Stockholm World Water Week in 2018

Asia Focus: Challenging Nexus technologies, a force for good?

Session Time: Wednesday 29 August, 11:00-12:30pm

Summary:

The objective of this session is to highlight the complex and interconnected nature of water, energy, ecosystems and food, with a specific focus on the role that **new technologies play in solving and/or exacerbating nexus issues – particularly as resources become scarce**.

Event description:

Water, energy, land and ecosystems are essential for satisfying basic human needs and securing access to these resources in a sustainable manner is fundamental to the continued development that is required to meet all of the SDGs. Sector policies regarding water, energy, land and ecosystems have deep and consequential impacts on one another. Policies from one sector often entail serious but overlooked externalities for other sectors at local, national, regional and global scales. This is especially the case in the context of increasing resource scarcity and associated competition for these vital resources.

New technologies – including those in remote sensing, renewable energy, water treatment, hydropower, carbon mitigation, artificial intelligence and blockchain are seen by many as holding huge potential to help solve issues at the nexus – particularly when resources are insufficient to serve the needs of all sectors and users. Conversely, there are ways in which some of these technologies to worsen challenges at the nexus if proper governance and management mechanisms are not in place.

Objectives and Outcomes:

The objective of this session is to conduct a highly interactive debate about technologies at the nexus to help develop and share new means by which new technologies can be maximised to help solve nexus challenges, while also mitigating potential risks.

Event classification:

Energy Sources, Food Security, Governance, Nexus, Water Management

Convenors:

Food and Agricultural Organisation of the United Nations, Asian Development Bank, International Water Management Institute and Australian Water Partnership.

Session Structure:

Time	Activity
11:00 – 11:15	**Introduction and the Australian Nexus Experience by Michael Wilson (DFAT)**
11:15 – 11:20	**Introduction to the Nexus – Louise Whiting (FAO)**
11:20 – 11:25	**Introduction to the debate - Ravi Narayanan**
11:20 – 12:00	**Debate - moderated by Ravi Narayanan** **Debate Question:** With regard to growing competition for often-limited resources at the water-energy-ecosystems-food nexus: Is technology a force for good? **Participants:** ***For: Technology is a force for good*** **1.** IWMI - Luna Bharati **2.** ADB - Tom Panella **3.** Young Water Fellow - Nuha Anfares **4.** CI - Vittoria Elliot ***Against: Technology is not a force for good*** **5.** USGS - Abigail Lynch **6.** RMCG - Rob Rendell **7.** Young Water Fellow - Sarah Motsatse **8.** DWFI - Christopher Neale
12:00 – 12:25	**Audience interaction**
12:25 – 12:30	**Closing Remarks by Ravi Narayanan**

INTRODUCTION

MICHAEL WILSON is Assistant Secretary, Governance, Fragility and Water Branch in the Australian Department of Foreign Affairs and Trade

Michael joined the former Australian Agency for International Development (AusAID) in 2005 and managed branches responsible for multilateral engagement, humanitarian and disaster response, communications and public affairs, ministerial and parliamentary services and bilateral programs across south-east Asia and the middle east. From 2011 to 2014, he was responsible for the Australian Government's bilateral and regional aid programs in mainland south-east Asia, based in Hanoi, Vietnam. Michael holds degrees in political science and international relations from the Australian National University and the London School of Economics and Political Science.

INTRODUCTION TO THE NEXUS

LOUISE WHITING, Senior Water Resources Consultant, Asia Pacific Regional office for the United National Food and Agricultural Organization

Louise is an experienced policy-maker, programme developer and project manager at national and international levels, specializing in water resources management and policy as it relates to irrigation and food production, climate change, environmental flows and ecosystem services.

She has worked in Australian politics where was involved in intergovernmental negotiations during the Murray-Darling Basin reform period. She spent four years with the UN Food and Agriculture Organization (FAO) implementing large-scale, multi-country water resources management and irrigation projects in Asia and Africa and building organizational understanding on water governance and politics. Louise was also a Senior Policy Analyst for Water Aid where she worked to integrate the water sub-sectors, influence global climate change policy, increase the flows of climate finance to sustainable water projects and provide technical backstopping support to country programming across Africa, Asia and Latin America.

DEBATERS (FOR TEAM)

LUNA BHARATI, Principal Researcher-Hydrology and Water Resources, International Water Management Institute, Kathmandu, Nepal

Luna Bharati has 15 years of post-PhD. experience as a scientist and research program manager. She is currently a Principal Researcher and project manager at the International Water Management Institute (IWMI). The key areas of her interests and expertise are in integrated and sustainable water

resources management. She has also worked extensively in assessing climate change risks and impacts as well as planning adaptation strategies from large river basins to small mountain watersheds. Dr. Bharati is based at the Center for Development Research (ZEF), Bonn, Germany since August, 2016 and is the IWMI country representative for Germany.

THOMAS PANELLA Chief of Water Sector Group in the Sustainable Development and Climate Change Department, Asian Development Bank

Thomas Panella is the Asian Development Bank's (ADB's) Chief of Water Sector Group in the Sustainable Development and Climate Change Department responsible for overall policy direction, operational innovation, and quality control for the water portfolio. Prior to this, he served as ADB's Country Director in Afghanistan and led project/portfolio development and management, policy dialogue, donor coordination, and resident mission management. He joined ADB in 2003 as a Water Resources Specialist and has led water resources operations in Central, South, and Southeast Asia including postings in Uzbekistan as head of operations and Indonesia as head of the water and the climate change programs. Prior to ADB, he worked as a Water Resources Management Specialist in the World Bank's Environmentally and Socially Sustainable Development Department from 2000 to 2002. He has consulted for the United Nations and other international and US organizations on resource management. From 1989 to 1993, he served as the Southern California Regional Director for Tabors, Caramanis and Associates, a resource management consultancy. He was Convener of the California Urban Water Conservation Council in 1997. He is currently a Member of the Global Water Partnership's Technical Committee. He received a Masters and PhD in Public Policy and a Master of Science in Energy and Resources from the University of California at Berkeley.

NUHA ANFARES, Young Water Fellow

Nuha Anfaresi is an undergraduate student of environmental engineering at the Islamic University of Indonesia. She is one of the winners of the 48th Scientific Competition of Indonesian Institute of Sciences and selected as one of the 2018 Young Water Fellows by Young Water Solutions due to the development of a sand filter that removes heavy metal ions from water in tin pits.

DR. VITTORIA ELLIOTT, Mekong Science Director, Moore Center for Science, Conservation International and Research Associate at the Natural History Museum, Smithsonian Institution

Vittoria is an evolutionary ecologist and integrative conservation biologist. Her research, which is truly applied integrates results from diverse disciplines ranging from molecular ecology to socioeconomics, to address in-situ needs for policy, management and interventions. She has been working in the Greater Mekong for the last 10 years, largely focused on the research and interventions needed to sustain viable inland fisheries in the Mekong. Vittoria integrates the use of

various technologies, including environmental DNA and other molecular techniques and earth observation approaches into her research portfolio.

DEBATERS (AGAINST TEAM)

ABIGAIL LYNCH, Research Fish Biologist, U.S. Geological Survey, National Climate Adaptation Science Center

Abigail Lynch is a Research Fish Biologist with the U.S. Geological Survey's National Climate Adaptation Science Center. Working primarily in inland systems, Abby's research examines the impacts of global change on fish at local, national, and global scales. She coordinates the international 'InFish' research network is particularly interested novel approaches to assessing inland fisheries to inform sustainable development discussions.

ROB RENDELL, Senior Fellow, RMCG An environmental and agricultural consultancy

Rob has more than 40 years' experience in irrigation, groundwater drainage, salinity management, project management, extension, reclaimed water re-use, practical irrigation farming and farm management, agricultural industry benchmarking and sustainability indicators. Rob's wide range of experience from the practical to the technical/managerial and also to strategy and policy, gives him ability to contribute at many levels. He is recognized as a leader in the water and irrigated agriculture sector.

SARAH MOTSATSE, CEWAS Fellow

Sarah Motsatse is An Environment and Water Science (Cum Laude) graduate from the University of the Western Cape, South Africa. Although a scientist she has an affinity for social development and passionate about working in sustainable projects. She was on the Entrepreneurship and Empowerment in South Africa programme, an exchange between the University of Florida, University of Colorado and Texas A&M. Originally from Lesotho, she is currently developing a project that bridges the gap between food security, climate change and water security and was selected as a 2018 CEWAS fellow funded by the Re Swiss Foundation.

CHRISTOPHER M. U. NEALE, Director of Research, Daugherty Water for Food Global Institute, University of Nebraska

Professor Neale joined the University of Nebraska in 2013 and oversees the Daugherty Water for Food Institute's research programs, engaging faculty and global fellows in new projects and initiating partnerships with organizations and universities worldwide. Previously, Neale was a professor of irrigation engineering at Utah State University, where he led efforts in remote sensing of agricultural

and natural resources since 1988. He has an extensive background in agricultural water management research and projects in the western U.S., Africa, South America and the Caribbean.