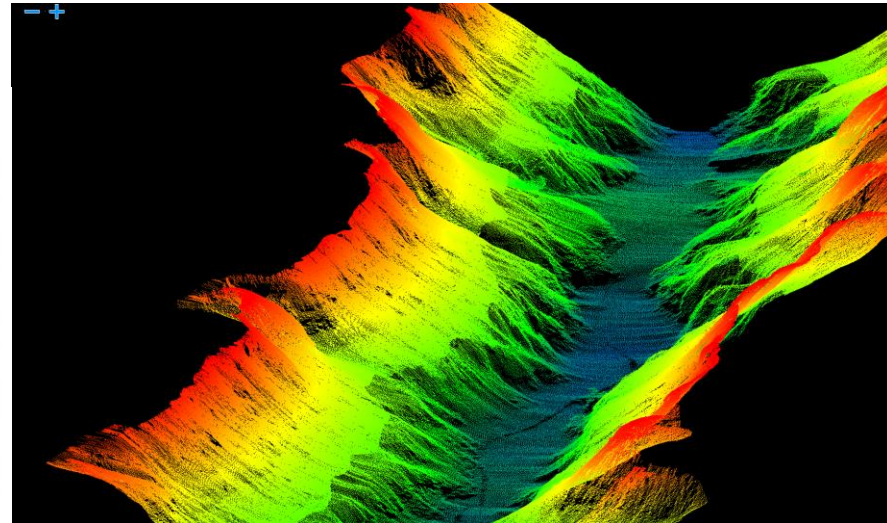
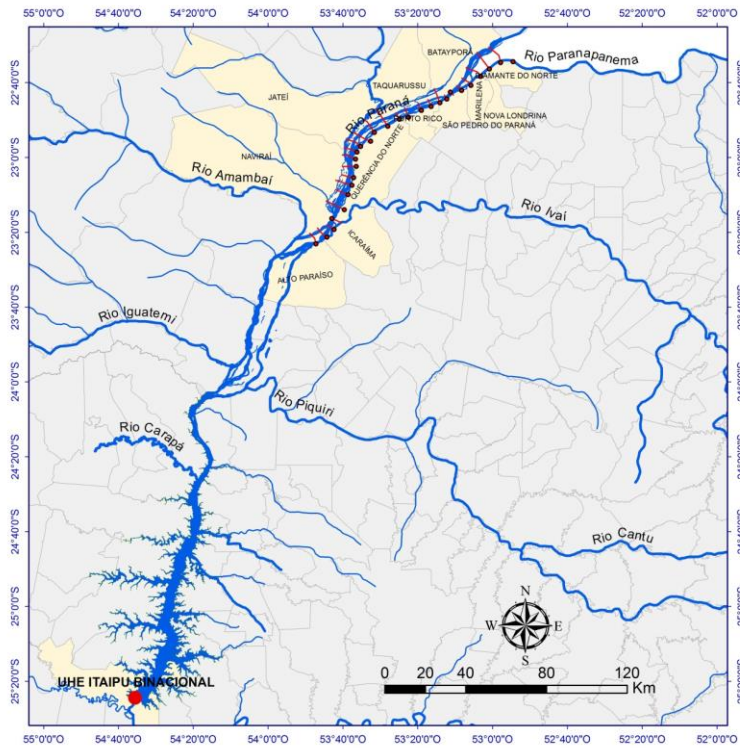
Hydrological alerts (downstream). Point R11 monitoring

Climate Monitoring



Water Management services

- 2) Collection of bathymetric data and Scanning of riverbed
- 3) Sedimentation monitoring
- 4) Water Quality



South American Experience

Water release... to balance multiple uses of the international river, based on technical data and information from an ad hoc Intergovernmental Commission

Practices in the region show successful practices of international cooperation in this area

Special Operations
“Water Windows”
May 18-29, 2020
Aug 3-16, 2020
May 21-31, 2021



Ecosystem Management services

1524 km Py
1300 km Bra
of fence to protect
riparian forest


101,000 HA
of protected areas



Reforestation
of almost
220,000 HA
with native forest
and fruit trees



Social actions

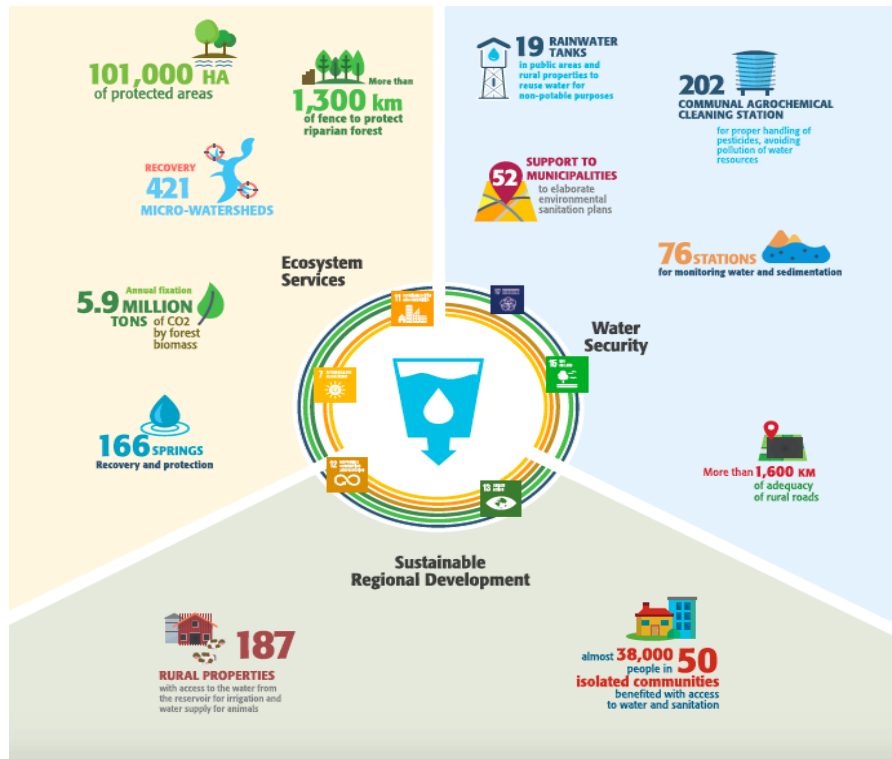
Working on the implementation of SDGs

- Work *with* indigenous people.
 - Today we see for example tribes that are working together with power plants to protect and preserve the ecosystem, while gaining expertise, economic benefits, more valuable land, and women empowerment in their communities.
- Providing access to water to communities





Recent Landmarks and Work ahead



- Bilateral agreement (Brazil and Paraguay) to give Itaipu a Social and Environmental Responsibility (2005).
- Strategic Planning: Modification of “Area of Influence” to “Area of Interest” thereby extending the reach of actions.
- Balance between legal certainty for long term planning and flexibility for short term changes.
- Transboundary cooperation is enabled by implementing activities **for and by** the WEF E nexus

Thank you!