



SUSTAINABLE
**WATER &
ENERGY**
SOLUTIONS
NETWORK



**UN CLIMATE
CHANGE
CONFERENCE
UK 2021**

IN PARTNERSHIP WITH ITALY

COP26 Side Event

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

Summary

4 November 2021

14:00 – 15:30 Glasgow Time

10:00 – 11:30 New York Time

1. The Global Sustainable Water and Energy Solutions Network held a side event during COP26 on 4 November 2021 from 14:00-15:30 Glasgow time. The in-person portion of the hybrid event was held in the SDG Pavilion at COP26 and participants from across the world joined virtually via Zoom. The event was titled “**Sustainable Water and Energy Solutions supporting Climate Change Objectives during the Decade of Action and Beyond**” and included speakers from the public, private, and non-profit sectors, as well international organizations. The agenda, concept note, and list of speakers and presentations can be found on the [network’s website](#).
2. The main objectives of the event were “to share current and future activities, projects and programmes by participating members of the Sustainable Water and Energy Solutions Network in support of climate change mitigation and adaptation” and “to discuss the potential impacts of these actions at the local, regional and global level and the way forward beyond 2030.”
3. **Ms. Leena Srivastava**, Deputy Director General for Science at the International Institute for Applied Systems Analysis (IIASA), served as moderator and began by welcoming the participants and thanking the speakers and network for their contributions. She spoke about the history of the network and the importance of integrated solutions in the water and energy sectors.
4. **Mr. Liu Zhenmin**, Under-Secretary-General of the Department of Economic and Social Affairs of the United Nations, provided welcoming remarks. He thanked the network for their continued support and emphasized that, with less than a decade left to achieve the 2030 Agenda, we are still of track to meet our goals. Climate change is accelerating, ecosystems are at risk, and countless natural disasters are putting lives and livelihoods at risk. Water and energy goals are key to the entire 2030 Agenda, and the network plays an important role in sharing knowledge and mobilizing action. The network’s Energy Compact, for example, is an outstanding example of leadership and action. Moving forward, Mr. Liu expressed his support for strengthening the network and accelerating progress towards our goals in order to avert climate catastrophe.
5. **Minister Bento Albuquerque**, Minister of Mines and Energy of Brazil, provided opening remarks. He thanked the participants and spoke on the intersection of water and energy. Brazil has slightly more than 10% of the fresh water on the planet and one of the most renewable energy grids in the world. This correlation, he explained, has to do with the way Brazil manages the nexus of water

and energy, most notably by carefully managing the water. The Brazilian sugarcane industry was able to reduce their water usage from about 15-20 cubic meters per ton of sugarcane to 2, massively reducing their water consumption. Mr. Albuquerque finished by saying that each commitment matters and that the projects shared at the panel were all part of the larger effort to combat climate change and secure a better future.

6. **Mr. Mariano González**, Member of the Governing Council of Canal de Isabel II and Regional Vice Minister for the Environment and Agriculture of the Community of Madrid, Spain, emphasized the role that the 2030 Agenda has on the strategy and outlook of Canal de Isabel II and their strategy for setting a model for all of Europe to achieve the goals. The challenge, he explained, does not lie in access to natural resources, but in the lack of a model of how to use resources to generate electricity. Luckily, Canal de Isabel II and others are making massive progress in this field. Between hydroelectric power, (including microturbines), solar, green hydrogen, and biogas, Canal de Isabel II is leveraging various strategies to reduce emissions and improve output of energy and other beneficial products. For instance, wastewater from sanitation can be repurposed for fertilizer, and biogas can be used *in situ* to help power these processes and reduce energy dependency. Mr. González emphasized how Canal de Isabel II was able to take a problem (waste products from sanitation) and turn it into an opportunity (biogas and fertilizer production) and expressed that business opportunities can be in line with sustainable objectives. Going forward, as the demand for water in the region increases, Mr. González reaffirmed Canal de Isabel II's commitment to the 2030 Agenda and expressed that reducing water consumption can have benefits across the energy, water, and climate spaces.
7. **Mr. Alex Guerra**, General Director of the Private Institute for Climate Change Research (ICC), of Guatemala, began by showing a map of climate-related hazards in Guatemala, which covered nearly the entire country. This reality, he explained, supports the need for climate mitigation and adaptation. Mr. Guerra said that the sugar agroindustry is at the forefront of this movement in Guatemala, and has contributed new developments in climate change science, adaptation and vulnerability reduction, mitigation, and capacity building. Using sugarcane biomass instead of fossil fuels as an energy source avoids releasing over 4 million tons of CO₂ annually. Analyzing other possibly impactful measures to take within the sugar agroindustry, ICC and its partners have also determined that replacing diesel pumps with electric pumps would be among the most effective measures to take to reduce emissions. Certain other measures would not be cost effective, and businesses need to have proper motivation to make these changes in support of climate mitigation. Mr. Guerra closed by speaking on the importance of soil for carbon storage and fixation and aquifer recharge and that ICC continues to make strides in climate research and on promoting climate resilience, adaptation, and mitigation.
8. **Mr. Luiz Felipe Carbonell**, Coordination Director of Itaipu Binacional Brazil, first referenced Itaipu's mission statement, to "Generate quality electricity with social and environmental responsibility, driving sustainable development in Brazil and Paraguay." Sustainable development forms such an important, foundational part of Itaipu's mission, that they need to consider their purpose not only to produce energy but also to serve their communities and environment. The power produced by the Itaipu dam already goes a very long way in satisfying Brazil and Paraguay's energy needs (10% of Brazil's and 88% of Paraguay's), but the organization does more work in other fields as well. Mr. Carbonell highlighted the International School of Sustainability and the preservation of 75 thousand hectares of the Atlantic Forest, which contributes to 28% of the of the

total restoration of the Atlantic Forest in the State of Parana and the dissemination of invaluable ecosystem services. The company's current reservoir should have a useful life of more than 180 years. When it comes to climate resilience, Itaipu is especially dedicated to low carbon technologies, territorial and regional development, and water security, as well as sustainable energy generation. Itaipu's protected region of forest not only provides carbon sequestration and decreased sedimentation but also actually increases precipitation and the wellbeing of the reservoir. Through ecosystem management, international partnerships, and environmental education, Itaipu is continuing to follow its mission statement.

9. **Ms. Eshrat Waris**, Director of Product and Business of SOLshare Bangladesh, first shared that SOLshare is an energy-sharing startup organization that provides people in Bangladesh – a densely populated and rapidly developing country – clean energy through an innovative program. The national grid of Bangladesh is 97% fossil fuels, and there is no smart integration with other grids (excepting an initiative with SOLshare that allows some people to sell solar power to the national grid). Using the SOLBazaar, a peer-to-peer marketplace for energy, people can have more control over the energy produced and less energy goes wasted, as solar energy often does at peak day times. This is a major benefit in a country where 60 million people have unreliable access to electricity. This program can also extend to micromobility – the electric three-wheeler rickshaws that are common in the region. There are several more ideas on the horizon, including a change from lead batteries to lithium ion for the rickshaws, or smart meter pit stops. Ms. Waris finished by thanking the participants again and thanking the network for focusing on grassroots innovation and enterprise, which is scalable and effective.
10. **Mr. Harald Schützeichel**, Founder & Chairman of Stiftung Solarenergie (Solar Energy Foundation) of Germany, shared that the Solar Energy Foundation's mission to promote the supply and spread of decentralized solar energy. Since 2003, the organization has conducted this mission, first in Ethiopia, then in Kenya, the Philippines and Uganda. In each of these countries, the work is done through local organizations, seeking to support job creation and strengthen local solar companies in developing countries. Basic solar connections are enough to meet the needs of households, businesses, schools, and health stations, which can be a major change for communities. Notably, water pumps can drastically reduce the time otherwise spent collecting water, especially for smallholder farmers, and health centers have easier access to lighting and, importantly, cooling for medicines and vaccines. In closing, Mr. Schützeichel noted that the decentralized energy supplies in Africa are generally fueled by diesel or kerosene, and, while replacing these fossil fuels is positive, it is necessary to be careful not to replace one problem with another. Thus, the Solar Energy Foundation repurposes its batteries and other waste.
11. Ms. Srivastava thanked the panelists for their presentations and, with little time remaining for the Q&A session, posed one question to all the panelists: for all of the diverse solutions mentioned during the panel, what framework conditions are necessary for scaling-up or replication, and is it necessary that this is done through large companies and the private sector, or can it be done at the NGO or social level?
 - a. Mr. Schützeichel said that the availability of the product (sustainable energy) nor the willingness of the customer are the primary issue holding back progress on this front. Rather, the primary issue is the energy policy of each country, which is usually concentrated on fossil energy. If there is any focus on renewables, it is generally focused

on large products which bring money to the government, and not local companies. In order to make more progress, these policies must be changed.

- b. Mr. Guerra said that even in this event there were fitting examples of progress and impact in the private sector and at the local or municipal level. Funding, he said, was also not the biggest problem. He said that, if something makes economic sense for consumers, it will happen. Therefore, we need accessible solutions that people can support. In order to get to that point, we need to encourage technology transfer and the sharing of experiences, which are included in the Paris Agreement.
12. **Ms. Maria Antonia Gwynn**, Counselor of Itaipu Binacional Paraguay provided closing remarks. She thanked the panelists again and spoke on the importance of water and energy solutions supporting climate change objectives. The world today, she said, produced more renewable energy than ever before. The brutal impacts of climate change, such as drought and hydrological crisis in South America, can only be overcome through far-reaching international cooperation. She emphasized the importance of interacting and learning from each other. Like other energy sources can complement hydropower, so caring for the ecosystem surrounding energy projects must complement the energy projects. She closed with a final video from Itaipu Preserva which can be viewed on the network's website [here](#).