

## Concept Note (Draft)

### **Theme B:**

Water-related Disaster Management

### **Lead Organizations:**

**- ICHARM -**

The International Center for Water Hazard  
and Risk Management

## 1. Rationale/Background

Humankind has always lived under the threat of natural disasters. Over recent years, enormous progress is made in understanding natural hazards and controlling some of its negative effects, nevertheless vulnerability appears to be rising. It is clear from Figure 1 that water-related disasters in particular (such as flood, drought and water epidemics) have been increasing in scale and with greater impact, than ever before.<sup>1</sup> According to the EM-DAT database of the Centre for Research on the Epidemiology of Disasters (CRED), water-related disasters (including flood, windstorm, wave/surge, and water related epidemic) over the period 1980-2006 killed nearly one million people, affected the livelihood of over 300 million people and caused over USD 88 billion of recorded direct economic damages.<sup>2</sup> The Asia-Pacific is undoubtedly the most vulnerable region in the world. Vulnerable societies across the Asia-Pacific region, are enduring the long-term negative social, economic and environmental consequences of these disasters destroying property and taking lives in countries where most people already lives in poverty. The correlation between poverty and death toll when a disaster occurs is evident and reveals how poverty, societal inequality and gender prejudice at the national level also creates additional elements of vulnerable to disasters. On the other hand, the fertility and prospected livelihood opportunities in lowland areas and coastal zones has shaped the concentration of population to form large cities and consequently the growing populations of urban poor that are increasingly vulnerable to water hazards. Last but not least, various human activities are involved in the process of increasing vulnerability by changing the natural balance of the earth, interfering as never before with the atmosphere, the oceans and the forest cover.

As depicted from the data of Figure 2, Asia-Pacific region accounts for over 80% of the people killed by water-related disaster worldwide. For instance, during the period 2001-2005, it is estimated that 62,273 people were killed annually by water related disasters in the Asia Pacific region, in comparison with 13, 432 people killed in other regions of the world.<sup>3</sup> The underlying and associated causes of the increasing vulnerability to water-related disaster across all nations in the region is due to the dual complex interaction between water hazards largely intensified by climate change and people's vulnerability largely intensified by the political, social and economical conditions and background. The scientific evidence that climate change presents very serious global risks is now overwhelming, and it demands an urgent global response. The "Stern Review on the economics of climate change" estimates that if we don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more. In contrast, the costs of action – reducing greenhouse gas emissions to avoid the worst impacts of climate change – can be limited to around 1% of global GDP each year.

Bridging the regional levels of action, the Asia-Pacific Regional Document of the 4th World Water Forum concluded that "developing and improving appropriate structural measures to reduce damage from water-related disasters is a lengthy and expensive process. However, over the long term, a precautionary approach whereby funds are allocated preemptively would significantly offset the funds currently required for recovery activities.....Therefore, **we must look beyond coping with the hazard and also pay attention to reducing vulnerability, and the key to reducing vulnerability lies in increasing preparedness through preemptive activities: early warning systems, raising awareness and evacuation planning. Coordinates efforts to adopt these and other measures would go a very long way towards dramatically decreasing the number of deaths caused by water-related disasters**

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<sup>1</sup> World Water Development Report, "Managing Risks: Securing the Gain of Development", pp.340-369.

<sup>2</sup> EM-DAT, the CRED disaster database analyzed by ICHARM. Beyond these recorded statistics the full extent of direct and indirect disaster impacts on life and livelihood are not fully measured.

<sup>3</sup> Asia-Pacific Regional Document of the 4<sup>th</sup> World Water Forum

– a key priority for the region.” Furthermore, disaster reduction requires coordinated actions at all stages of the disaster management cycle and process including emergency response, recovery response, prevention and mitigation and preparedness. This disaster management process should also be coordinated with efforts made in closely related fields. For instance, the disaster mitigation process should consider human health impacts during a water-related disaster such as flooding in particular (e.g. cholera, e-coli, malaria), thereby more effectively addressing health issue that arise during disasters. At regional level, the Second High Level Meeting on Health and Environment in ASEAN and East Asian Countries (Bangkok, 12-13 December 2005) reviewed and adopted the draft Regional Charter on Environment and Health, which is expected to be endorsed by the Ministerial Regional Forum on Environment and Health in Southeast and East Asian Countries in 2007. The regional action will, among other issues, deal with natural disasters such as water-related disasters.

From a global perspective, the Millennium Development Goals (MDGs), the Hyogo Framework for Action 2005-2015 (HFA), and the Hashimoto Action Plan together provide a set of strategic goals and global actions to substantially reduce the effects of disasters on life and livelihood over the next decade. The task force group will establish a regional information network to facilitate sharing of information among members, and will conduct capacity building activities.

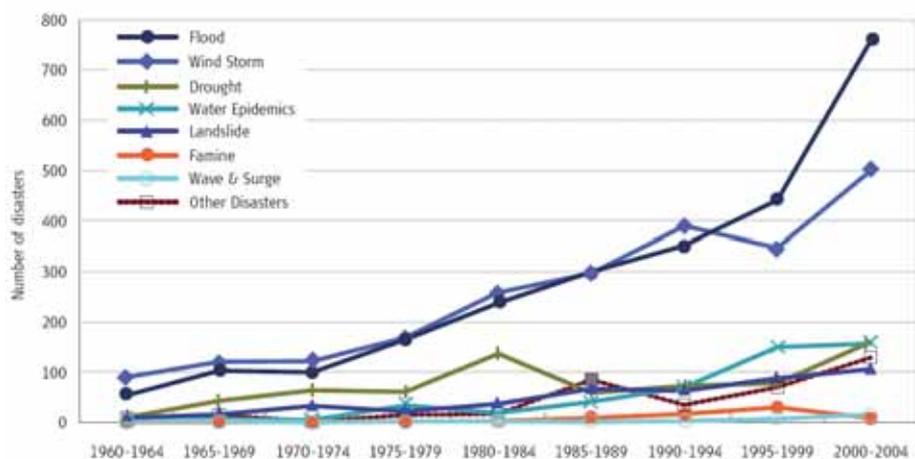


Figure 1. Global trend of water-related disasters (1960–2004).

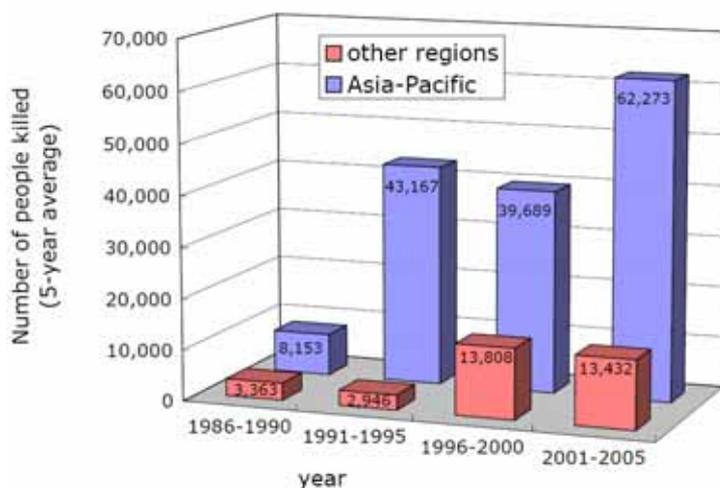


Figure 2. Number of people killed by water-related disasters in Asia-Pacific and other regions of the world. **The Asia Pacific region accounts for over 90% of the world population affected by flood, wind storm and landslide disasters. (up-dated figure will be made).**

## 2. Objectives

APWF's objective in relation to Priority Theme B will be to serve as a forum for cooperation among all stakeholders, including governments, national, sub-regional, regional and international organizations, alliances and networks; to facilitate information sharing, development and dissemination of relevant technologies, development of evidence and information to support development of policies and strategies; and capacity building to strengthen regional actions and policy for effective reduction of water-related disasters, and consequently reduce the region's vulnerability to water related disasters and their social and economic consequences.

During this initial phase leading to the first Asian Pacific Water Summit, to be held in Bepu Japan, on 3 to 4 December 2007, it is proposed to give special attention to flood issues including effective strategies to provide adequate water and sanitation during and after disasters. However, since it is impossible to separate the problems that our region is actually confronting with regards to water-related disasters, such as water scarcity, drought, and water pollution, the theme will also discuss and highlight these important concerns.

## 3. Main activities and topics to be covered under the theme

### - Weblog Forum

*Objectives:* The APWF water weblog is an open forum to all stakeholders working in water-related disaster issues aiming to promote innovative ideas in disaster risk reduction principles and policies. The outcomes of the discussion are prospected to formulate thematic recommendations to be proposed to the Asia Pacific Water Summit.

➤ **Topics to be covered (we need to decide and focus our efforts on limited number of topics to be covered herein and to be reflected in Chapter 4 input to the summit):**

- Strategy to ensure more effective integration of disaster reduction into the development planning and policy of all countries in the region with strong institutional basics for implementation (see HFA).
- Less developed countries do not have adequate financial resources, institutional capacity, and qualified human resources to cope with hydrological extremes without international assistance. What is the strategy to ensure that prospective assistance programmes will improve the weakest elements in the chain of the disaster management cycle?
- Identifying the existing gaps and the risk underlying factors (see HFA). What can we do or propose as individual or organization to initiate activities for addressing these gaps.
- Strategy to strengthen disaster preparedness for effective response at all levels (see HFA).
- Strategy to develop sound risk information for decision-making including development of indicators, documentation of good practices and lessons learned, and the creation of regional high quality and accurate disaster database.
- Strategy and potential solutions to strengthen access to safe drinking water and hygiene as well as to reduce incidence of water born diseases during and after disasters.
- Strategy to promote national/local governments' leadership in disaster management and develop better mechanism of cooperation, networking and coordination of actions among different nations at the regional level and among different municipalities and citizens at the national level. What institutional aspect is needed to promote such collaborative approaches among the wide variety of stakeholders in the region?

### - Theme B Synthesis Workshop

- *Objectives:* Consolidate the APWF water weblog discussion to formulate the key thematic recommendations and messages for the Asia Pacific Water Summit.
- *Process:*

- The workshop will be organized in June/July 2007. The details of the workshop programme will be decided after reviewing the weblog progress (May/June 2007).
- **Preparation of the Thematic Report**
  - *Objectives*: Synthesis the result of the workshop into thematic recommendations (summary report) to be submitted to the Asia-Pacific Water Summit.
  - *Process*:
    - The draft of the Thematic Recommendations will be prepared by the lead organizations (July 2007). The draft will be circulated among all participating stakeholders for review and feedback (September 2007).
    - The 2<sup>nd</sup> draft will be circulated to the APWF Governing Council for review and Feedback (October 2007). The lead organization will submit the final update of the Thematic Recommendations (summary report) to the APWF Governing Council by (November 2007)

#### 4. Input to the 1<sup>st</sup> Asia Pacific Water Summit

The summit is viewed as a new conducive environment and opportunity for dialogue between leaders and disaster managers in the region. The working group (based on the weblog and workshops discussions) will formulate the inputs to the summit in the form of *Thematic Recommendations* of clear strategic messages including if possible propose Recommendation Policy Statement(s).

##### Proposed topics to be addressed by the Thematic Recommendations:

1. **Component on governance issues:** strategies to alleviate human and economic damages in the region:
  - Local (and national) government agencies have a big role to play in implementing and supporting community based efforts for disaster prevention, mitigation, response and recovery for disasters from hydrometeorologic hazards.
2. **Component on Health issues:** One of the major challenges in health emergency response is supplying adequate water and providing sanitation facilities (e.g. toilets) especially if we are aiming at using WHO standards.
3. **Propose Recommendation Policy Statement:**

While the statement should based on a holistic management approach the key message must be sharpen in focus. The statement must be completed with an accompanying context that includes:

  - **A Background Section:** focused and clear statement explaining the need for the recommendation, the problem the recommendation addresses, and the intended audience.
  - **A Facilitation and Communications Section:** clear description outlining the steps that should be taken to ensure the recommendation reaches and influences the intended audience.
  - **An Assessment Section:** strategy and clear measurable indicators describing how the effectiveness of the policy/recommendation might be measured and how often this measurement will take place.

#### 4. List of Partner/Implementing Institutions

ICHARM, Lead organization  
 World Health Organization (WHO)  
 Asian Development Bank (ADB)  
 Japan International Cooperation Agency (JICA)  
 UNESCAP  
 SOPAC  
 Typhoon Committee  
 WMO  
 UN-ISDR  
 UNICEF  
 UNOCHA  
 CITYNET  
 Bangladesh Water Partnership  
 Korea Water Forum  
 Flood Control & Sabo Engineering Center, DPWH, the Philippines  
 International Fund for Saving the Aral Sea  
 IDI-Japan  
 CTI Engineering, Japan  
 Unisfera International Center, NGO, Canada  
 Japan Water Forum (JWF)

#### 6. Budget Plan

ICHARM and partners will contribute staff-time and other expenses to this project. Financial requirements are needed:

- 1- to support member countries to provide inputs to each activity,
- 2- to support the organization of two workshops;
- 3- to support the services of a research assistant at ICHARM and the services of a local consultant to assist ICHARM in the preparation of the deliverable to the Asia-Pacific water summits.

	<b>Activity Description</b>	<b>Cost (US\$)</b>	<b>Remarks</b>
1	Support member countries to provide inputs to related activities	10,000 x 5 50,000	5 selected countries after consultation with JICA and ADB.
2	2 <sup>nd</sup> workshop of the Disaster Management Theme Working Group (2 days workshop).	17,000	- 20 regional expert (one from each partner organization) - Under the assumption that 50% of the participants will be self supported by their organizations.
3	3 <sup>rd</sup> workshop of the Disaster Management Theme Working Group - 2 days workshop -	17,000	As above
	Expert Research assistant allowance	35,000	Expert researcher fee shall include: Air ticket + Daily allowance to do work at ICHARM for a period of 6 month + participation to APWF meetings and workshops.
4	Local consultant assistance fee	90,000	
<b>Total (US\$)</b>		<b>209,000</b>	