



Panta Rhei – Everything Flows
Change in Hydrology and Society
IAHS Scientific Decade 2013-2022
www.iahs.info/pantarhei

Details of the Proposal

Title of the Working Group

Sustainable Water Supply in an Urban Change

Abstract of the proposed research activity

Achieving the sustainability in water supply has become one of the main challenges for the changing World. Water is used in every field of life: for drinking and domestic purposes, industrial needs and agriculture. That means, various ecological, economic, social and cultural aspects must be considered. Moreover, water supply needs to meet the demands of the increasing urban growth and therefore irrigated agriculture. For a better development and reaching the goals we need a profound study of changes in hydrological and water use characteristics in different countries; influence of their changing economic activity on the river flow and water quality; evaluation of the availability of water resources for the population; anthropogenic impact on water resources; efficiency of water use. Such kind of assessment is necessary for accessing sustainable water supply and supporting sustainable societal development in a changing environment.

Panta Rhei Research Themes, Targets and Science Questions addressed by the Working Group

Assessment of water supply and water use together with evaluation of water resources change is necessary for sustainable water management in the near and distant future, raising living standards and preserving the environment. It is very important to understand and to compare these changes for the countries, which differ in size, population trends and water demands in all the fields of economy. This study aimed to focus on India, Russia, China, Iran, Canada and Austria, countries, different in all the aspects of life, including patterns of development. In addition, the comparison with some other countries will be made. This corresponds to the three main targets of Patna Rhei and addresses to the following questions:

Science question 1: “What are the key gaps in our understanding of hydrologic change?”

Science question 2: “How do changes in hydrological systems interact with, and feedback on, natural and social systems driven by hydrological processes?”

Science question 6: “How can we support societies to adapt to changing conditions by considering the uncertainties and feedbacks between natural and human-induced hydrologic changes?”

Societal impact of the Working Group activity

The Working group activity is socially, governmentally and scientifically oriented. There is lack of interdisciplinary investigations and therefore long-term development strategies including those for water sector that makes sustainable environmental management difficult. This integrative research on several different countries can help to deeply understand the relationships between water change and humans, water supply and urban change, development and water demands, which are vital for all the citizens, decision-makers and scientists in different research areas. It is planned to present the work in water conferences in different countries, as well as in interdisciplinary congresses, to hold seminars in research organizations and to make reports in governmental institutions, such as Ministries of Natural Resources and Federal Environmental and Water agencies of the countries. Besides, it is agreed to hold meetings with people, responsible for water supply, like those working for water authorities, municipal water utility networks and water services companies. Moreover, several interdisciplinary international meetings, summer-schools and workshops will be organised. The interim and final results will be published.

List of Participants

Name of Participant	Affiliation (full address and email)	Role in Working Group	Main expertise
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