

INTERNATIONAL COMMISSION ON WATER RESOURCE SYSTEMS (ICWRS)

Status Report June 2015

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ICWRS Meetings

Every other year, there is either an IAHS Scientific Assembly or an IUGG General Assembly. In the years between assemblies, ICWRS usually organizes a symposium on Integrated Water Resources Management (IWRM).

In the year 2014, ICWRS organized in Bologna the symposium: “Bologna IAHS 2014 - 6th IAHS-EGU International Symposium on Integrated Water Resources Management – Evolving Water Resources Systems - Understanding, Predicting and Managing Water - Society Interactions”. The symposium took place during June 4-6, 2014. It brought together experts from different countries and expertises in a stimulating environment to present research ideas and results to bring hydrology into the future by reaching an improved connection with society. The conference represented a key step to provide a first summary of the relevant research activity that is being carried out on the theme of hydrology and society. The conference was framed within the Panta Rhei research initiative of IAHS and focused on water

resources assessment and management in a changing environment. Water resources systems, catchment hydrology, eco-hydrology, groundwater hydrology, water security and socio-hydrology were the driving themes, and in particular:

- Hydrological processes in a changing environment: Coping with uncertainties
- Floods, droughts and water risks in a changing socio-hydrological context: Feedbacks between water resources and social systems
- Water resources: Monitoring, integrated management and assessment
- Hydro-economics and optimization of water resources systems: changing boundary conditions, targets and criteria of water management.

The conference hosted the first Peter Loucks Lecture, a distinguished presentation given by a renowned scientist on water resources management. The Lecture is promoted by the International Commission on Water Resources Systems of IAHS. The first lecturer has been Peter Loucks himself, who delivered the lecture during June 5, in Bologna.

Proceedings of the conference were published in the Proceedings of the International Association of Hydrological Sciences (PIAHS), and are available through open access at <http://www.proc-iahs.net/364/index.html>. The proceedings collect 89 articles presented by research groups active in 31 different countries from 5 continents (see Figure 1).

In the year 2016 the series of IWRM conferences of ICWRS will be continued by the symposium: “**The spatial dimensions of water management - Redistribution of benefits and risks**” (<http://iahs-rub.hydrology.ruhr-uni-bochum.de/>).

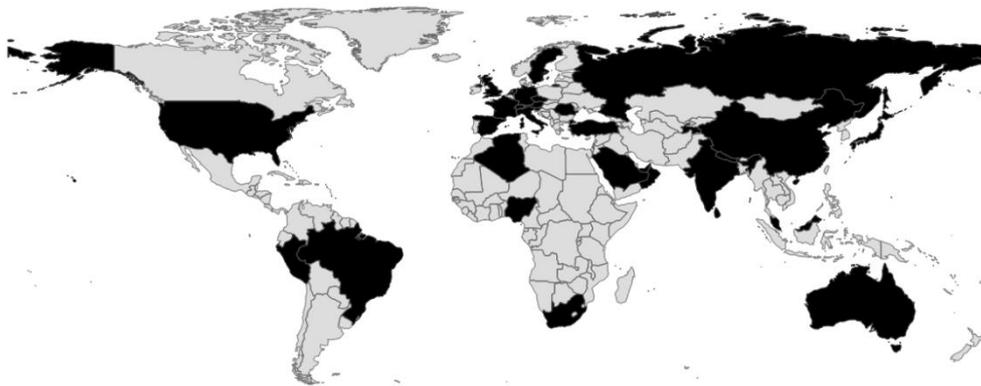


Figure 1. Countries of origin of the international research groups that contributed to the PIAHS volume “Evolving Water Resources Systems: Understanding, Predicting and Managing Water–Society Interactions”.

The papers focus on a broad variety of topics associated with water resources assessment and management in a changing environment, and concentrate in particular on the two-way interaction between water and society. Water resources systems, catchment hydrology, eco-hydrology, groundwater hydrology, water security and socio-hydrology are driving scientific areas, which are grouped in four chapters associated with the following main themes (see also Fig. 2): (A) Hydrological processes in a changing environment: Coping with uncertainties; (B) Floods, droughts and water risks in a changing socio-hydrological context: Feedbacks between water resources and social systems; (C) Water resources: Monitoring, integrated assessment

and management; (D) Optimization of water resources systems: changing boundary conditions, targets and criteria of water management.

- Hydrological processes in a changing environment:
Coping with uncertainties
- Floods, droughts and water risks in a changing socio-hydrological context:
Feedbacks between water resources and social systems
- Water resources:
Monitoring, integrated assessment and management
- Optimization of water resources systems:
changing boundary conditions, targets and criteria of water management

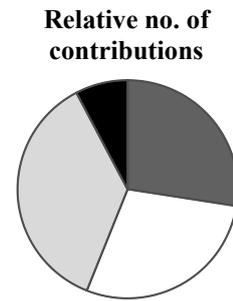


Figure 2. Main themes of “Evolving Water Resources Systems: Understanding, Predicting and Managing Water–Society Interactions” and relative number of contributions in the forthcoming Red Book “Evolving Water Resources Systems: Understanding, Predicting and Managing Water–Society Interactions”.

The collection of papers, in virtue of the broad spectrum of geographic and climatic conditions and the composite palette of emerging and topical water issues addressed by the studies, represents a unique piece of knowledge for advancing our understanding of water-society interactions, improving integrated water resources systems management and governance and addressing the water problems for the next generations.

Furthermore, for the year 2015, the Commission will be involved in the organization of several workshops during the IUGG-IAHS General Assembly to be held in Prague. The following workshops will be held:

- HW6 - “HW06 Socio-Hydrology: The Dynamic Interplay between Water and Human Systems”, Lead convener: Murugesu Sivapalan
- HW7 - “Control of Water Resource Systems”, convened by Ronald van Nooijen, Alla Kolechkina and Taha Ouarda.
- HW8 - “Water Security in a Changing World”, convened by Barry Croke & Stephen Mallory
- JH1 - “Extreme Hydrological Events” (IAHS, IACS, IAG). Lead convener: Christophe Cudennec, Rennes, France, con-convener: Zongxue Xu et al.

along with the following Symposia:

- HS1 - Changes in flood risk and perception in catchments and cities

Website

The website (www.iahs-icwrs.org) is up-to-date.

Alberto Montanari, President ICWRS