



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

[The first page of this template contain guidelines and should be removed when submitting the proposal]

Proposal for a Research Theme

Premise

The research activity of Panta Rhei is structured in research themes that will refer to the targets of Panta Rhei. Research themes will be listed in the Panta Rhei web site as they are approved by the Panta Rhei Chair and Target Leaders. A first list of Research Themes will be compiled after January 31st, 2014 (see below).

Call for Research Themes

The Panta Rhei community is invited to submit proposals for Research Themes to be developed during the Panta Rhei Scientific Decade 2013-2022.

Research Themes are driven by one or more broad research questions and are described by a short abstract (no more than 150 words) describing the related activity and the link of the theme with the Panta Rhei Science Questions, with particular emphasis on the connection with society. Finally, proposers of a Research Theme should provide a first list of related working groups. If no groups are available, the proposers of the Research Theme are expected to submit at the same time a proposal for a working group (please see the Panta Rhei web site).

Research themes can be proposed anytime during the first biennium of Panta Rhei (2013-2015). However, startup Research Themes can be proposed until January 31st, 2014. After that date a first summary of research themes will be compiled and the related web page updated. If you are interested to propose a research theme, this first deadline should not be missed. Proposals that will be submitted later on will be considered as long as they fill a significant gap in the overall configuration of the Research Themes that have already been approved.

Please submit this proposal by January 31st, 2014 as an email attachment to alberto.montanari@unibo.it. A confirmation of receipt will be sent to you.



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Details of the Proposal

Panta Rhei abstract

Global Change in Hydrology and Society

Socio-economic globalization and the rise of global environmental issues like climate change and resource scarcity have revived the interest in analysis, modelling and assessment on a global scale. In this revival the hydrological sciences contributed to climate modelling, the global assessment of water resources and modelling of the global water cycle. Typically global hydrological analysis and models limit themselves to the hydrological cycle, leaving analysis and modelling of interactions with the global socio-economic system to the realm of integrated assessment modelling and system dynamics. However, like global climate modelling is not feasible without proper incorporation of the global hydrology, integrated assessment modelling can't do without proper integration of global hydrology. Global hydrology is for example closely linked to food and energy systems and can have a major impact on development through floods and droughts. The research theme Global Change in Hydrology and Society reaches out and contributes to integrated assessment modelling by providing pieces of the integrated assessment puzzle and share a policy oriented outlook with integrated assessment modelling.

Panta Rhei research Targets and Science Questions addressed by the Research Theme

1. How does the global hydrological system interact with the global socio-economic systems? (Understanding)
2. How can we use improved knowledge of coupled global hydrological-social systems to improve model predictions and deal with probabilistic and deep-uncertainties (Estimation and prediction)
3. How can we support the global community to adapt to changing hydrological conditions (Science in practice)

Societal impact of the Research Theme

Currently the IPCC is setting new standards for the governance of global issues. Integration of global scientific results and a structural connecting to policy and politics are a relevant virtue of this standard. This research theme aims to prepare the hydrological sciences for its contribution to the International Panel on Water Scarcity (IPWS) to be.

Panta Rhei Working Groups referring to the Research Theme: Not available