



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 Research Theme

Transdisciplinarity

Abstract of the research theme

A scientific decade on Change in Hydrology and Society requires the perspectives of those disciplines that have traditionally been concerned with society, the social sciences, as well as of society itself. Understanding how these perspectives can be combined with hydrological perspectives to create new ways of approaching socio-hydrological questions is the aim of the Research Theme *Transdisciplinarity*. Specific research questions include:

- Scientists do not act in a disinterested and analytical way with respect to the things they study; science is practiced *within* socio-hydrological systems. We have very few studies of how those systems shape hydrological science as a discipline, and the opportunities and constraints that this creates for producing scientific knowledge. Thus, how is hydrological research practiced within socio-hydrological systems and can we account for, through the consideration of particular case studies, how science has co-evolved with society in a range of hydrological settings? How do political, social and cultural constraints and discourses mix with scientific knowledge in evolving socio-hydrological systems?
- Socio-hydrological systems have meaning to more than those who are scientists; the people and institutions that live within socio-hydrological systems have profound hydrological knowledge. What does this mean for how socio-hydrological systems should be researched and governed in a democratic world?
- The social sciences are often critical of the approaches traditional to scientific method. Thus, what are the ways of working that are required to allow natural scientists, social scientists and other stakeholders to develop meaningful collaborations around socio-hydrology?

Leading on from the last point, this Research Theme is seen as the umbrella for conducting, evaluating and recording transdisciplinary experiments during the scientific decade 2013-2022.

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

This Research Theme addresses mainly target 1 (“understanding”) and target 3 (“science in practice”). Science question 2 (“How do changes in hydrological systems interact with, and feedback on, natural and social systems driven by hydrological processes?”), among others, will be enriched through social science perspectives on coupled human-environment systems. Experiments with transdisciplinary methods, in turn, will provide evidence for 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 Research Theme

Societal impact follows directly from the embeddedness of science in society within a transdisciplinary research programme. It is one aim of the Research Theme to evaluate and help improve how knowledge, power and decisions interact in a socio-hydrological world.

Panta Rhei Working Groups referring to the Research Theme

We are also proposing a Working Group with the same name.