

Knowledge Forum on Water Security and Climate Change: *Innovative solutions for sustainable water resources management*

18 – 20 October 2017
Room IX
UNESCO HQ, Paris, France

Achieving and maintaining water security is increasingly challenging under current climatic variability and projected climate change, especially in vulnerable areas such as mountainous and arid regions. Therefore, there is a need to identify pathways to integrate the science-based understanding of climate impacts on water security into mitigation and adaptation policies.

As a response, the Knowledge Forum on Water Security and Climate Change has been designed to strengthen this process through keynote presentations to highlight scientific frontiers, opportunities and gaps in research and scientific uncertainties. It will bring together researchers, practitioners, policy and decision makers, partners and collaborators working in the water sector to share knowledge, best practices and ideas for a sustainable water resources management under the impacts of global change. The participants will be engaged in the crucial discussion of water security in contribution to the Sustainable Development Goals (SDGs) and sustainable future more broadly.

The Knowledge Forum builds further upon the inception meeting of the project “Addressing Water Security: Climate Impacts and Adaptation Responses in Africa, Asia and Latin America and Caribbean”, which provided recommendations for three key areas of action: Vulnerability Assessment; Science-Policy for Adaptation and Awareness Raising; and Communication among multi-stakeholders.

The Knowledge Forum will address water security under climate change by:

1. *Identifying the gaps remaining in the science-policy dialogue on water security and water diplomacy*
2. *Highlighting the role of international networks and citizen science for communication among multi-stakeholders*
3. *Identifying climate impacts and showcasing innovative solutions and adaptation strategies to address water security challenges*
4. *Engage in a dialogue on scientific challenges to achieve the water-related SDGs and the Paris agreement, involving visions from young researchers and professionals*

Expected outcomes:

1. *Scientific frontiers, opportunities, gaps in research and scientific uncertainties identified*
2. *Knowledge and best practices shared to address the most pressing water challenges under global change, highlighting the contribution from young researchers and professionals*
3. *Strengthening communication between multi-stakeholders using a participatory approach and by identifying priorities, capacities and funding needs*
4. *Cooperation, collaboration and synergies strengthened among IHP and partners*
5. *Key recommendations from each session to develop policy briefs and guidance for further action*

Preliminary Agenda

<p>Knowledge Forum on Water Security and Climate Change: Innovative Solutions for Sustainable Water Resources Management</p> <p>18-20 October 2017</p> <p>Room IX, Floor -1, UNESCO Headquarters, Paris, France</p>	
<p>Day 1: 18 October</p>	
<p>09:00 – 09:30</p>	<p><i>Registration of participants</i></p>
<p>09:30 – 10:00</p>	<p><i>Opening Ceremony</i></p> <p>Master of Ceremony: Ms Blanca Jiménez-Cisneros, Director UNESCO-IHP</p> <p>Welcome and opening address by Ms Flavia Schlegel, Assistant Director-General for the Natural Sciences at UNESCO</p> <p>Opening remarks by Mr Dries Willems, Deputy General Representative of the Government of Flanders to UNESCO</p> <p>Presentation on the Knowledge Forum on Water Security and Climate Change: Mr Anil Mishra / Mr Koen Verbist, UNESCO-IHP</p>
<p>10:00 – 11:30</p>	<p><i>High Level Science-Policy Dialogue on Water Security</i></p> <p>Moderator: Ms Blanca Jiménez-Cisneros, Director UNESCO-IHP</p> <p>Mr Abdin Salih, Former President of the UNESCO-IHP Intergovernmental Council</p> <p>Mr Abdoulaye Sene, Organizing committee member World Water Forum 2021, Senegal</p> <p>Mr Carlos Estevez, Director of the Water Authority, Chile</p> <p>Mr Dirk Van der Stede, Flanders Knowledge Centre Water (Vlakwa/VITO), Belgium</p> <p>Ms Chantal Marijnissen, EU-DEVCO Sustainable Energy and Climate Change</p> <p>Mr César Carmona Moreno, EU-Joint Research Center, Italy</p> <p>Ms Elma Montaña, Science Director, Interamerican Institute for Climate Change Research, Montevideo, Uruguay</p> <p>Mr Tandong Yao, Institute of Tibetan Plateau Research, Beijing, China</p> <p>Q&A</p>
<p>11:30 – 12:00</p>	<p>Group Photo and Coffee Break</p>

<p>12:00 – 13:00</p>	<p><i>Science contributions to the SDGs and the Paris Agreement</i></p> <p>Moderator: Mr Abou Amani, UNESCO-IHP</p> <p>Development of the SDG 6 Synthesis Report – Evidence-based knowledge synthesis to assist policy making effectively Mr Stefan Uhlenbrook, Director UNESCO World Water Assessment Programme</p> <p><i>The Global Water Futures Programme and its Science Contributions to the UN’s Sustainable Development Goals and the Paris Climate Agreement</i> Mr John Pomeroy, Canada Research Chair in Water Resources and Climate Change and Associate Program Director of Global Water Futures</p> <p><i>Towards integrated solutions for water, energy, and land using an integrated nexus modeling framework</i> Mr Yoshihide Wada, International Institute for Applied Systems Analysis</p> <p>Mr Christophe Cudennec, Secretary General International Association of Hydrological Sciences (IAHS)</p> <p>Q&A</p>
<p>13:00 – 14:00</p>	<p>Lunch</p>
<p>14:00 - 16:00</p>	<p><i>Sharing Knowledge for Water Security</i></p> <p><i>Addressing Water Security through International Collaboration Networks</i> Moderator: Mr Anil Mishra, UNESCO-IHP</p> <p><i>The G-WADI Global Network for Drylands: A History of Collaboration to Address Applied Water Challenges in Arid Lands</i> Mr William Logan, Director International Center for Integrated Water Resources Management (ICIWaRM), USA</p> <p><i>AU-NEPAD Centres of Excellence on Water Science – The Scientific Component</i> Mr César Carmona Moreno, EU-Joint Research Centre, Italy</p> <p><i>Two International Water Security Networks: The International Water Security Network (IWSN); and AQUASEC, the IAI Center for Excellence for Water Security in the Americas</i> Mr Robert Varady, University of Arizona, USA</p> <p><i>The university network “Centers for Natural Resources and Development” (CNRD)</i> Mr Lars Ribbe, Institute for Tropical Technology, Köln, Germany</p> <p>Q&A</p> <p><i>Citizen Science for Water Security</i> <i>Pioneering Approaches to Solve Wicked Water Problems</i> Mr David Hannah, UNESCO Chair in Water Science, Birmingham University, United Kingdom</p> <p><i>Integration of Citizen-collected Data to Flood Modeling for Real-time Hazard Mapping</i> Mr Takahiro Sayama, Kyoto University, Japan</p>

	<p><i>Citizen Science Networks in Latin America and Africa</i> Mr Wouter Buytaert, Imperial College London, United Kingdom</p> <p><i>Bringing science to local communities in the Bolivian Highlands</i> Ms Magali Garcia, UMSA, La Paz, Bolivia</p> <p>Q&A</p>
16:00 – 16:20	Coffee Break
16:20 - 18:00	<p><i>Water Security: Successful Experiences from across the Globe</i></p> <p>Moderator: Mr William Logan, Director ICIWaRM, USA</p> <p><i>Managing Water in Arid regions of Latin America and the Caribbean (MWAR-LAC)</i> – Mr Koen Verbist, UNESCO-IHP</p> <p><i>Permanent Interstate Committee for drought control in the Sahel (CILSS)</i> – Mr Abdou Ali, AGRHYMET, Niger</p> <p><i>Platform on Water and Disasters</i> Mr Toshio Koike, ICHARM, Japan</p> <p><i>Hydroclimate services in the Zambezi Water basin</i> Mr Amon Murwira, Zimbabwe</p> <p><i>African Drought Early Warning System Expansion to Southern Africa</i> Mr Abou Amani, UNESCO-IHP</p> <p><i>The SADC integrated water resources management initiative (SADC-WIN)</i> – Ms Peggy Oti-Boateng, UNESCO Regional Office for Southern Africa</p> <p><i>(TBC) The HydroBID for Addressing Water Security Challenges at the Watershed Scale</i> – Mr Fekadu Moreda, Interamerican Development Bank, USA</p> <p>Q&A</p>
18:30	Cocktail reception offered by the General Representation of the Government of Flanders (Embassy of Belgium)
Day 2: 19 October	
09:30 - 11:00	<p><i>Eyes on water: Innovative Technologies for Water Resources Monitoring</i></p> <p>Moderator: Mr. Koen Verbist, UNESCO-IHP</p> <p><i>WMO innovative approach to water information</i> Mr Dominique Berod, WMO</p> <p><i>iRain & RainSphere: Satellite Precipitation Data in Your Hand</i> Mr Kuolin Hsu, CHRS, UCLrvine</p> <p><i>Monitoring and Forecasting Floods and Drought in Data Scarce Regions</i>– Mr Justin Sheffield, Southampton University, UK – Princeton University, USA</p>

	<p><i>Satellite and Water Monitoring Cooperation</i> Ms Moeka Yamaji, Earth Observation Research Center, JAXA</p> <p><i>Monitoring Water Resources from Space – the NASA Water Resources Program</i> Mr Kel Markert, NASA Applied Sciences Program</p> <p><i>Monitoring water quality and agricultural water stress applying optical satellite data –</i> Mr Bart Deronde, Flemish Institute for Technological Research (VITO), Belgium</p> <p><i>Water Information Network System (IHP-WINS)</i> Mr Youssef Filali-Meknassi, UNESCO-IHP</p> <p>Q&A</p>
11:00 – 11:20	Coffee Break
11:20 – 13:00	<p><i>Youth in the Global Water and Climate Discussion</i></p> <p>Moderator: Mr Yo Nishimura, UNESCO-IHP</p> <p>Presentations:</p> <p><i>UNESCO’s role in engaging youth in Water Security issues</i> Ms Nicole Webley, UNESCO-IHP</p> <p><i>Youth involvement in the local, regional and global action in addressing the challenges of water security and climate change</i> Ms Jovana Dodos, European Youth Delegate to the World Water Council</p> <p><i>Co-producing knowledge for global water and climate challenges: the role of early career professionals in sustainability research</i> Ms Hannah Moesberger, Future Earth Global Hub Paris, France</p> <p><i>Youth for Climate Change in Sulawesi Tengah, Indonesia</i> Ms Sukma Impian Riverningtyas, Youth for Climate Change, Indonesia</p> <p><i>Historical assessment of drought in Kenya using model and satellite data: Case of 2016-2017 drought</i> Mr David Ongo, Regional Centre for Mapping of Resources for Development (RCMRD), Kenya</p> <p><i>Real-Time Hydrologic Monitoring System for Paraguay</i> Mr Daniel Vazquez, Itaipu Binacional, Paraguay-Brazil</p> <p><i>Scientific and participatory approaches to monitor water-related SDG (SDG-6) in Tunisia</i> Mr Raed Fehri, Earth and Life Institute, Catholic University of Leuven</p> <p>Panel Discussion</p> <p>Q&A</p>
13:00 - 14:00	Lunch break
14:00 – 16:00	<p><i>Water Security and Climate Change Impacts in Mountains</i></p> <p>Moderator: Mr Anil Mishra, UNESCO-IHP</p>

	<p>Introductory Video : The Impact of glacier retreat in the Andes: International Multidisciplinary Network for Adaptation Strategies</p> <p><i>Outcomes of the FUST Project 'The Impact of Glacier Retreat in the Andes'</i> Mr Koen Verbist, UNESCO-IHP</p> <p><i>The World Glacier Monitoring Service (WGMS)</i> Mr Martin Hoelzle, Department of Geoscience, University of Fribourg</p> <p><i>Climate Change and Mountain Hydrology: Results from the Global Energy and Water Exchange Project's International Network for Alpine Research Catchment Hydrology</i> Mr John Pomeroy, Research Chair in Water Resources and Climate Change Canada</p> <p><i>Glacial Lake Risk and Climate Change in Mountainous Areas</i> Mr Daene McKinney, University of Texas at Austin, USA</p> <p><i>Tracing the White Water: Contributions of Receding Glaciers to Water Resources –</i> Mr Wouter Buytaert, Imperial College of London, UK</p> <p><i>Changes in glaciation of Balkhash-Alakol basin and their impact on water resources</i> Mr Igor Seversky, Almaty, Kazakhstan</p> <p>Mr Tandong Yao, Institute of Tibetan Plateau Research, Beijing, China</p> <p>Q&A</p>
<p>16:00 – 16:20</p>	<p>Coffee break</p>
<p>16:20 - 18:00</p>	<p>Launch of New Publications</p> <p>Moderator: Mr George Papagiannis, UNESCO Division of Public Information</p> <ul style="list-style-type: none"> - <i>Mountain Ecosystem Services and Climate Change – A Global Overview of Potential Threats and Strategies for Adaptation</i> Mr Martin Price, University of the Highlands and Islands Perth College - <i>Sediment Problems and Strategies for their Management: Experiences from several large river basins</i> Mr Anil Mishra, UNESCO-IHP - <i>G-WADI: The Way Forward</i> Mr William Logan, ICIWaRM, USA - <i>The Impact of Glacier Retreat in the Andes</i> Mr Wouter Buytaert, Imperial College of London, UK - <i>The Water Vulnerability Atlas of the Andean Region</i> Mr Björn Alfthan, GRID Arendal - <i>The Latin American and Caribbean Drought Atlas</i> Mr Gabriel Mancilla, CAZALAC - <i>The Chilean Agroclimatic Observatory – Tool for Climate Risk Management</i> Mr Antonio Yaksic, Ministry of Agriculture, Chile

	Q&A
Day 3: 20 October	
09:30 – 10:50	<p>Addressing Climate Change Impacts and Adaptation Responses</p> <p>Moderator: Ms Blanca Jiménez-Cisneros, Director UNESCO-IHP</p> <p><i>Collaborative Risk Informed Decision Analysis (CRIDA)</i> Mr John Mathews, AGWA</p> <p>Mr Felice Zaccheo, EU-DEVCO Sustainable Energy and Climate Change Unit</p> <p><i>Water resources and adaptation to climate change: French Water Partnership's recommendations for action and examples</i> - Ms Nathalie Dorfliger, French Water Partnership</p> <p><i>The Groundwater Resources Assessment under the Pressures of Humanity and Climate Change Programme (GRAPHIC) – Thales Carvalho Resende, UNESCO-IHP</i></p> <p><i>Indigenous Knowledge for Climate Change Assessment and Adaptation</i> Mr Douglas Nakashima, UNESCO-LINKS</p> <p>Q&A</p>
10:50 – 11:10	Coffee Break
11:10 – 13:00	<p>Water Diplomacy: Building Peace through Water Cooperation</p> <p>Moderator: Ms Renée Gift, UNESCO-IHP</p> <p><i>Outcomes of the 2017 University of Arizona Conference on Science Diplomacy and Policy</i> Mr Robert Varady, Udall Center for Public Policy, USA</p> <p><i>Water Diplomacy: Means of Developing Good Neighborhood Relations</i> Mr Siegfried Demuth, Director, International Centre for Water Resources and Global Change, Germany</p> <p>Ms Zaki Shubber, Lecturer in Law and Water Diplomacy, IHE, Netherlands</p> <p><i>The contribution of Academia to water diplomacy, a reflexive perspective</i> Mr Christian Bréthaut, Assistant Professor, Geneva Water Hub, Switzerland</p> <p><i>Hydrodiplomacy in Transboundary Waters</i> Mr Aaron Wolf, Professor of Geography, Oregon State University, USA</p> <p><i>Multi-Track Water Diplomacy: Role of Civil Society and Science in Transboundary Water Cooperation</i> Ms Yumiko Yasuda, Global Water Partnership, Sweden</p> <p><i>Impact of Democracy Rules on Efficiency of International Water Law</i> Ms Monika Zalewska, University of Lodz, Poland</p> <p>Panel Discussion</p>

<p>13:00 - 14:00</p>	<p>Lunch break</p>
<p>14:00 – 15:00</p>	<p><i>International Cooperation for Water Security</i></p> <p>Moderator: Ms Jessica Jeavons, Bureau for Strategic Planning, UNESCO</p> <p><i>Water Security, or the uneven race between technology and governance</i> Mr Aleix Capdevila, Senior Water Resources Management Specialist, The World Bank</p> <p><i>The Flemish UNESCO Trust Fund (FUST)</i> Mr Gert Verreet, Flemish Government, Department Economy Science and Innovation (EWI), Belgium</p> <p><i>The Global Environment Facility</i> - Mr Vladimir Mamaev, UNDP - Global Environmental Finance Unit</p> <p>(TBC) The Interamerican Institute for Climate Change Research - Ms Elma Montaña, Science Director, IAI</p> <p>(TBC) Mr Martin Kerres, GIZ</p> <p>Q&A</p>
<p>15:00 – 15:30</p>	<p><i>Closing Ceremony</i></p> <p>Master of Ceremony: Mr Anil Mishra, UNESCO-IHP</p> <p>Ms Blanca Jiménez-Cisneros, Director UNESCO-IHP</p> <p>Mr Gert Verreet, Flemish Government, Department Economy Science and Innovation (EWI), Belgium</p>