



## Regional Capacity Development Event Asia

Sustainable Water and Energy Solutions for a Resilient Recovery from COVID-19

Virtual Webinar | 1 December 2020

*Mr. Ibrahim Hafeezur Reham*, Director of India Operations at the **VITO Arabia Science and Technology LLC**, acted as moderator for this event. Mr. Reham emphasized the visibility of water and energy connectivity in production, consumption and technology innovations. Because of the direct or indirect impacts in both sectors, it is necessary to have more coordinated thinking and technical use to make a resilient and sustainable water-energy system. Water is a critical resource and energy is a major driver for development. Enhancing technologies and innovations that interlinks and transcend traditional sectoral silos is important for further develop approaches to the water-energy nexus.

**Introductory Session:** *Ms. Margaret Koli*, Research Associate at the **United Nations University**, highlighted the importance of looking beyond water and energy and considering their relevant interlinkages with other sectors, such as food. Regarding the water-energy-food (WEF) nexus, she stressed the need to enhance research and capacity building, to develop digital collaboration platforms, and to link research and practice. She asserted that, given the magnitude, complexity and interconnectedness among these sectors, they cannot be tackled by organizations alone but require global cooperation. Reflecting on the COVID-19 pandemic, she emphasized how critical it will be to digitize and deliver knowledge through multiple methods, bridging the digital divide and minimizing barriers to access. She concluded by highlighting the need for integrated water and energy solutions to be developed in local contexts with local knowledge, yet taking into account transboundary and large-scale drivers as well as the physical, social, cultural, economic and political environments.

**Panel Discussion:** *Mr. Sohel Ahmed*, Managing Director of **Grameen Shakti & SolShare** in Bangladesh, presented his organization's peer-to-peer solar mini-grids and technical intervention for users and non-users to exchange electricity seamlessly. He explained how these peer-to-peer systems can work to purify water, power solar pumps for ground and surface water, contribute to better health, reduce pressure on utility grids, promote proper hygiene and sanitation practices, and boost income generation and livelihood improvements through the use of drip irrigation systems. The implementation of new productive use appliances (PUAs) could also help in promoting income generating activities through solar water pumps, egg incubators, rice hullers and sewing machines, among other, as well as provide some additional relief from COVID-19. Mr. Ahmed concluded by highlighting the benefits of these solutions not only for the water and energy sectors but also to promote energy entrepreneurship in these rural areas as well as a more sustainable recovery from the COVID-19 pandemic.

*Ms. Dipti Vaghela*, Network Facilitator and Manager of the **Hydro Empowerment Network (HPNET)** in Myanmar, explained this network's mission to empower local practitioners of

community-scale hydro, particularly on sustainable hydro mini-grids. She explained how these grids are located typically in remote locations and are operated through a “social asset only model,” where communities operate it for only a few hours per day, even though electricity may be available for 24 hours. This approach results in low power factors with less revenue and minimum cash flow; it doesn’t optimally generate socioeconomic benefits, and maintenance is challenging as usually there are not enough funds to sustain these systems. Building on this model, Ms. Vaghela then described the work of her organization in supporting local practitioners’ transition from a *social asset approach* to an inclusive *social enterprise approach*. She highlighted the benefits of the social enterprise approach, including how it helps promote energy and economic development, allows for social enterprise production and utilization of electricity from the hydro mini-grids, provides community benefits and increases income generation.

*Mr. Anshuma*, Associate Director of the Water Resources Division at the **Energy and Resources Institute (TERI)** in India, described the most relevant challenges faced today by the water and energy sectors. This includes the decline of water availability per capita, stressed and scarce water river basins, increasing and competing water demand, over exploitation and depletion of ground water, inefficient use of water, water pollution issues, and wastewater reuse and treatment. He emphasized the critical need to focus on integrated water and energy resource management to promote efficiency, conservation and sustainability. Mr. Anshuman shared four case studies that have already produced promising data results to alleviate the challenges associated with the state of water. These case studies focus on thermal power plants to reduce water consumption and improve efficiency, agro-irrigation and the provision of free electricity to farmers in rural India, farming technologies and practices that reduced production risks, and raw water and wastewater treatment and energy distribution needs, desalination and water-waste as resource for promoting technologies and efficient practices, all of which already produced promising data results. Mr. Anshuman proposed recommendations for the way forward, including exploring ways to enhance water use efficiency, reducing the water footprint and working towards an efficient co-management of the water and energy sectors to set targets and benchmarks.

**Q&A:** The panel was followed by an interactive Q&A session with the audience. Participants thanked speakers for their contributions and several questions were posed. The discussion focused on the type of technologies that are better to improve efficiency and enhance integrated water and energy approaches, as well as on how to best enhance cooperation between the energy and water sectors and institutions to jointly develop capacities for integrated solutions. When asked about key actionable areas from the point of view of capacity development which can bring about a transformation in the water-energy nexus, the panelists explained that this may be enhanced through knowledge sharing and technology transfer, inclusive enterprises so that solutions do not create problems or inequitable development, and sharing technologies that can create sustainable models.

**Closing:** *Mr. Martin Niemetz*, Sustainable Development Expert at **UN DESA**, provided closing remarks. He thanked all panelists and participants for the insightful discussions, and invited participants to stay engaged in the discussions through the recently launched website of the [\*Global Sustainable Water and Energy Solutions Network\*](#), which aims to be a hub for knowledge sharing on integrated water and energy solutions in support of the 2030 Agenda and the Paris Agreement.