
Topic Session Proposal

Topic 1.3

Managing Disasters

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In consultation with Topic 1.3 Consultation Group (those who were in the 2nd
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Met. Service, Turkish Grain Board, UNESCO, UNFCCC SECRETARIAT, UN/ISDR,
USAGE/Institute of Water Resources, World Bank, WECF and Walloon Region of
Belgium, WMO

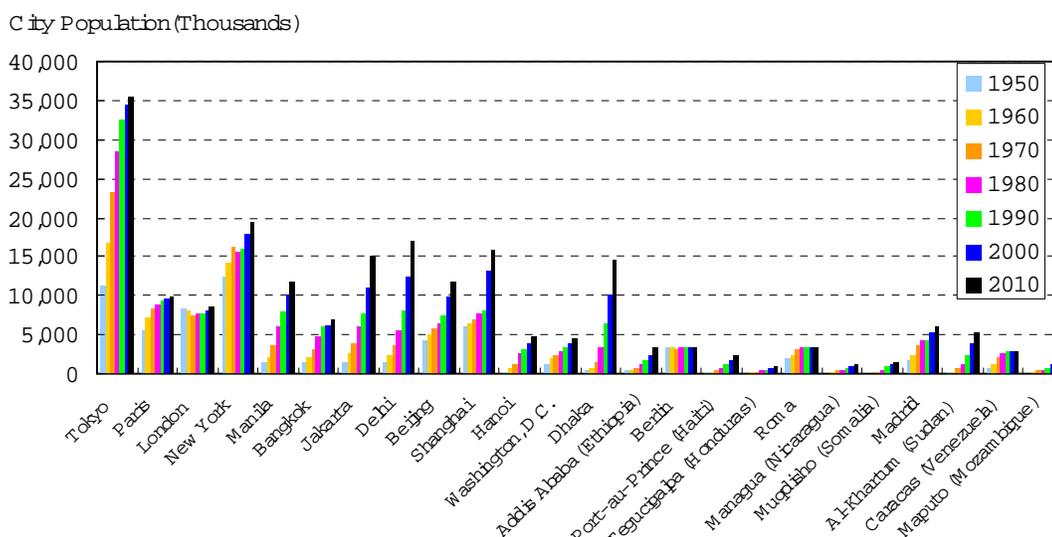
Table of Contents

1. Introduction	1
1.1 Background.....	1
1.2 Objectives	4
1.3 Problem identification:	4
2. Potential Sessions	5
2.1 Session 1: Trialogue Session	5
2.2 Session 2: Technologies for Water-Related Disaster Management	6
2.3 Session 3: New Design Criteria for Extreme Events/ Climate Change	8
2.4 Session 4: Emergency Water Management During and After Disasters/ Conflicts	9
3. The stakeholders and their representatives to be consulted.....	11
4. The means of engagement of these stakeholders	11

1. Introduction

1.1 Background

Water is a direct cause of disasters, and also a key for the aggravation or mitigation of disasters and opportunities for new development. Recurrent water related disasters such as floods, drought, tsunamis, landslides, and mud-flows have brought tremendous human and property loss. Rapid population growth and economic migration in urbanized areas increase vulnerability to water related disasters, and at the same time, they create more demand for water resources. Improvement of poor management of water resources is one of the solutions to such situations. However, we are now facing another difficult issue, "Climate Change," which could augment the frequency and vulnerability of problems of "too little water" and "too much water." Measures for resolving water issues are critical for adaptation to climate change. The increase of water-related disasters also requires attention to the issue of emergency water resources management during and after disasters/ conflicts, which is critical to the relief of damages.



Source: World Urbanization Prospects: The 2005 Revision

Figure 1 Population in Major Cities

The correlation between poverty/population densities versus the toll of human casualties caused by water-related disasters indicates that poverty and societal inequality have a negative impact on the vulnerability to water-related disasters. And a lack of political commitment to adapt to changing risks could make the situation worse.

Damages from water-related disasters represent a much greater percentage of the socio/economic wealth of the poor and thus are a critical roadblock to achieving sustainable growth and development. As the global community realizes this important linkage between water-related disasters and socio/economic development, the issue of water-related disaster risk

reduction starts to attract international attention. Both the Hyogo Framework for Action 2005-2015 (HFA) and the Hashimoto Action Plan calls for a set of strategic goals and global actions for substantially reducing the effects of disasters on lives and livelihoods over the decades to come. In Asia-Pacific, the issue of water-related disaster management has been receiving very high political attention. It was addressed at the 1st Asia-Pacific Water Summit in December 2007 as one of the three main themes. As stated in HFA, disaster risk reduction needs to be incorporated into national and local development policies and planning. Disaster risk assessment is essential for this process.

Despite these efforts, recent data show that the number of water-related disasters is increasing and may become worse in the future due to negative impacts of climate change.

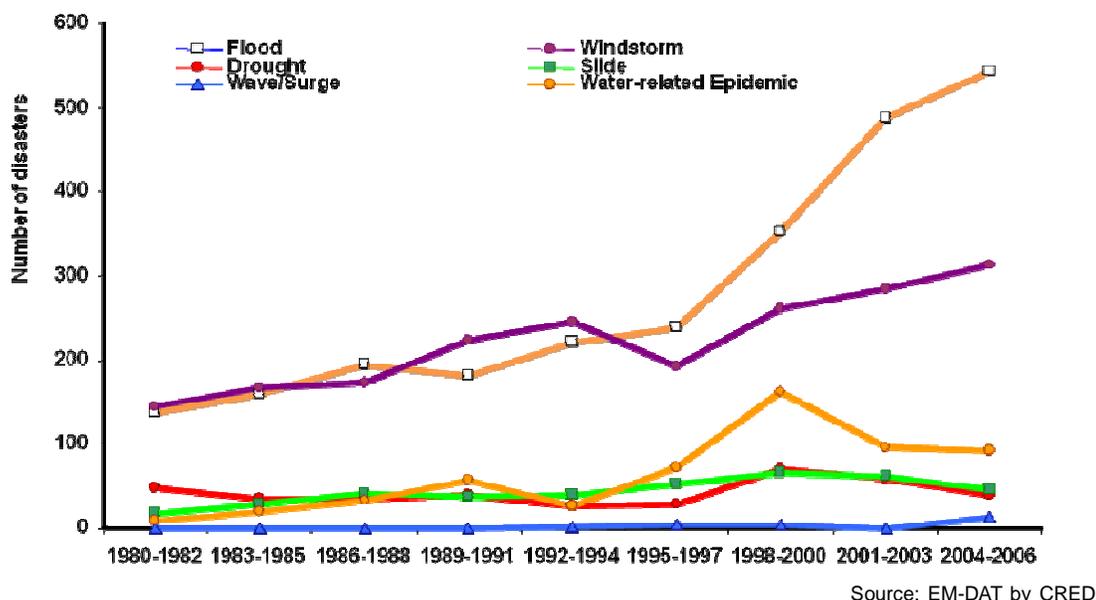


Figure 2 Total Number of Water-related Disaster trends for Every Three Year

The application of the IWRM approach could be useful for mitigating water-related disaster risks with limited human and financial resources. As stated by the ministers of the Asia-Pacific region, it is important to “promptly strengthen the comprehensive efforts from both hard and soft sides, based on the recognition that the measure is an important element of integrated water resource management, against water-related disasters.” That is, there is a need for the development of new design criteria for both structural and non-structural measures in managing water-related disasters.

Collaborative strategic action for disaster reduction by international agencies, governments, civil society and other stakeholders such as the media are prerequisites for addressing the management of water-related disasters during this time of global changes in climate and population growth. On top of that, a strong political will is urgently needed to seek and support

comprehensive and integrated disaster management schemes to optimize the use of limited available resources.

1.2 Objectives

Under the current situation previously described, the pressing question is, ***“how can we mobilize and manage all available resources in a proper way to tackle disasters in a changing world?”***

The above question is crucial to the topic of “Managing Disasters”. The objective of this topic is to create new momentum toward political commitment and leadership to bridge the divide between policy development and available technologies in the area of water-related disaster management. It is expected that discussions will lead to strengthening and ensuring the effectiveness of our efforts to achieve better water-related disaster management in the world

1.3 Problem identification:

The following four key issues were identified for this topic, resulting from the 2nd coordination meeting and the collection of key questions on the website.

- Common understanding of various stakeholders to take concerted action for managing disasters;
- New concept for structural and non-structural design to adapt to changing risks;
- Utilization of technologies for managing disasters; and
- Provision of water and sanitation in vulnerable and/or conflict areas to prevent secondary effects.

2. Potential Sessions

2.1 Session 1: Trialogue Session

Broader Issue/Context	The discussion highlights the role of science in developing a social-level understanding of the responses needed to manage and mitigate natural disasters. This takes us logically to the discussion of appropriate forms of cooperation between three major actor-clusters. The first actor-cluster can be thought of as the government, with the task of making authoritative decisions that are applicable to society as a whole. The second actor-cluster can be thought of as science, with the task of developing certainty in their understanding of the drivers of natural disasters in order to make predictions with a high level of confidence. The third actor-cluster can be thought of as society, which consists of individuals, organizations and economic entities like corporations. The important issue that needs to be understood in the context of a disaster management strategy is the way that these three actor-clusters interrelate. Collectively, this process can be thought of as a Trialogue in which Government, Society and Science are involved through a series of interrelations.
Key Question	How do we make the significant leap (or paradigm shift) needed to gain different levels of cooperation between Government, Society and Science in order to manage disasters?
Session Development Description/ Outline	Areas to be explored or presentations/issues to be discussed: <ol style="list-style-type: none"> 1. Examples (case studies) of where trialogues have been developed, their modality and their results 2. Explain the set-up and process to set up a dialogue 3. Organize live “trialogue” at the WWF5 on disasters with stakeholders from a variety of stakes between global and local level, between government/science/society
(Types of) Organizations to be involved in session development	Proposal for the session convener group (tentative) <ul style="list-style-type: none"> - Governments: MWR of the Netherlands - Academics: CSIR - International organizations: GWA / “High-level Expert Panel on Water and Disaster/UNSGAB”/ UNESCAP / Typhoon Committee
What is being bridged here?	(To be developed further in detail) <ol style="list-style-type: none"> 1. Understanding of what a trialogue is, and its effectiveness as a tool 2. Various stakes are brought together
Next steps and timeline	As soon as the Session Conveners (SC) have been identified, a list of key events and meetings will be developed and drafted by the Session Conveners in consultation with the Topic Coordinators and the Topic Consultation Group. It is expected to take advantage of scheduled meetings, such as the World Water Week in Stockholm to get people around the table.
Contact information for coordination of this session	<i>To be identified through discussion. (including CSIR)</i>

2.2 Session 2: Technologies for Water-Related Disaster Management

Broader Issue/Context	<p>Loss of life and livelihoods triggered by water-related disasters are major impediments to sustainable development and poverty reduction. The probability of increasing extreme climatic events such as floods, droughts, and coastal flooding induced by global warming is likely to further aggravate the impact of disasters. In addition, it is anticipated that frequency of disasters such as glacial lake outburst floods (GLOFs) will increase. The expected population growth in urban areas, where people are vulnerable to water-related disasters, could make the situation worse. We also have to be aware that there is a lot to be done even in the current situation to reduce water-related disasters risks.</p> <p>In some countries, local measures with indigenous technologies saved thousands of lives from devastating disasters, and continuous efforts in implementing proper technologies greatly contributed to sustainable national development. On the other hand, high technologies such as flood alert systems, which require only satellite data, will enable evacuation warnings in basins without any observation system on the ground. They are expected to greatly contribute to reducing the loss of life in developing countries. Utilization of GIS in making flood maps is another effective example. Various technologies must be properly combined, taking into account the regional characteristics, and available financial and human resources in a timely manner. The existence and accessibility of technology are key to reducing and preventing loss of life in water-related disasters. It is important to optimize the use of existing technologies. However, it is also necessary to develop appropriate new technologies to adapt to changing risk of water-related disasters.</p> <p>This session will focus on contribution of technologies in managing disasters.</p>
Key Question	<p>How should we enhance the use of existing technologies to manage disasters caused by climate change and population growth? Is there still need for the development of new technologies and innovations?</p>
Session Development Description/ Outline	<p>Areas to be explored:</p> <ol style="list-style-type: none"> 1. State of technology (satellite, GIS, etc.) and potentials for further development 2. Demand for and applicability of new technology in countries and at local level 3. Ability and interest among financiers and cost effectiveness of new technologies
(Types of Organizations to be involved in session development)	<p>Proposal for the session convener group (tentative)</p> <ul style="list-style-type: none"> - Governments: MLIT of Japan / DSI of Turkey - Academics: Middle East Technical University
What is being bridged here?	<p>The world of technologies with local users of information</p>
Next steps and timeline	<p>As soon as the Session Conveners (SC) have been identified, a list of key events and meetings will be developed and drafted by the Session Conveners in consultation with the Topic Coordinators and the Topic Consultation Group. It is expected to take advantage of scheduled meetings, such as the World</p>

	Water Week in Stockholm to get people around the table.
Contact information for coordination of this session	<i>To be identified through discussion. (including MLIT)</i>

2.3 Session 3: New Design Criteria for Extreme Events/ Climate Change

Broader Issue/Context	<p>Greenhouse gas mitigation measures are important in the mid- and long-term to reduce the impact of climate change. However, water-related disasters which seem to be triggered by climate change, such as floods, wind storms, droughts, and high-tides, have already increased their frequencies and magnitudes. Such situations require us to move beyond “reaction” to “prevention” in addressing the water-related disasters. The “High-level Expert Panel on Water and Disasters/UNSGAB” was created to contribute to the acceleration of this paradigm shift. “Prevention” in the context of disaster management means the application of adaptation measures to prepare for changing risks, which is expected to contribute to the reduction of loss of lives and human properties.</p> <p>Statistical data used to evaluate return periods of water-related hazards and expected economic damages for cost-benefit analysis is insufficient for the planning of infrastructures and their operations. This is due to current hydrologic uncertainties caused by climate change. Water infrastructures and management rely on innovative structural and non-structural design concepts in order to be more resilient against future extreme events. It is important to mainstream new design criteria for the planning of various water infrastructures in IWRM for the management of water-related disasters in this changing world.</p> <p>In this session, discussion should focus on how we should design new concepts for planning innovative structural and non-structural measures to cope with climate change under large uncertainties in both developing and developed countries and how to generate political commitment for necessary policy development which could trigger the paradigm shift.</p>
Key Question	How can we make a paradigm shift from mitigation to mitigation and adaptation?
Session Development Description/ Outline	<ol style="list-style-type: none"> 1. Identification of hot spots and assessment of vulnerabilities 2. Discuss with stakeholders on relevance and effectiveness of vulnerability assessments for policy making, development planning, public awareness and public support funding commitment and implementation under uncertain situations due to climate change
(Types of Organizations to be involved in session development)	<p>Proposal for the session convener group (tentative)</p> <ul style="list-style-type: none"> - Governments: MLIM of ROK / MLIT of Japan - International organizations: GWA / WMO - Regional organizations: EWP - Donor organizations: JICA
What is being bridged here?	<ol style="list-style-type: none"> 1. Scientific methodologies are bridged with policy makers 2. Effectiveness of assessment tools can be tested
Next steps and timeline	As soon as the Session Conveners (SC) have been identified, a list of key events and meetings will be developed and drafted by the Session Conveners in consultation with the Topic Coordinators and the Topic Consultation Group. It is expected to take advantage of scheduled meetings, such as the World Water Week in Stockholm to get people around the table.
Contact information for coordination of this session	<i>To be identified through discussion. (including WMO)</i>

2.4 Session 4: Emergency Water Management During and After Disasters/ Conflicts

<p>Broader Issue/Context</p>	<p>Rapid provision of clean water and sanitation to vulnerable populations affected by complex emergencies, whether armed conflicts or natural disasters, or a combination of both. The aim is to prevent the spread of epidemics and diseases before, during and after the crisis.</p> <p>Such complex emergency situations are witnessed in many parts of the world as a result of floods, droughts, landslides earthquakes, and manmade disasters from armed conflicts to pollution hazards. From a technological viewpoint, it is often difficult to rebuild water supply, sanitation and other facilities in a short period of time once they are destroyed. It may take months or even years for complete recovery. Therefore, there is a need for rapid solutions such as quick fixes / rehabilitation and improved access to water resources and sanitation facilities which could be used beyond the crisis itself.</p> <p>The main challenge is to assess a given situation and coordinate the various players on the ground, such as local government, international agencies, donor organizations, and NGOs, as well as other stakeholders, and provide the appropriate response in emergency situations. Transition between emergency and recovery is also important. It is vital to develop appropriate emergency water management policies based on a proper assessment of disaster risks for preventing disaster damages from recurring. Also, inappropriate disaster management in the time of water-related problems is critical as it could lead to secondary disasters bringing additional damage.</p> <p>This session will focus on the role of each group, from the highest political level to local communities and ordinary people. Everyone can play a role in the management of water under an emergency situation. This would help bring about a smooth shift from an emergency response to a reconstruction phase to ensure future sustainability.</p>
<p>Key Question</p>	<p>How to maintain key water infrastructures and appropriate living environmental condition before, during and after disasters and/or conflicts?</p>
<p>Session Development Description/ Outline</p>	<p>Areas to be explored Identify gaps between the different regions/communities as to access to vital resources</p> <p>Affected stakeholders As listed under Sec. 3 below.</p> <p>Process of stakeholder mapping There are 3 levels of stakeholders:</p> <ol style="list-style-type: none"> 1. Primary Stakeholders: population directly affected by the problem/crisis? 2. Secondary Stakeholders population indirectly affected by the problem/crisis? 3. Tertiary Stakeholders population neither involved nor affected by the problem/crisis but can influence opinions either way (i.e., towards improvement or status quo) <p>At the beginning, the 3 levels of stakeholders and their stakes are identified by the Topic Consortium Group and the Consultation Group. In combination with desk research, the feedback process through the World Water Forum website and consultations during meetings and events, a final list</p>

	<p>of stakeholders and their positions is identified per key issue in the next 3 months.</p> <p>Finally, the focal points for the various stakeholder groups (made available by the WWC) can assist in identifying key representatives for each session.</p> <p>Envisioned Session Format.</p> <p>Based on concrete examples the session will:</p> <ul style="list-style-type: none"> -Present the current pattern in crisis situations emphasizing strengths and weaknesses, - Present options for bridging gaps. <p>The main focus is on the role of politics in an emergency situation, the importance of having everyone involved from pre-crisis to reconstruction phases, from the highest authorities to the level of a community in a region, the need to enhance acceptance by all stakeholders.</p> <ul style="list-style-type: none"> - The need for a rapid response using the appropriate technology.
(Types of) Organizations to be involved in session development	<p>Proposal for the session convener group (tentative)</p> <ul style="list-style-type: none"> - International organizations: ICRC / UNESCO IHP / UNICEF / OCHA / WHO - Private Sector: VEOLIA Eau - Regional Organization: Arab league
What is being bridged here?	<p>Bridging is about connecting, throughout the various phases of a crisis, the different stakeholders in view of providing an appropriate and effective humanitarian response.</p>
Next steps and timeline	<p>As soon as the Session Conveners (SC) are identified, a list of key events and meetings is developed and drafted by the Session Conveners in consultation with the Topic Coordinators and the Topic Consultation Group. It is expected to take advantage of scheduled meetings, such as the World Water Week in Stockholm to get people around the table.</p>
Contact information for coordination of this session	<p><i>To be identified through discussion. (including ICRC)</i></p>

3. *The stakeholders and their representatives to be consulted*

Potential stakeholders are listed below. The list is based on the equity approach and therefore ought to be as inclusive as possible. The selection of stakeholders that will actually be invited to the process will be made in consultation with the Consultation Group members.

Stakeholders	Stakes	Representatives
Politicians – local level	How to implement what kind of policies	Mayors, local level politicians, local level political parties
Politicians – higher levels	How to communicate to lower levels of bureaucracy	Ministries, departments, government agencies
Farmers	How will measures influence the landscape	Farmer's Associations
Landowners		Landowner's Associations
Communities		Community associations equity
Insurance companies	Risks	
Private sector		Private sector agencies
Local opinion leaders		Religious leaders, business or trade union leaders, local celebrities, teachers.
National and local media		Scientific journalists
Science and technology	How to communicate knowledge to policy-makers effectively	Research institutes, universities
Financial Sector		Banks, agencies allocating national funds, development sector agencies
Women		Women groups
Youth and children		Youth groups
Workers and Trade Unions		
Business and industry		
Indigenous people		
Environmental groups (NGOs)	Environmental consequences of adaptation measures	

4. *The means of engagement of these stakeholders*

After the selection of the stakeholders, the Topic Coordinators (TC) will communicate with the Programme Committee for the identification of the representatives from each stakeholder. Then, the TC will contact the identified representatives to discuss their involvement in the preparation process as well as their contribution to the session by using e-mail correspondences, Virtual Meeting Space and conference calls. Also, this Session Proposal will be put on the interactive website of the 5th World Water Forum so stakeholders can respond during the 'Call for session contributions', give feedback and make suggestions on the content or phrasing of the Proposal. The Session Proposal will furthermore be distributed whenever and wherever possible among sector professionals during (regional) scheduled meetings, conferences, e-platform debates, hearings, dialogues and the like.