

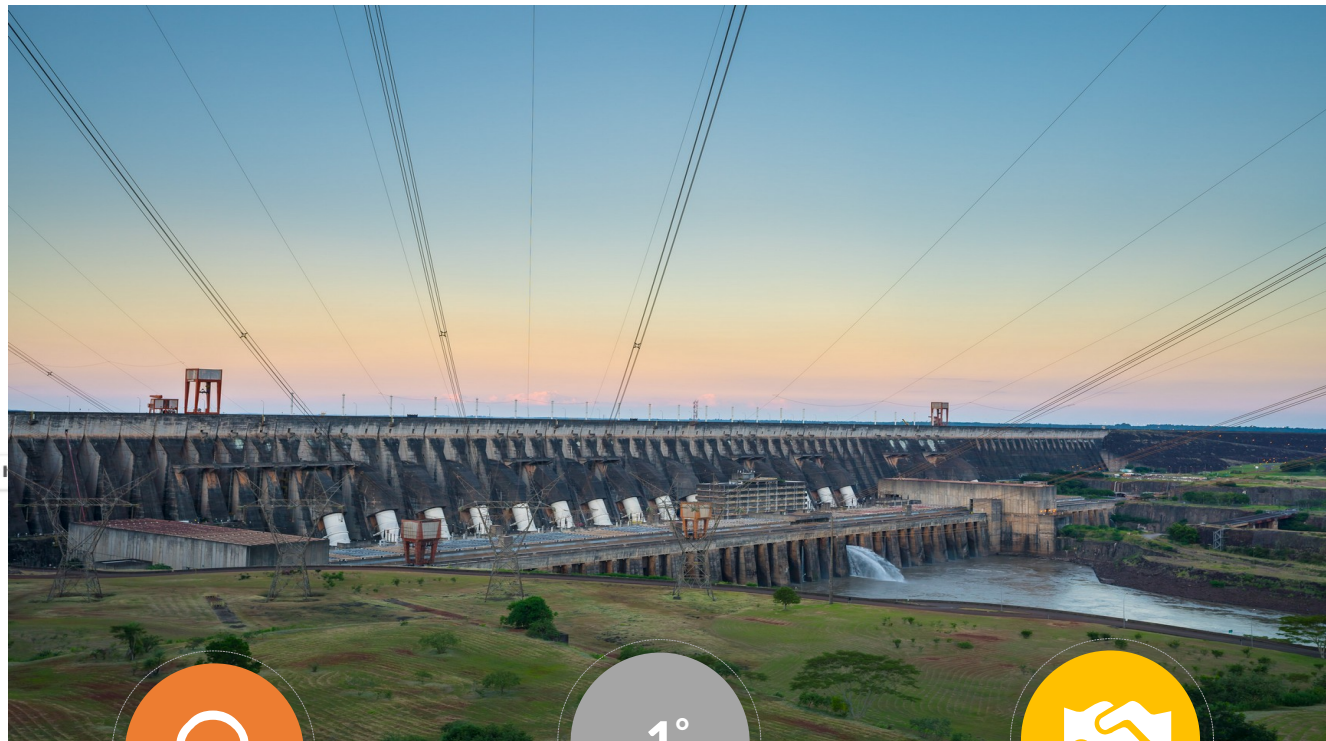
Sustainable Hydropower, Water and Energy Security: Case studies at Itaipu Binacional - Paraguay





Mission:

Generate quality electricity, with social and environmental responsibility, contributing to sustainable development, in Paraguay and Brazil.



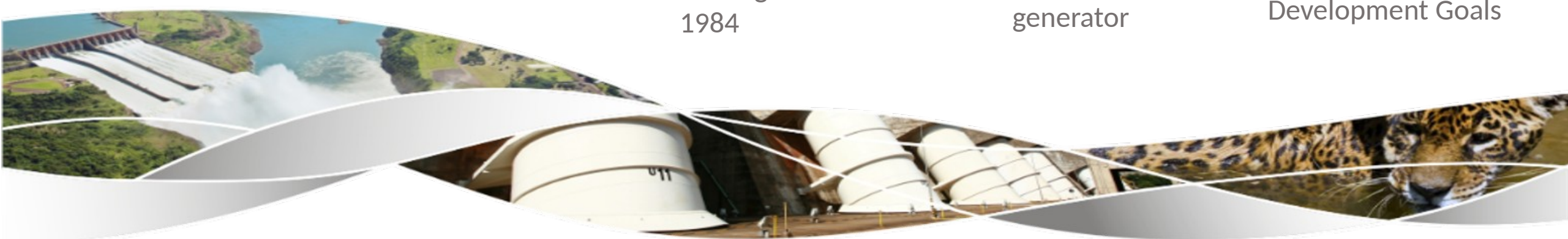
2.8 billion megawatt-hours generated since 1984



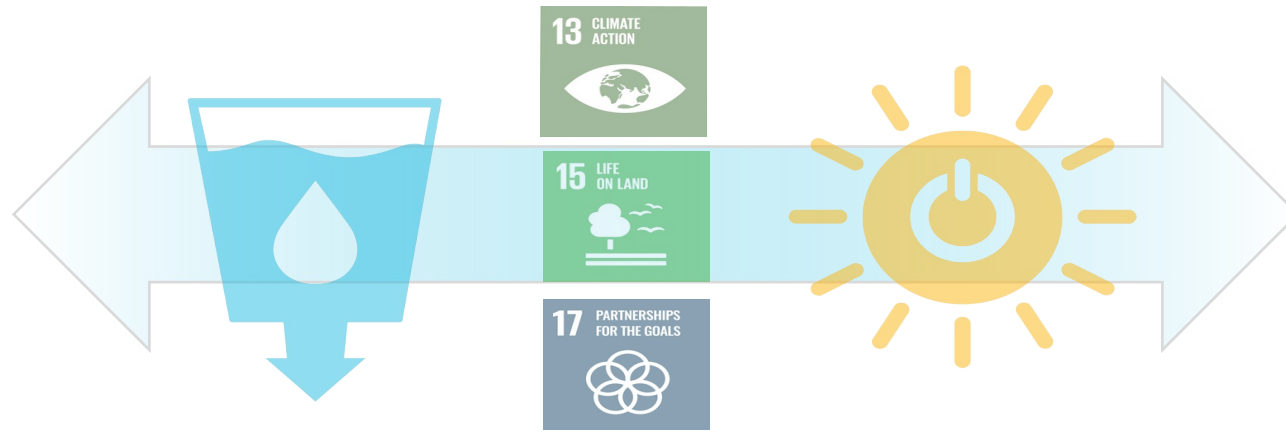
The world's largest renewable energy generator



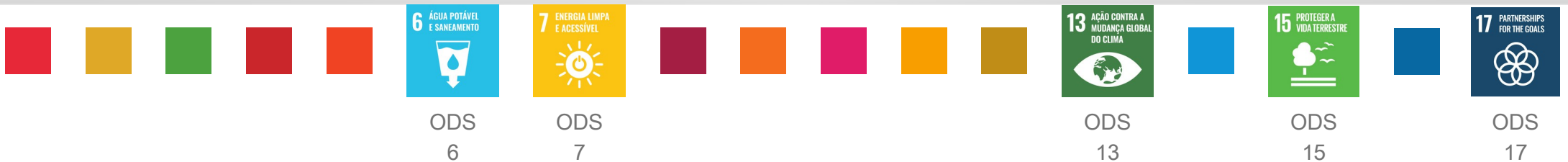
Committed to the Sustainable Development Goals



THE WATER-ENERGY NEXUS: ITAIPU'S KEY INTEGRATED SOLUTIONS SUPPORTING REGIONAL COOPERATION, CLIMATE RESILIENCE AND BIODIVERSITY



- The water-energy nexus presents key challenges worldwide-
- Water scarcity and energy insecurity threaten sustainable development in several regions-
- ITAIPU contributes to addressing water and energy challenges through the nexus approach-
- The nexus is vital to ITAIPU's operations and socio-environmental actions-
- ITAIPU implements measures to ensure responsible water management and sustainable practices-



REGIONAL COOPERATION

- ITAIPU the binational partnership-
- International partnerships-
- Environmental partnerships-
- Partnerships supporting social programs and projects-
- Partnerships supporting research, development and innovation-



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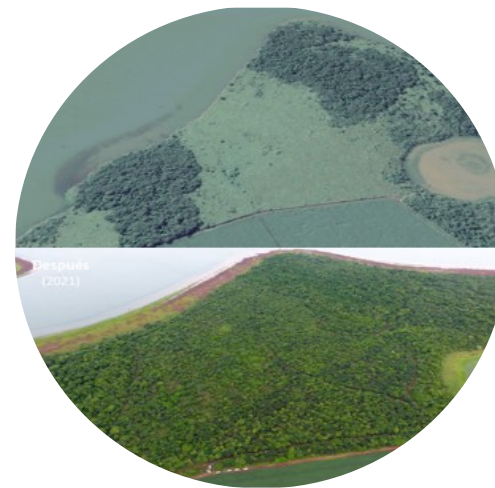


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CLIMATE RESILIENCE



RENEWABLE ENERGY RESOURCES



103.098 GWh en 2016

EVITANDO EL CONSUMO EQUIVALENTE A

550.000 barriles de petróleo diarios
50 millones de m³ de gas natural

EVITA LA EMISIÓN DE:

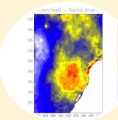
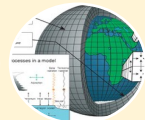
87 million tCO₂e de carbono mineral

39 million tCO₂e De gas natural

AWARNESS, MONITORING AND CAPACITY DEVELOPMENT



105 Climate Monitoring Platform with climate integrated monitoring stations

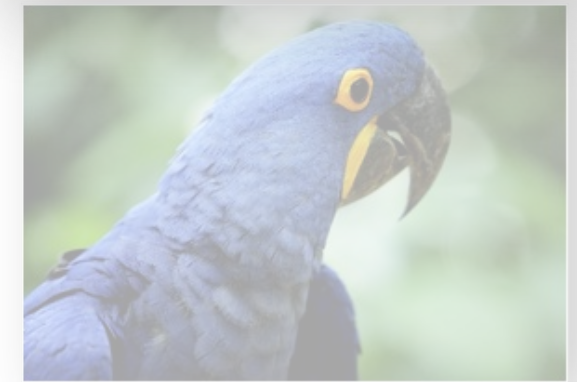


RESTORATION OF TERRESTRAL ECOSYSTEMS



101.000 ha de zonas protegidas

ECOSYSTEMS & BIODIVERSITY CONSERVATION



- ✓ LIFE
- ✓ UNESCO MAB BIOSPHERE RESERVES



ECOSYSTEM SERVICES

Itaipu restored and protects more than **100,000** hectares of the Atlantic Forest, which fixes 5.9 million tons of CO2 equivalent per year

Itaipu's protected areas recognized as core areas of the Biosphere Reserve by UNESCO's Man and the Biosphere Program

BIOVERSITY

In 30 years, more than **17 million** fingerlings and fry were produced and transferred into the Reservoir.

Approximately **25 million** seedlings planted for reforestation in both countries

SOIL CONSERVATION

Thousands of rural producers provided technical assistance in soil conservation techniques

2,500 family farmers were provided technical assistance for conversion from traditional farming to sustainable and organic agriculture

10 Protected areas

United Nations Educational, Scientific and Cultural Organization | Man and the Biosphere Programme

The water-energy nexus is of utmost importance for ITAIPU's operations and socio-environmental actions. As the world's largest renewable energy generator, ITAIPU plays a crucial role in promoting sustainable development, addressing water and energy challenges, supporting regional cooperation, climate resilience, and biodiversity conservation. ITAIPU's commitment to these areas will contribute to a sustainable and prosperous future for the region and the world.



<https://itaipu.energy/news/itaipu-at-the-un-2023-water-conference/>



THANK YOU VERY MUCH FOR
YOUR ATTENTION !

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