ACTO
Amazon Cooperation Treaty Organization

22nd Annual Consultative Meeting on Large Marine Ecosystems and Coastal Partners

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ACTO: SOURCE-TO-SEA AND WATER MANAGMENT INTEGRATED CAPACITY BUILDING TO THE SAP IMPLEMENTATION IN THE AMAZON BASIN

Luiz Amore
Institutional Strengthening
Project for Implementation of the Strategic Action Programme

AMAZON COOPERATION TREATY ORGANIZATION

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WATER RESOURCES

Regional and global water reserve
Regulates global and regional climate

HYDROLOGY

Output flow: 220,000 - 300,000 m3/s in rainy season.
Length: 6,992 km
Hydrographic basin area: 6,118,000 km²

POPULATION

Amazon Basin: 44 million inhabitants.
420 indigenous peoples.
370 languages.

ECONOMIC ACTIVITES

53% agricultural activities.
31% trade.
16% manufacture.

Actions within the framework of the Amazonian Strategic Cooperation Agenda

Bolivia Brasil Colombia Ecuador Guyana Perú Suriname Venezuela

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AMAZON BASIN IN THE EARTH: A NEW PARADIGM

SUSTAINABILITY

Biodiversity and Forest conservation
Ecohydrology of different ecosystems
Source-to-sea continuum and water management instruments

CLIMATE CHANGE

Carbon sequestration increase
El Niño +1 ^{0}C or Super El Niño +3.5 ^{0}C

VANISHING GROUNDWATER CRISIS

Water lost from aquifers: 2T ton (1993-2010) from all continents
Artificial recharge alternatives
Use of natural isotopes ^{2}H ^{18}O…

AERIAL RIVERS

Huge amount of water
Connections with La Plata and other basins

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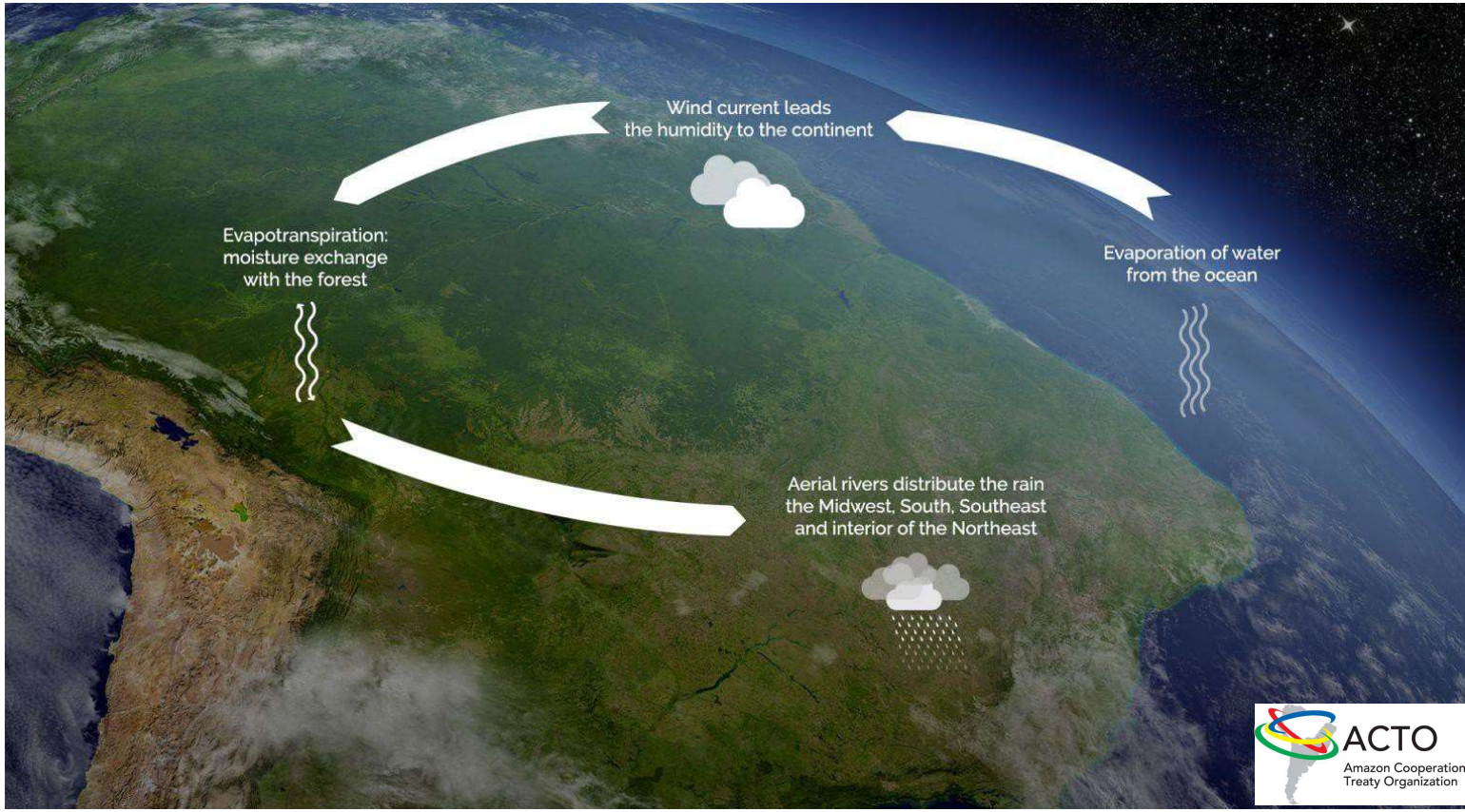
AMAZON BASIN IN THE WORLD: AERIAL RIVERS



9 Priority transboundary issues identified in the Amazon

1. Water contamination
2. Deforestation
3. Loss of biodiversity
4. Extreme Hydro-climatic events
5. Erosion, sediment transport and sedimentation
6. Soil use change
7. Loss of glaciers
8. Large infrastructure works
9. Insufficient IWRM

- ***Adoption of an IWRM approach to guide the implementation of policies for water governance with regional perspective.***
- The riparian countries recognize the interconnection of water, land and related resources and the need to coordinate across different sectors.
- Need to advance towards an Amazonian regional approach centered on the importance of considering the ***link between water, energy, food and ecosystems.***`
- ***Need to improve source-to-sea coordination.***

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Amazon Basin gef
SAP IMPLEMENTATION

UN environment programme

gef

Amazon Basin Project

Implementation of the Strategic Action Programme (SAP)

Objective

Implement the Strategic Action Programme (SAP) in the Amazon Basin, promoting Integrated Water Resources Management from source to sea.

Approaches

1. Gender equality and women empowerment in SAP implementation for an innovative water governance.
2. Source-to-sea management approach addressing the linkages between land, water, delta, estuary, coastal ecosystems in a continuous flow loaded with sediments, biota and pollutants reaching the river mouth in the Atlantic Ocean.
3. Water-energy-food-ecosystems Nexus promoting a multisectoral dialogue.

SAP Strategic Action Lines

1. Strengthening Integrated Water Resources Management (IWRM).
2. Institutional Adaptation to climate variability and change.
3. Knowledge management and application in public policies.

PROGRESS AND IMPLEMENTATION OF THE NEXUS APPROACH IN THE AMAZON BASIN

OTCA Organización del Tratado de Cooperación Amazónica

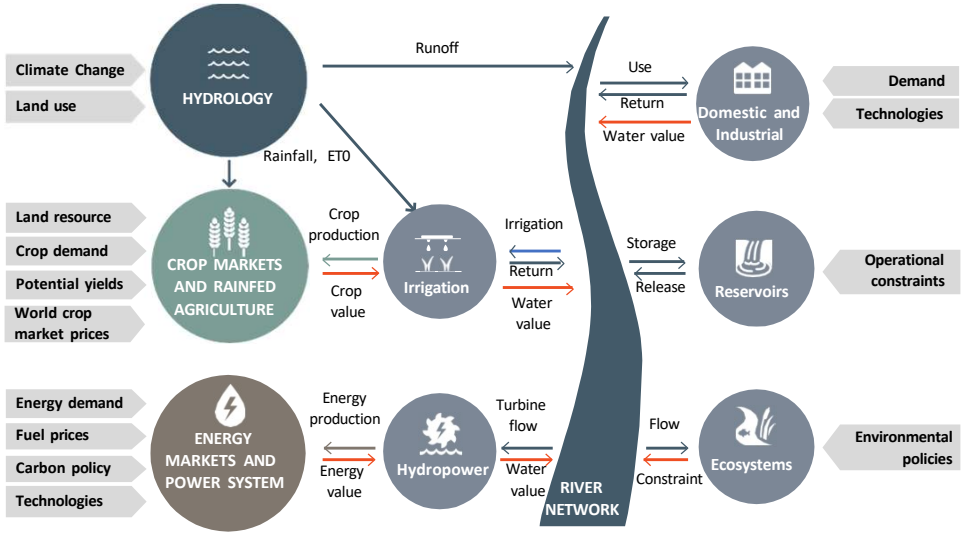
IDB Inter-American Development Bank

With the support of The Nature Conservancy

Development of a regional hydrological platform and a multi-sector nexus model for the Amazon Basin.

1. Stakeholder engagement (Mapping and engagement, Scenario definition)
2. Development of Analytical tools (Hydrological modeling for water balance (HydroBID), Nexus modeling (WHAT-IF), Water Quality Analysis)
3. Nexus portfolio analysis (Investment needs, Additional studies)
4. Visualization and Reporting (Dashboard, ORA).

- ✓ Regional Working Group (Water, Energy, and Agriculture Ministries)
- ✓ Ministerial Specialists trained in HydroBID and Nexus approach
- ✓ Hydrological model for a water balance in the Amazon basin (80%).



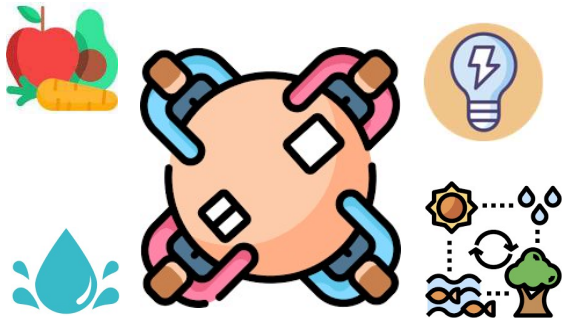
PROGRESS AND IMPLEMENTATION OF THE NEXUS APPROACH IN THE AMAZON BASIN

Inter-ministerial and expert dialogue roundtables on the water-food-energy-ecosystem nexus to increase climate resilience and better achieve SDG 9 on resilient infrastructure and sustainable energy.

- National and regional technical dialogues and roundtables on resilience and sustainability of infrastructure in the Amazon Basin.
- International experiences and best practices from transboundary basins, applying Nexus-based approaches to address infrastructure issues in the Amazon Basin.

Risk analysis, environmental impact assessment and best practices to minimize the impact of infrastructure on water resources and the environment.

- Compendium of Resilient and sustainable infrastructure in the Amazon Region.
- Technical document for policy makers with inputs and recommendations from the Nexus assessment.
- Amazon Declaration on the Future of the Amazon region from a common perspective.



INTRODUCING THE SOURCE TO SEA MANAGEMENT APPROACH IN THE AMAZON BASIN

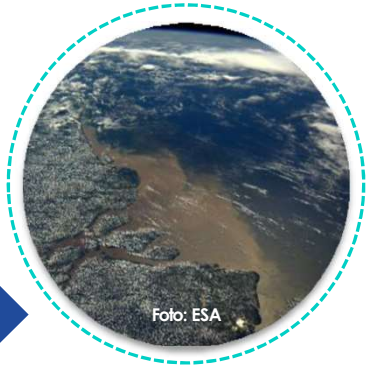
Application of the Source-to-Sea approach in the Amazon Region is oriented to support the establishment of an innovative IWRM governance model at the basin level based on better understanding of the upstream and downstream environmental, social and economic linkages and improved institutional coordination across sectors and segments in the source-to-sea continuum

River sources in the Andes Mountains

Sediments, biota and pollutants flow

Reaching coastal zone mangroves and the Amazonian delta

Atlantic Ocean



Open Ocean

INTRODUCING THE SOURCE TO SEA MANAGEMENT APPROACH IN THE AMAZON BASIN

- **Identification and characterization of key source-to-sea flows in the Amazon, their alterations and impacts in the system** will contribute to complement the Transboundary Diagnostic Analysis (TDA), identify and prioritize additional issues to be addressed across the source-to-sea system and orient the prioritization and conceptualization of the regional monitoring networks .

- **Comprehensive source-to-sea governance assessment** will help define the common framework of IWRM principles and guidelines in the Amazon basin, the role of ACTO in IWRM, and the concept for a Permanent IWRM Coordination Mechanism in the Amazon Basin.

- Theory of change will provide guidance to governance and management responses, planning and implementation of agreed common goals supporting strategic actions for the SAP supplement and implementation.

ROLE OF BASIN ORGANIZATIONS

- Supporting national institutional strengthening, inter-ministerial coordination and capacity building for IWRM across boundaries, sectors and ecosystems.
- Developing regional strategies and multi-thematic agendas.
- Promoting shared / common principles and policies.
- Facilitating basin-wide assessments and targeted studies.
- Introducing innovative tools supporting integrated approaches and promoting multisectoral dialogue and transfer of technologies.

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IN BREAKING DOWN SILOS

- Providing a space for political and technical dialogue and cooperation mechanisms for coordinated management between different sectors and across borders.
- Catalyzing integrated and coordinated planning and investment.
- Facilitating partnerships and financing.
- Supporting reducing pollution impacts on freshwater and marine system environments through agreed basin-wide water quality monitoring systems.

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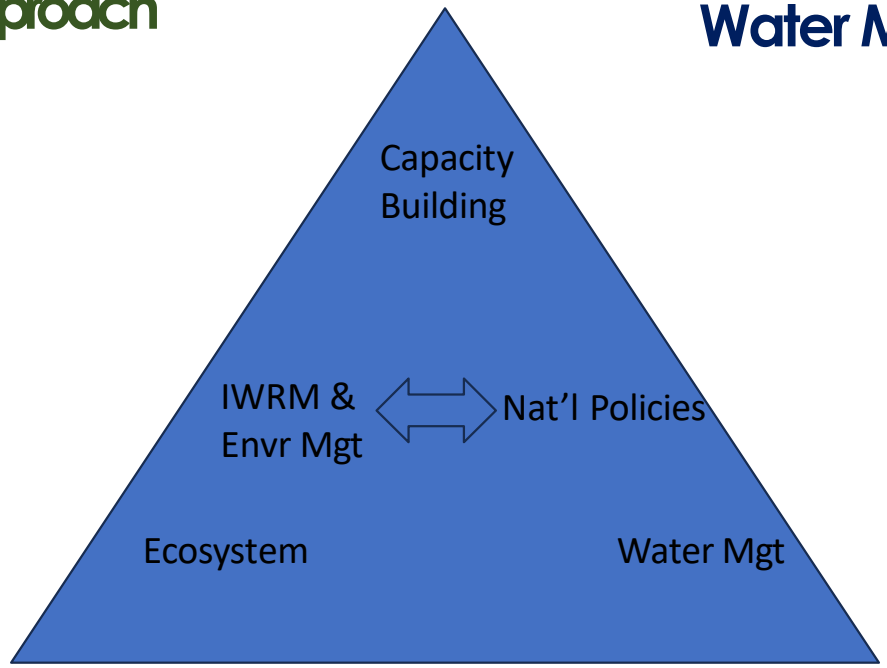
PRELIMINARY IMPLEMENTATION APPROACH

Regional Cooperation

Source-to-Sea Approach

Water Mgt Instruments (ToolBox)



Academic Group

Water Directors Net

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OBRIGADO.

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Organización del Tratado de Cooperación Amazónica

Cuenca Amazónica
IMPLEMENTACIÓN DEL PAE

ONU programa para el medio ambiente

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