

# International Commission on Water Quality (ICWQ)

## Report on activities in the period July 2011 – October 2012

The International Commission on Water Quality (ICWQ) is responsible for promoting the advancement of the water quality of hydrological systems, including assessment and management. The following report is a short summary of activities that have been undertaken by ICWQ officers since July 2011 until October 2012.

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### Organization of IAHS events

At the ICWQ plenary meeting in Melbourne in 2011 three basic topics for ICWQ future activities were defined:

- Understanding fresh-water quality problems in a changing world
- How can models help to solve water quality problems?
- How to benefit from new monitoring technology?

It was planned to organise sessions related to these topics at the Assembly in Gothenburg in 2013, and to publish a red book on the first topic.

ICWQ officers were actively involved in the preparation of the Scientific Program for IAHS – IAPSO – IASPEI Joint Assembly “Knowledge for the future” to be held in Gothenburg, Sweden 22 - 26 July 2013. One symposium (“Understanding fresh-water quality problems in a changing world”) and two workshops (“Characterizing water quantity and quality: new approaches and future directions” and “How can models help to solve water quality problems?”) were suggested for the Joint Assembly Program by ICWQ in accordance with the decision made in Melbourne. Later all our suggestions were accepted and included in the Program.

Besides, Berit Arheimer was assigned as a Member of the Local Organising Committee for the Joint Assembly in Gothenburg 2013.

ICWQ officers were included as convenors and co-convenors in the following symposia and workshops:

**Symposium H04:** Understanding fresh-water quality problems in a changing world, Convenor: Berit Arheimer, Co-convenors: Valentina Krysanova, Elango Lakshmanan;

**Symposium HP2:** Land-ocean interaction, Co-convenor: Per Stålnacke;

**Workshop HW03:** Characterizing water quantity and quality: new approaches and future directions, Convenor: Kate Heal, Co-convenor: Wouter Buytaert;

**Workshop HW06:** Anthropogenic radionuclide contamination of water and sediment: short-term and long-term consequences, Co-convenor: Kate Heal;

**Workshop: HW13:** How can models help to solve water quality problems? Convenor: Valentina Krysanova, Co-convenor: Per Stålnacke

In addition, Berit Arheimer participated in the International Strategic Workshop on Future IAHS Science Initiative in Nanjing in May 2012, and made a presentation on ICWQ activities and plans.

### **Contribution to the IAHS Brochure**

ICWQ contributed to the IAHS Brochure providing a description of the Commission objectives and three main topics for current and future activities of the Commission.

### **Establishing of ICWQ Membership**

At the ICWQ plenary meeting in Melbourne in 2011 it was agreed to establish a “membership” of ICWQ so that interested scientists would become members of the Commission to be able to support the ICWQ activities. Now the list includes 62 Commission members. Some of them are already involved in the organisation of planned Symposia and workshops at the Joint IAHS-IAPSO-IASEI Assembly in Gothenburg in July 2013.

### **Organisation of other water quality-related conferences and workshops**

The ICWQ officers were involved in the organisation of the following events:

Consortium meeting of the Project Integrated water resources and coastal zone management in European lagoons in the context of climate change” (LAGOONS), 24-26 April 2012 in Gdansk, Poland (*P. Stålnacke: Co-coordinator of project; V. Krysanova as Session chair*);

Consortium meeting of the Project Integrated water resources and coastal zone management in European lagoons in the context of climate change” (LAGOONS), 16-18 October 2012 in Murcia, Spain (*P. Stålnacke: Co-coordinator of project; V. Krysanova as Session chair*);

Groundwater Management in Urban Areas - 7 Years successful Indo-German scientific Cooperation, Chennai, India, 28th August 2012. (*E. Lakshmanan as a Panellist and Session Chair*);

The India Science Day, Issues of Sustainability in Urban and Rural Spaces in India, 11th June 2012. Berlin, Germany (*E. Lakshmanan as a Panellist*);

American Geophysical Union, 2011 Fall Meeting, 5th to 9th December 2011. San Francisco, USA (*E. Lakshmanan gave an invited talk*);

4th International conference on Medical Geology. Geological and medical sciences for a safer environment, September 22nd to 25th 2011, Bari, Italy. (*E. Lakshmanan as Session Chair*);

NORDIC WATER 2012 - Catchment Restoration and Water Protection. XXVII Nordic Hydrological Conference. 13-15 August, 2012 in Oulu – Finland (*P. Stålnacke: Review of abstract and Key-note presentation*);

Constructed Wetlands for Industry and Commerce meeting, 21-22 May 2012, Edinburgh (*K. Heal as organiser*).

### **Involvement in water quality-related projects and working groups**

The ICWQ members are involved in a number of national and international projects and working groups.

Kate Heal: Member of the Steering Committee of the "Mainstreaming Innovation" project which includes sustainable urban drainage infrastructure for improving water quality.

Valentina Krysanova: Work Block leaders in two projects: "Integrated water resources and coastal zone management in European lagoons in the context of climate change" (LAGOONS) funded by EC, and Sustainable Management of River Oases along the Tarim River (SuMaRio) funded by German Federal Ministry of Education and Research.

Elango Lakshmanan is a Principal Investigator in three Projects sanctioned in this year: "Hydrogeochemistry of surface water and groundwater along Cauvery River" funded by Indian Space Research Organisation, "SAPH PANI - Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India" co-funded by European Commission 7<sup>th</sup> FP and "Seawater-fresh water dynamics and identification of measures to prevent seawater intrusion in alluvial aquifers north of Chennai by groundwater modelling" funded by the Dept. of Science & Technology, Govt. of India.

Per Stålnacke: Co-coordinator of "Integrated water resources and coastal zone management in European lagoons in the context of climate change" (LAGOONS) funded by EC.

Per Stålnacke: Water quality expert in Norwegian & Indian bi-lateral project 'Climate Change Impacts on River Basins in Semi-arid Areas in India. Mitigation and Adaptation Measures to Address Current and Future Challenges'.

Wouter Buytaert is a member of the GEWEX working group of the WCRP. He attended a GEWEX workshop at the University of Saskatchewan, Saskatoon (5 – 7 July 2013).

Wouter Buytaert is chair of the subdivision on Water Resources and Control of the European Geophysical Union.

## Other activities

- Hydrological Sciences Journal, Associate Editor (KH\*)
- Regional Environmental Change, Associate Editor and a Guest Editor of a Special Issue (VK)
- Member of the German National Committee of IAHS (VK)
- Scottish Alliance for Geoscience, Environment and Society, Co-convenor Theme 2 on Terrestrial Carbon (KH)
- Member of evaluation team for Finnish Academy climate change research fund (BA)
- Cluster leader in the Swedish national research programme Climate change and Environmental Objectives (BA)
- Member in scientific committee of PUB initiative of IAHS (BA)
- Member in scientific jury of Swedish Junior Water Prize, linked to Stockholm World Water Week (BA)
- Member in BALTEX scientific steering committee (BA)
- Member in the steering board of the Water Management Program at SMHI (BA)
- Member in the Swedish expert group of UNESCO scientific programmes IHP (BA)
- Journal of Environmental Science and Technology, Associate Editor (EL)
- International Journal of Water Resources and Environmental Management Associate Editor (EL)
- Journal of Earth Resources, Editor-in-Chief (EL)
- Member of Earth System Science Project Advisory Committee, Ministry of Science and Technology, Government of India(EL)
- Elango Lakshmanan received Tamil Nadu State Scientist Award for the year2011 (EL)
- Hydrology and Earth System Sciences, Editor (WB)
- Water Resources Management, Guest Editor (WB)

\* Abbreviations: KH – Kate Heal, VK – Valentina Krysanova, BA – Berit Arheimer, EL – Elango Lakshmanan, , WB – Wouter Buytaert.