

**TOWARDS A MISSION PAPER AND WORK PLAN  
FOR THE IAHR-IFI WORKING GROUP CONTRIBUTING TO THE  
INTERNATIONAL FLOOD INITIATIVE (IFI)**

prepared by  
Arthur E Mynett, IAHR Council Member  
IAHR-IFI Working Group Chairman

for  
IAHR EXECUTIVE COMMITTEE

**MISSION OF IAHR IN IFI**

Many organizations are paying attention to effects of climate change on increasing impacts on society, notably potential hazards due to flooding. Already organisations like WMO, IAHS, ICHARM, UNESCO, UN/ISDR, UNU, WWAP, and others are contributing to the International Flood Initiative IFI.

The question then arises: what can IAHR contribute to IFI? Based on a rapid assessment of relevant documents and consultation with some prominent colleagues in the field, the quick answer is: *a lot!*

The reason lies in the fact that the fields of meteorology and hydrology focus primarily on detecting possible changes in weather patterns, notably increased precipitation and changes in frequency and intensity of extreme events. Having established just that, the implications in terms of the *effects* of more severe weather patterns, are left for others.

It is here that IAHR can contribute considerably:

- establishing rainfall-runoff relations, not only in rural and riverine systems, but also in urban conglomerations (as of last year, more than half the world population is living in urban areas and this number will increase)
- advancing capabilities of two-dimensional inundation modelling for planning and design purposes (nowadays 1D river schematisations hardly suffice for extreme flood events modelling, neither in rivers nor in urban areas – e.g. New Orleans)
- this holds not only for an integrated approach including surface water and ground water, but also for river- and coastal systems (in case of e.g. storm surges combined with extreme river discharges)
- developing advanced warning systems in order to issue timely alarms for evacuating or safeguarding the population (like tsunamis or dambreak events)
- dealing with uncertainty is considered much needed and is receiving considerable attention; IAHR has been working in this area long time already
- the implications of following probabilistic approach is yet another area of interest where IAHR can bring in its knowledge and expertise.

In general, it can be stated that an ***integrated approach*** is favoured by many, which includes contributions from a wide range of specialty areas including meteorology, hydrology, hydraulics, oceanography, coastal engineering, disaster management and education. IAHR has a lot to offer not only in a number of specialty fields, but even more so *in the area of integration itself*, in fact in all of the main areas identified by IFI: “research”, “education and training” and “information networking”.

## **WORK PLAN FOR IAHR-WG ON IFI**

Clearly any contribution from IAHR to IFI has to be developed in close conjunction with the other IFI partners – in that respect the forthcoming IFI workshop in Toronto, Canada, on 5 May 2008 will provide a good opportunity to get IAHR involved, and to provide feedback to the internal IAHR community. In fact. IAHR can already report on

- ❑ the new structures which IAHR has established to enhance IAHR ability to participate in initiatives such as IFI:
  - Formal approval of SCGWI by Council and GMA
  - Establishment of a Working Group on IFI
  - Establishment of WG on Climate Change
  - Establishment of WG on Applied Hydrology
- ❑ Specific Actions underway which contribute to the aims of IFI
  - Publication of major new IAHR Monograph on Flow in Compound Channels
  - Dam Break Data Set (FHS)
  - IAHR Media Library
  - Journal of River Basin Management
    - improving interdisciplinary sharing of research
  - Rivers-List
    - facilitating shared technical experience on issues relating to rivers and floods
  - IAHR Instrumentation Database
    - to facilitate takeup of new instrumentation to permit better simulation of floods
  - New IAHR-IAHS Task Force to look at "Climate change impact on the hydrological cycle and engineering design"
- ❑ IAHR sponsored Dissemination Events Developing Knowledge on Floods
  - Int. Junior Researcher and Engineer Workshop on Hydraulic Structures, Pisa, Italy July 2008
  - Congreso Latino Americano, Cartagena, Colombia, 2-6 September, 2008
  - 8th ICHE 8-12 September, 2008 Nagoya, Japan
  - International School of Hydraulics, Hydraulic Methods for Catastrophes: Floods, Droughts, 23-26 September 2008, Poland
  - 16th Congress of Asia and Pacific Division of International Association of Hydraulic Engineering and Research and 3rd IAHR International Symposium on Hydraulic Structures, 20-23 October, Nanjing, China
  - Joint Ecohydraulics/Hydroinformatics Conference, Concepcion, Chile, 12-16 Jan, 2009
  - International Seminar on Climate Change Impacts on Water Resources Conservation and Management in Developing Countries, Indonesia, May 2009
  - IAHR Biennial Congress, Vancouver, July 2009 - Proposed Seminar on IFI, August, 2009

My suggestion is that during IFI in Toronto I report on the areas of expertise of IAHR as mentioned on the first page as well as on the activities presented above. The results of the discussion and feedback received from the other IFI partners will be reported to the Executive Council, and will provide the basis to identify sections and members to join the IAHR Working Group on IFI.