

SUMMARY

COP27 Side Event (Virtual and In-Person) “Sustainable Water and Energy Solutions supporting Climate Change and Biodiversity Objectives through Innovation and Clean Technologies”

9 November 2022

**14:45 – 16:00 (Egypt Time),
7:45 – 9:00 (New York Time)**

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1. The COP27 side event on “Sustainable Water and Energy Solutions supporting Climate Change and Biodiversity Objectives through Innovation and Clean Technologies” was held on 9 November 2022 from 14:45 to 16:00 Egypt time at the SDG Pavilion.
2. **Ms. Radia Sedaoui**, Chief Energy Section, UNESCWA served as moderator and began by welcoming panelists and all the participants to this event.
3. **Mr. Minoru Takada**, Team Leader, Sustainable Energy, UN DESA provided introductory remarks emphasizing the importance of achieving the SDGs to ensure effective climate action. The mid period review by Member States of the SDGs will take place in 2023 during the UN General Assembly. SDG 6 and 7 are central to all SDGs.
4. **Mr. Marcos de Araujo**, Special Secretary for Social Articulation, Secretariat of Government of the Presidency, Brazil began by congratulating UN DESA for organizing the side event and said that Brazil is taking numerous measures to promote the SDGs particularly SDG 6 & 7 on water and energy. Brazil has over 26 projects covering 250 municipalities, in 10 states for the recovery of watersheds. The planting of 100 million saplings in the river basins is one of the most significant initiatives undertaken. Due to the rural electrification programmes of the Brazilian government, more than 7,000 families initially benefitted, and that number grew steadily to over 186,000 rural families by 2022. Brazilian energy today is one of the least carbon intensives in the world. ITAIPU contributes significantly to improve the energy needs of Brazil. These are just few of the examples of the initiatives taken by the Brazilian government for carbon neutral energy production through hydroelectric programmes. The Brazilian government is willing to share its expertise in this sector with countries around the world.
5. **Ms. Maria Antonia Gwynn**, Governing Council Member, Itaipu Binacional, Paraguay, emphasized the need for achieving the Paris Agreement goal of limiting the temperature increase to 1.5 Degree Celsius, especially by using clean and renewable sources of energy. She mentioned that ITAIPU is a role model for the rest of world for its production of clean and renewable energy. ITAIPU uses each and every drop of water in the most efficient way to produce clean and carbon free energy. The regular monitoring of the ITAIPU basin for flooding or other natural calamities helps to mitigate any problems that may arise, should such a situation develop. Continued innovation and improvements are necessary to keep running multipurpose dams such as ITAIPU. Monitoring of the sediment deposits guarantees constant flow of water to the region. These measures have helped reduce CO2 emissions. ITAIPU took

action concerning environmental protection with its project to preserve the biosphere. She stated that all we do today has an impact in future generations and if we all work together, we can win the fight against climate change.

6. **Mr. Pascual Fernández**, CEO, Canal de Isabel II, Comunidad de Madrid, Spain, said that his company provides urban water services to 200 municipalities in Spain and other Latin American countries benefitting over 7.6 million inhabitants. A lot of energy is needed to move water to the cities. Canal de Isabel II has taken several synergetic initiatives towards water management and energy production with 9 hydropower plants and 17 generators that produce renewable energy using biogas. Biogas is a byproduct resulting from wastewater treatment. It is easily generated from organic matters such as sewage, food and garden waste avoiding the use of fossil fuel. It is getting popular in many European countries and billions of euros are being invested in this biofuel. The EU launched a major energy project in 2022 with investment for research and innovation on hydrogen. Over 20% of the investment for hydrogen will be made in Spain. Canal is working on installing the first green hydrogen plant powered by PV solar and biogas cogeneration.
7. **Ms. Emily Rees**, Europe Representative, Ethanol Group, UNALA said that UNALA contributes significantly towards the SDGs on water and energy. UNALA was created in 2017 bringing together representatives of sugarcane and sugar industries from 11 Latin American countries, for sustainable production of sugar and sugar beets. These member states are committed to the sustainable development of their countries. The sugar sector is becoming one of the major producers of renewable energy. That includes ethanol which is used for transport but also bioelectricity, biomethane and green hydrogen. Sugarcane residues today produce 19% of the electricity in Brazil second to hydropower. The industry is also actively engaged in reforestation programmes. UNALA focuses on 3 main areas i.e., planet, people and prosperity. Sugarcane producing countries are helping mitigate emissions from fossil fuel sources all over the world. Over 90% of cars in Brazil today use flex fuel, i.e., ethanol or gasoline as energy source. Since the ethanol initiative in 2003, Brazil has helped to prevent 556 million tonnes of CO₂ emissions from being released into the atmosphere. UNALA members produce 1/3 of the world's ethanol and provide jobs to over 7 million people. It also helps protect the water springs. Sugarcane and sugar beets are far more than sugar, as they are used to produce several byproducts such as cosmetics and bio-based plastics, which are low in carbon and friendly to biodiversity.
8. **Ms. Shada El-Sharif**, Green Economy Specialist/Member of Jordan's delegation to COP-27, began by saying that Jordan was the second most water scarred country in the world. Its population consists of 34% of refugees from other countries. The King of Jordan introduced the Climate-Refugee Nexus at the COP-27. Jordan is facing double edged sword of drought and flood due to climate change. In 2020, the national green growth plan was introduced which is socially inclusive with inputs from refugees, other vulnerable sections of society, etc. It has a 10-year vision/plan for green economy and sustainable resources. SDG 6, 7 & 13 are important aspects for Jordan. Today Jordan has one of the best wastewater treatment plants, which utilizes biogas and renewable energy. Jordan depends a lot on tourism and within that they are heavily dependent on eco-tourism as well. Jordan has taken a very inclusive approach for the implementation of the SDGs to ensure cooperation from all sectors including NGOs, refugees, etc.

9. **Ms. Carol Mungo**, Research Fellow, Africa Center, SEI, Kenya, talked about the Sustainable Energy Solutions (SESA) for Africa. SEI has several collaborative projects between the EU and 9 Africa countries (Ghana, Kenya, Malawi, Morocco, Namibia, Nigeria, Rwanda, South Africa and Tanzania) from Oct 2021 to Sept 2025. SEI is working on solar and water-power projects in the great Lakes Regions of Kenya. They aim to provide replicable energy access technologies and business models through local living labs. The living labs are expected to facilitate co-development of scalable solutions to be tested, validated, and later replicated in the region. These solutions include solar PV for water, innovative energy storage systems including use of second-life EV batteries, smart micro-grids, waste-to-energy systems (biomass to biogas), climate-proofing, etc. The Incubator programme has been launched to support local innovation. The SDG Synergies are a practical tool for understanding how groups of policy areas and targets interact using systems thinking. SEI has supported governments to better align their national development plans, policies and strategies to the SDGs, climate goals and other agendas in Africa, Asia, and Latin America.
10. **Mr. Ariel Scheffer**, Head of Environmental Management, ITAIPU Binacional, Brazil, talked about the water energy nexus, hydropower plants and how ecosystems contribute to the production of energy. ITAIPU produces 10% of the energy consumed in Brazil and 90% of the energy in Paraguay. Water security and energy security, as well as biodiversity are of critical importance. The Amazon provides water for 57 medium and large dams, and over hundreds of small power plants as well. ITAIPU uses nature-based solutions to help with energy security and water security. ITAIPU won the World Water Prize in 2015 from the UN for water management. Today ITAIPU is doing an excellent job in biodiversity management. They have created the Territorial Intelligence Center to assess where to put their best efforts to have better results for water and land use. From 1985-2017 it achieved very good results in reforestation of the ITAIPU region.
11. **Mr. Sergio Méndez**, Climatologist, Reservoir Division, ITAIPU Binacional, Paraguay discussed the problems related to sediments and water quality expected in the ITAIPU region from climate change and highlighted the importance of adaptation and mitigation. A team of scientists from ITAIPU regularly monitors the reservoir and the temperatures in the dam. It is observed that there is an increase in temperatures, a decrease in precipitation and an increase in drought events. Due to sudden rain, there is also an increase in sediments. In terms of biodiversity, ITAIPU is monitoring the fish fauna in the area. The goal is to understand how climate change is affecting the ITAIPU basin and also to support climate mitigation and preservation of the natural resources in the region.
12. The side-event concluded with a vote of thanks from **Ms. Radia Sedaoui** to all panel members and participants. Due to paucity of time, there were no Q&As.