Technical Session on Science and Technology to Advance DRR on Water
Activating International Initiatives

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Director of the Division of Water Sciences and Secretary of the International Hydrological Programme (IHP), UNESCO
- Nearly 80% of the world’s population is exposed to high levels of threat to water security

- IPCC’s Fifth Assessment Report on Impacts, Adaptation and Vulnerability (AR5) 2014: Water Security is at risk

**IPCC’s Fifth Assessment Report**

WG-2 on Impacts, Adaptation and Vulnerability (AR5) 2014:

**Risks and Challenges**

**IHP-VIII (2014-2021):**

*Water security: Responses to local, regional and global challenges*

**IHP contributing to SDGs mainly:**

**GOAL 6**

*Ensure availability and sustainable management of water and sanitation for all*

**GOAL 11**

*Make cities and human settlements inclusive, safe, resilient and sustainable*

**GOAL 13**

*Take urgent action to combat climate change and its impacts*
Improve knowledge and innovation to address water security challenges

**AXIS 1**
Mobilizing international cooperation to improve knowledge and innovation to address water security challenges

**AXIS 2**
Strengthening the Science-Policy interface to reach water security at local, national, regional, and global levels

**AXIS 3**
Developing institutional and human capacities for water security and sustainability

**Themes**
- Water-related disasters and hydrological change
- Groundwater in a changing environment
- Addressing water scarcity and water quality
- Water and human settlements of the future
- Ecohydrology: Engineering harmony for a sustainable world
- Education, key to water security

**IHP-VIII Responses**
- 6 Themes
- 3 Axes
- 2014-2021
International Flood Initiative (IFI)

- Develops capacity building to better understand and respond to floods hazards while taking advantage of their benefits.
- Focus on research, information networking, education and training to empower communities.
Flood Hazard Mapping covering lower Indus Basin in Pakistan:

Maps with layers considering Settlements, Roads, Schools, Agriculture etc.
Platform of global networking and knowledge sharing between international entities:

• Surveys drought management;
• collects information;
• helps affected countries;
• develops capacity building;
• strengthens public participation and,
• promotes regional and international cooperation on drought issues.
Case Studies: Africa and LAC Droughts Monitors

- Strengthen the capacity of African and LAC countries for near real-time monitoring and seasonal forecasting; to raise awareness of the impact of drought on vulnerable and disadvantaged groups.
Global Network on Water and Development Information for Arid Lands: G-WADI

- Improved understanding of the characteristics of hydrological systems and water management needs in arid areas
- Capacity building of individuals and institutions
- Broad dissemination of information to the user community and the public
- Exchange of experience
- Promoting integrated basin management and the development and use of appropriate decision support tools
G-WADI Website: http://www.gwadi.org/
FRIEND: Flow Regimes from International Experimental and Network Data - Water

A network of scientists and water managers:

- Regional water resources
- Water-related disasters
- Global change; water cycle
- Water education and capacity building
Snow and Ice Networks

Regional Workshop: Assessment of Snow-Glacier and Water Resources in Asia
28-30 November 2006, Almaty, Kazakhstan

High Level Panel session: Climate Change Impacts on Water Resources and Adaptation policies in Mountainous regions
13-November 2013, 37th General Conference
UNESCO Cultural Heritage Sites

Marzeion and Levermann (2014)

1 – 1,5% Land
5 – 10% Population
UNESCO- IHP main activities during COP21

Exhibition: “Mountains: early warning systems for climate change”
2 November-20 December

Launching of the commemorative Book 50 years of UNESCO Water Programmes
2 December, 2015

Water and Climate Day: 7 activities
UNESCO’s Pavilion, 2 December, COP21

Håll-Bar: “Implementing the Paris Agenda; Water as the summoning power?”
8 December 2015

Outreach Event: “Raising awareness on Climate Change: Key findings of the IPCC 5th Assessment Report (AR5)”
7 December, 2015

UN-WATER Side Event: “The pivotal role of water in climate change adaptation and mitigation”
7 December 2015, COP21
International Conference on Water, megacities and global change
1-4 December UNESCO HQ - Paris - France

- Organized by UNESCO-IHP in partnership with ARCEAU-IdF, the association of water professionals, researchers, decision-makers and elected officials from the Paris metropolitan area.
- 7 Themes around vulnerability, resilience and climate change
- Theoretical aspects, case studies and policies (130 authors from 38 countries)
- Scientist, policy makers, public and private water utilities, local and regional governments, NGOs, etc
- An initiative with the civil society, under the leadership of IHP, for the creation of an international network to foster cooperation between megacities will be launched.
  A declaration has been prepared that will to be conveyed to the main stakeholders of the COP21.
Project Achievements - Publications

Cambridge Press
Thank you!

www.unesco.org/water