



Online Seminar  
Global Network on Sustainable Water and Energy Solutions  
**“The Key Role of Biodiversity in Support of Sustainable Water & Energy Solutions,  
Terrestrial Ecosystems, & Climate Change Objectives”**

**Summary**

13 August 2021

10:00 – 11:30 AM NY Time

1. The Global Network on Sustainable Water and Energy Solutions, with partners Itaipu Binacional and the United Nations Department of Economic and Social Affairs (UN DESA) held a virtual seminar on biodiversity on 13 August 2021. The seminar brought together multi-stakeholders to discuss and showcase existing initiatives and disseminate information on how biodiversity plays a key role in enabling sustainable water and energy solutions for fighting climate change (See Annex I – Agenda.) Participants spoke in English, Spanish, and Portuguese, and interpretation was provided by Ryan Kelly (Spanish/English) and Osil Tissot (Portuguese /English).
2. **Welcome:** The meeting was moderated by **Ms. Lucy Aquino, the Paraguay Country Office Director of World Wildlife Fund (WWF)**, who thanked members of the network and spoke on the interconnections between biodiversity, water and energy, and climate. She noted the credentials of the distinguished panel from diverse parts of the world in the areas of water and energy, and from the public and private sectors.
3. **Opening Remarks: Mr. Luiz Felipe Carbonell, the Director of Coordination of Itaipu Binacional**, Brazil, thanked the network and organizers. He spoke about the meaning of sustainability and maintaining profitable and impactful practices without mismanaging nature. Itaipu, for example, he said, is primarily concerned with water, which they use to generate electricity. But the soil that makes up the banks of rivers, if not maintained, can degrade and influence the quality of the water, the generated power, and the environment at large. “Nature sends us a bill,” he says. Economic development is still possible while being conscious of environmental health. We need to prioritize this in our planning and education, so that future decision-makers prioritize biodiversity and ecosystem health. He emphasized that environmental education is the basis of everything. COP26 later this year is a major opportunity to find out what different communities have developed regarding environmental strategy, and Itaipu is always looking to work with partners in this area.

4. **Mr. Gustavo Ovelar, Head of Environmental Management, Itaipu Binacional, Paraguay**, noted the credentials of the panelists and spoke on a project to improve wild animal research planned for 2022 and a collaboration between the WWF and Itaipu to quantify Itaipu's carbon capture. Mr. Ovelar also noted a developing virtual course on climate change using Itaipu's web platform.

5. **Panel Presentations: Sharing Experiences on Biodiversity, Water, and Energy for Fighting Climate Change**

a) **Mr. Francisco Dallmeier, Director of the Center for Conservation and Sustainability of the Smithsonian Conservation Biology Institute and the National Zoo, United States:** The world population is still growing and developing, and the results are clear. This past Monday, 9 August 2021, the IPCC released a “red warning” report on human-caused climate change. Mr. Dallmeier pointed out that, in 1986, a certain stretch of land near the Itaipu dam was largely forest, with some used for grazing. 20 years later, a large portion of that land is used to grow soybeans (mostly for export), and the landscape is far browner, as sediment is exposed. Alongside this development, biodiversity has dropped across multiple categories with the species of plants in the area down to 663 from 20,000. The development sector, with UN guidelines, can integrate biodiversity into their work. Through sustainable infrastructure (green infrastructure, which sustains ecosystem services, and gray infrastructure, which sustains economic services) and conservation (in-situ and ex-situ), we can make a positive impact. Conservation also extends to creating conservation corridors for movement and overall protecting the watershed to preserve its ecosystem services. Experts from all organizations must collaborate for the greatest impact.

b) **Mr. Ariel Scheffer, Head of Environmental Management, Itaipu Binacional, Brazil:** This network is founded on the idea of interconnectivity between water and energy, which helps to see the interconnectedness of everything else. There are 5 predominant climate patterns in Brazil, which lend themselves to the diversity of the ecosystem. By understanding these systems, we can better adapt our energy systems. The Paraná River, which includes the Itaipu reservoir, is the 8<sup>th</sup> largest in the world. Many municipalities and individuals in the region depend on both the water and the energy from the river, and the river itself depends on the surrounding ecosystem, as suggested by Mr. Carbonell. Considering how important these ecosystem services are, Mr. Scheffer suggested a strategy for territorial environmental management. This plan involves working with all sectors in the region – agriculture, sanitation, tourism, and other biodiversity projects- to enhance resilience and adaptation action through conservation. Within the region, there are 101,000 hectares of protected areas, 24 million trees planted in a native species restoration project, and 72 native faunae in in situ and ex situ breeding and rewilding projects. Itaipu forest lands are a core area of the Atlantic Forest Biosphere Reserve, a UNESCO Man and the Biosphere program site. All in all, preserving nature is good for business. Nature-based solutions decrease climate and extreme weather risks for hydropower generation and long-term commitments and investments in nature can be beneficial.

- c) **Ms. Regiane Borsato, Technical Coordinator LIFE Institute, Brazil:** We cannot talk about water and energy without talking about biodiversity. The LIFE Institute, headquartered in Curitiba, Brazil, is a standard-setting organization that is best known for creating the LIFE Methodology for Business and Biodiversity, which is a tool to measure the pressure index of biodiversity and the performance of a business regarding biodiversity. High-performing organizations can receive a certification. This tool has a strong track record, with 11 years of development (6 years in operation), and is considered one of 5 main global metrics for biodiversity, and the most mature and tested for businesses. It has helped in 52 conservation projects, among many other achievements. A newer development, the Sustainable Territorial Management tool, will be released in the coming months, made with help from Itaipu. The “dimensions of discussion” for the STS approach include environmental, economic, and cultural factors. In developing the tool, the LIFE Institute launched an international network to talk about sustainable territorial management issues and held public consultations resulting in hundreds of contributions. The final step is creating local diagnoses and organizing training for local players, so that they can play a major role in this new strategy for ensuring sustainable practices.
- d) **Ms. Bianca Brasil, Program Manager of Business Engagement with the Secretariat of the Convention on Biological Diversity, Canada:** The Convention of Biological Diversity, a legally binding agreement for 196 parties from the Rio Conventions, has laid out a modern plan for biodiversity and environmental policy. The post-2020 framework is relevant to business operations, regulatory requirements, and resource mobilization, among others. By 2050, the goal is to be “at harmony with nature.” Leading up to 2030, then, we must take urgent action to recover biodiversity. This plan involves 4 long-term goals, 21 action-oriented targets, and a monitoring framework. The 4 long-term goals include Ecosystems, Species, & Genetic Diversity; Benefits Shared Fairly and Equitably; Human Needs are Met; and Means of Implementation. The plan also includes specific targets, such as conserving and protecting at least 30% of lands and oceans, reducing pollution from all sources to levels not harmful to biodiversity, integrating biodiversity values into policy, regulations, and planning, and redirecting, repurposing, reforming, or eliminating incentives that are harmful for biodiversity. Among the most important steps is to mainstream these ideas so that biodiversity has a central role alongside means of implementation. Biodiversity should be mainstreamed in government, the economic sector, and society at large. Businesses have an important role in recognizing and specifying materiality, integrating values of biodiversity into decisions (including supply chains, operations, and portfolios), increasing funding for biodiversity protection and sustainable practices, and overall providing leadership and commitments.

## 6. Discussion and Questions

- a) Mr. Dallmeier, speaking on the interconnectedness of biodiversity and climate with business and economic growth, noted that extreme weather, such as that we have

observed in recent months, has seriously impacted the region around the Panama Canal. The Panama Canal depends on water and watershed and accumulation of water during dry season. 7 years ago there was record rain in the region during an extreme cycle. The Canal nearly collapsed. Water flow is more irregular, and banks can become unstable. With the canal in unideal condition, ships may be unable to pass, and there is even concern that some of the latest, largest ships may not fit, which would have a major effect on regional and global commerce. Management of the watershed is essential. Integrating a management system related to monitoring would allow water production to be managed more efficiently. Without that kind of system, there is risk of collapse for business and the economy. This is a more obvious example, but there are plenty of others as well.

- b)** An audience member asked Mr. Scheffer if it was possible to merge hydroelectric power with biodiversity values, since hydro often involves making large reservoirs that could disrupt ecosystems. Mr. Scheffer explained that if these concerns are considered in the planning stages of a project, such as they were over 30 years ago during the planning and implementation of the Itaipu dam, they can be averted. For instance, care was taken regarding the condition of water that flows through the turbines and down the river, because water that is too high in oxygen can kill organisms. We talk about green infrastructure, but we must also work with gray infrastructure. It's important to show the business community the connections between biodiversity and ecosystem services. By getting engineers and environmental scientists together preemptively, major issues can be averted.
- c)** When asked about the emphasis on interconnectivity in the LIFE STS plan, Ms. Borsato noted that, as Mr. Dallmeier said, connectivity plays a major role in biodiversity and genetic diversity within species. Besides that, "nature has no fences" and we need to expand our efforts wherever possible. The effort has to be collective; this is what led to territorial standards. Partnerships and engagement of local players is key. The collective effort is what will ensure preservation of biodiversity. Itaipu is a good model of this in the world of environmental management, but we need similar systems of cooperation within farming communities, co-ops, and more.
- d)** Ms. Brasil was asked about the importance of business engagement and noted that business is interconnected with other factors just like water, energy, climate, and biodiversity. The current crisis is interlinked. Climate and biodiversity need to be addressed as a whole. Business and financial services have a major role to play. Business can help create trends and influence others. They are also especially notable because, in many cases, businesses can have the resources to invest in new solutions, driving progress themselves.
- e)** An audience member noted that new hydroelectric dams are being built across the world. How can new investments (in infrastructure and beyond) make the environment a priority from the very beginning of the project? Mr. Scheffer reiterated that, if you are conscious

of the environmental from the beginning, you can ameliorate externalities. Hydropower can have major impacts, but if you start with a good foundation – for instance, understanding the relationships between water and energy, and the necessity of continuing ecosystem services – you can create a net benefit. “Nature collaborates with your business.”

7. **Closing:** Ms. Aquino thanked the speakers and audience for their contributions and closed the meeting.

## Annex I – Agenda



### Webinar

## ***The Key Role of Biodiversity in Support of Sustainable Water & Energy Solutions, Terrestrial Ecosystems & Climate Change Objectives***

13 August 2021

10:00 – 11:30 AM (NY time)

#### **Moderator:**

- *Ms. Lucy Aquino, Country Office Director, World Wildlife Fund, Paraguay*

#### **Opening Remarks:**

- *Mr. Luiz Felipe Carbonell, Coordination Director, Itaipu Binacional, Brazil*

#### **Panel Presentations:**

##### **Sharing experiences biodiversity, water and energy for fighting climate change**

- *Mr. Francisco Dallmeier, Director of Center for Conservation and Sustainability of the Smithsonian Conservation Biology Institute and the National Zoo, United States*
- *Mr. Ariel Scheffer, Head of Environmental Management, Itaipu Binacional, Brazil*
- *Ms. Regiane Borsato, Technical Manager LIFE Institute, Brazil*
- *Ms. Jan Cassin, Director of the Water Initiative at Forest Trends, United States*
- *Ms. Bianca Brasil, Program Manager of Business Engagement with the Secretariat of the Convention on Biological Diversity, Canada*

#### **Discussion and Questions**

#### **Closing Remarks:**

- *Mr. Miguél Gomez, Coordination Director, Itaipu Binacional, Paraguay*