

COP 26 – Side Event

# Sustainable Water and Energy Solutions supporting Climate Change Objectives during the Decade of Action and Beyond



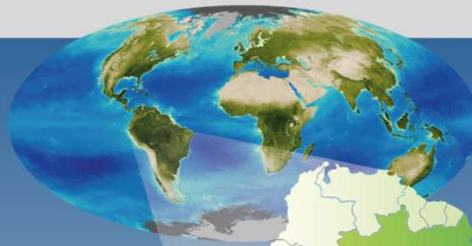
November 5th 2021



# Itaipu Binacional

Brazil and Paraguay - 1973

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



# Socioeconomic and climate contribution

13 CLIMATE ACTION



- Supply of energy demand:  
**Brazil 10% Paraguay 88%**
- Accumulated generation: **2,8 bi MWh**
- Replaces the equivalent of  
**550 thousand barrels of oil daily**



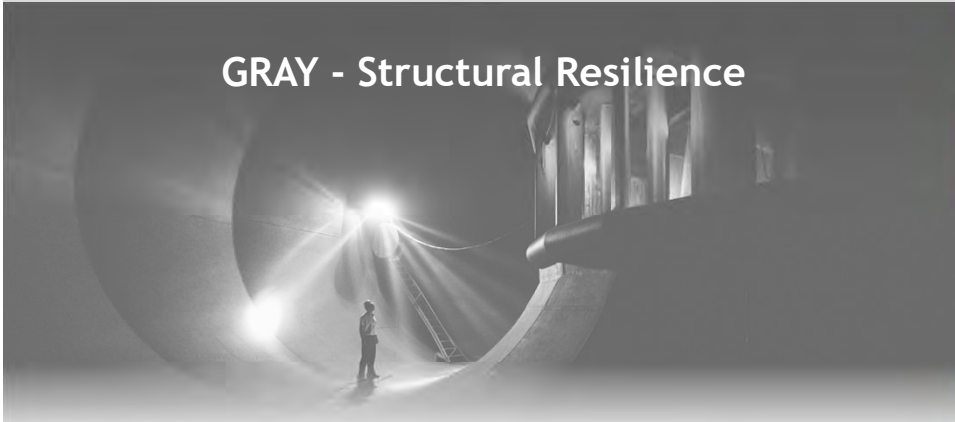
- Avoids the emission of **87 million t CO2** if emitted by coal
- Fixation of CO2 in forest is almost **30X higher** than its emissions

# Climate Change Resilience Strategies

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## GRAY - Structural Resilience



Strategic maintenance management of turbines

Productivity: 1 MW/M3/sec

**97% availability**

## GREEN - Functional Resilience



Recovery and maintenance of a natural protection belt increases water quality and decreases storm runoff sedimentation

**24 million trees** planted in the protection belt

Increase of accessibility for multiple uses of water

# Climate Change Mitigation and Adaptation Strategies

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## GRAY - Structural adaptation and mitigation



Modernization, accessibility and investments:

- Technological update - US\$ 500mil
- biomethane plants investments

## GREEN - Functional adaptation and mitigation



Forest restoration and climate change adaptation.

**75 thousand ha of Atlantic Forest** = contribution to 28% of the total restoration of the Atlantic Forest in the State of Parana.

Dissemination of ecosystem services.



# Main Remarks

13 CLIMATE ACTION



Strong commitments to SDG 13



# Main Remarks

13 CLIMATE ACTION



Significant CO<sub>2</sub> emissions fixated in the company's protected area and biological refuges.



# Main Remarks

13 CLIMATE ACTION



## Low Carbon technologies - Biogas





# Main Remarks

13 CLIMATE ACTION



Sustainable energy generation, territorial development and water security



# Main Remarks

13 CLIMATE ACTION



Regional development, water and climate security through territorial environmental management to restore regional biodiversity and lost capacity of ecosystem services supplies.





# THANK YOU

Itaipu. 47 years of creation.  
37 years of power generation.

