

**The Second IAHS Panta Rhei International Workshop**  
**on**  
**Water System Knowledge Innovation and its Practices**  
**in Developing Countries**

**November 20-22, 2017**

**Gorgan, Iran**

**Organisers:**

Gorgan University of Agricultural Sciences and Natural Resources of Iran, Gorgan, Golestan Province under the Ministry of Science, Research, and Technology of Iran

Iran National Mega Project on the Integrated Watershed Management, the High Council of Sciences, Research, and Technology of Iran

Golestan Provincial Government

Golestan Province Regional Water Agency

Golestan Province Central Office for Natural Resources and Watershed Management

and

The International Association of Hydrological Science (IAHS).

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## **Introduction**

The world's water problems are growing rapidly. Demand for freshwater is increasing by 64 billion cubic meters per year and this is set to rise even further as the world's population expands to an expected eight billion people by 2030 and more and more people demand a regular supply of quality water (WWAP, 2009). There is an urgent need to understand available hydrological knowledge and new demand for hydrological innovation in order to meet the water system challenges worldwide, in particular in the developing countries.

Twenty-first century solutions, including those that will help to attain the water-related Sustainable Development Goals need to interweave traditional engineering, ecosystem-based service delivery, social and institutional approaches, and bring together social entrepreneurs, leaders from policy and industry, and the global science community.

In the current modern times, humans have deeply impacted the natural hydrological cycles. Socio-hydrological knowledge will play a key role in providing the basis for the integration of physical processes with human activity dimensions and social demands for water security. **In response to this imperative to include human influences as integral component to hydrological research, the International Association of Hydrological Sciences (IAHS) launched the hydrological decade 2013-2022 with the theme “*Panta Rhei: Change in Hydrology and Society*”. *Panta Rhei* aims to reach an improved interpretation of the processes governing the water cycle by focusing on their changing dynamics in connection with rapidly changing human systems (Montanari et al., 2013; McMillan et al., 2016).**

By providing a platform for exchange, the Panta Rhei Workshop series contributes to the development and assessment of innovative ideas and products in a holistic way; identifying and accelerating the technological, social and institutional innovations necessary to address the multi-sectoral and multi-scale challenges of modern water systems in a way that promotes sustainability and resilience against threats.

This international workshop aims to **bring together scientists from worldwide (in particular from developing countries)** and various disciplines that share a common interest in **addressing the challenges of understanding and managing the water systems.**

A special session on the Caspian Sea water-related management challenges will be held during the workshop to provide a forum for more detailed discussion on an important water system and its dynamics. A one-day field trip to the southern coastal areas of the Caspian Sea and the nearby Hyrcanian forests will be organised.

The broad aims are to enhance the contribution of strategic scientific and technical research and innovation to the sustainable management of water systems, including rivers, groundwater and wetlands.

There are four main objectives for this workshop:

- (1) To understand major water system problems and their root causes particularly in developing countries in a coupled nature-human systems;
- (2) To demonstrate current hydrological knowledge of models, tools and case studies to deal with water system problems e.g. water scarcity, water-related disasters, groundwater depletion, water-related poverty and conflicts;
- (3) To identify demand for hydrological innovation to meet the grand water system challenges particularly IWM under the severe climate change conditions as well as under unstable policy and management conditions; and
- (4) To develop a multi-national and multi-disciplinary cooperation framework with a concrete working plan in order to provide capacity building, monitoring equipments, and free software packages and decision support systems for developing countries, and to **expand *Panta Rhei* as well as IAHS through establishing national committees and regional networks and increasing members in these countries.**

### **Registration fees and logistics**

No registration fees will be charged, but participants are responsible for their own international flights. Conference organisers will arrange for accommodation and travelling within Iran.

## Key deadlines

June 9, 2017	First announcement of the workshop
June 19, 2017	Second announcement of the workshop
September 01, 2017	Deadline for collecting submissions
October 31, 2017	Last announcement with detailed workshop information
Nov 20-22, 2017	Workshop

## Contact Information

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## Organiser Information

**Gorgan University of Agricultural Sciences and Natural Resources (GUASNR)** is the first higher education institute specialising in agricultural sciences and natural resources in Iran. The university is located in Gorgan, the capital city of Golestan Province, in the northeastern part of the country. It was founded in 1957 as the Junior College of Forestry and Range Management. Through a course of continued development the Junior College was promoted to GUASNR on 1992. Today, the university has 9 faculties with a total of 23 departments at 2 different campuses. It offers 29 undergraduate, 45 master and 35 doctorate programs. In addition, GUASNR publishes 11 national and 5 international scientific journals.

**The Iran Mega-Project on the Integrated Watershed Management (IMPIWM)** is a large national project based at GUASNR. The main aim of the project is initiation of a new holistic approach towards the integrated watershed management at the national and regional scales for Iran. The megaproject has been approved by the High Council of Sciences, Research, and Technology of the country in 2012 and has four phases and has been planned to be terminated in 2020. Following approval of the project, a consortium consisting of four universities and a national research body was established to compile the Phase Zero Proposal as the first step. The final version of the Phase Zero Report was submitted to the relevant officials and subsequently the Phase 1 was commenced according to the project plan.

**References:**

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World Water Assessment Programme (WWAP), 2009. The United Nations World Water Development Report 3: Water in a Changing World. Paris: UNESCO, and London: Earthscan.