

# **IAHR Applied Hydrology Working Group Annual Report to IAHR (November, 2009)**

This report summarises the activities conducted by the IAHR-Applied Hydrology Working Group in its first two years of activity since its establishment, approved by the IAHR Council in fall 2009.

## **1. Section: Working Group on Applied Hydrology**

### **2. Vision of the WGAH:**

To focus on the civil and environmental engineering aspects of hydrology, and serve as a link between hydraulic engineering and the wider hydrological community. The IAHR Strategic Plan approved at the Seoul General Members Assembly in 2005 explicitly identifies the need for water specialists to adopt a more inter-disciplinary approach to our activities, and hydraulics and hydrology, in particular, are highly synergistic.

### **3. Goals of the WGAH:**

- To provide a focus within IAHR on the needs of engineering hydrologists
- To act as a link with the wider hydrological community and to bridge the gap between theoretical advancement in hydrology (with a focus on surface hydrology) and engineering applications.
- To promote hydrological data exchange on experimental basins and model intercomparison.
- To contribute to plan and co-ordinate a more extended programme on specific hydrology topics in future IAHR Biennial Congresses.
- To collaborate with other international bodies such as WMO, IAHS, UNESCO to plan research initiatives and jointly organize conferences or workshops of relevance for hydrology from the perspective of water engineering applications.

## **4. Section Roster, approved by the IAHR Council in fall 2007, after an informal meeting of interested people in Venice IAHR Congress, 2007**

<i>Name</i>	<i>Address</i>	<i>E-Mail</i>
<b><i>Roberto Ranzi</i></b> – <i>Professor, Chair</i>	<i>DICATA-Department of Civil Engineering, Architecture, Land and Environment Universita' di Brescia Via Branze 43 I-25123 BRESCIA ITALY</i>	<i>ranzi@ing.unibs.it</i>
<b><i>Paul Pilon</i></b> – <i>Vice Chair</i>	International Joint Commission 234 Laurier Ave West 22nd floor Ottawa ON, K1P 6K6 CANADA	<i>pilonp@ottawa.ijc.org</i>

<i><b>Kang Boosik - Professor, Secretary</b></i>	<i>Department of Civil &amp; Environmental Engineering Dankook University Jukjeon, Yongin 448-701 Republic of Korea</i>	<i>bskang@dankook.ac.kr</i>
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### 3. Activities 2007 to date

#### A. Three visits to WMO

##### 1) Preparatory meeting at the 3rd session of the WMO-Commission of Hydrology Advisory Working Group on behalf of IAHR(Feb 11 – 13, 2008) :

- Objectives
  - The setup of the World Hydrological Cycle Observing System (WHYCOS)
  - The setup of INFOHYDRO, a metadata base aiming at distributing information on Networks of hydrological observing stations

##### 2) Invited visit to XIII<sup>th</sup> Session of the WMO CHy (Nov, 2008)

- Objective
  - To provide IAHR expertise to the WMO CHy-Commission for Hydrology in the accomplishment of its Programme
  - To organize short courses dedicated to engineers, hydrologists and staff of Hydrological Services about principles and methods of stream gauging also on the basis of the forthcoming new edition of the WMO Manual of Streamgauging.



**Figure 1** November 2009, WMO, Geneva. Arthur Askew (right), former Director of the Hydrology and Water Resources Department of WMO and President of IAHS at that time welcomes Roberto Ranzi, Chairman of the IAHR-Applied Hydrology Working Group, to Geneva where they later attended the XIIIth session of WMO's Commission for Hydrology

### **3) Co-organisation and participation at WMO, Geneva of a Planning meeting of the joint WMO-IAHR course on Stream gauging (15-16 Nov, 2009)**

The Chair, Vice-chair, Secretary and members of the WGAH contributed to the organisation of the Planning meeting of the joint WMO-IAHR course on Stream gauging, held in the WMO Headquarter in Geneva, on 15-16 November 2009.

#### **B. Preliminary Design of a Joint Course on Streamgauging**

**Motivation :** WMO and IAHR have agreed to cooperate in the development of a course on streamgauging based principally on the (soon to be published) 2<sup>nd</sup> edition of the Manual of Streamgauging (WMO N° 519).

**Target:** professionals and technicians of hydrological and hydrometeorological services, private companies, water engineers (30 people)

**Duration:** 2 speeds: 5 days for developing countries / 3 days for others.

**Where:** Kick off course: Brescia, 2010, Edimburgh (To Be Confirmed)  
IAHR European Division meeting, Korea, 2 African countries possibly not covered by WHYCOS projects,....

#### **Instructors:**

- Local Committee Experts
- IAHR expert(s)
- WMO officers or experts (especially in the initial courses)
- Sponsors experts

**Language:** local + official WMO languages

#### **C. IAHR Project on Climate Change Impact on the Hydrological Cycle, Water Management and Engineering**

- **Motivation:** To report on the current state of knowledge of the impact of projected climate change on the hydrological regime in the different regions of the world and on the extent to which these impacts are recognized and taken into account by national water authorities, engineering organizations and other regulating bodies in setting their standard practices and procedures for the planning, design and operation of water works.

#### • **Members of the ScientificCommittee**

**Prof. Roberto Ranzi**, *Chair*, University of Brescia, DICATA, Italy, Applied Hydrology WG in IAHR

**Prof. Toshiharu Kojiri** Water Resources Research Center, Kyoto University, Japan, Working Group on Climate Change in IAHR

**Prof. Arthur Mynnet**, WL Delft Hydraulics, The Netherlands, NESCOInternational Flood Initiative

#### • **Project Objective :**

to encourage a close co-operation between the scientific and engineering communities in taking appropriate and timely action in response to the impact of climate change on the hydrological regime and on water resource projects.

- **Project Period : 2009-2012**

- **The Expected output and Products :**

- Inventory of climate change impact studies and the engineering feedback for the adaptation to climate change impact on the hydrological cycle
- Scientific Report(s) and IAHR Statement to be approved by IAHR at the 2011 Congress.

**D. IAHR Sponsored one session at the EGU Congress in Vienna, April 2009**

**E. WGAH Co-sponsored the Dresden Wasserbaukolloquim, March 2009**

**F. WGAH Co-sponsored the meeting of the British Hydrological Society**

#### **4. Planned Activities for the Period December, 2009 to 2011 IAHR Congress**

- Organise one or two WMO-IAHR short courses on Stream gauging, likely in Italy and Korea within the 8<sup>th</sup> International Symposium on Eco-hydraulics, at least
- Complete the work programme of the IAHR Project on Climate Change
- Contribute to the Brisbane Scientific Programme

Geneva, 17 November 2009

Boosik Kang  
Secretary of the IAHR WG Applied Hydrology

Approved by Roberto Ranzi, Chair of the IAHR WG Applied Hydrology