

Water Resources Research Special Section

“The 50th Anniversary of Water Resources Research: History and Future of Water Science for People”

Call for Contributions

The first issue of Water Resources Research (WRR) was published in March 1965 and therefore the year 2015 will present the exciting opportunity to celebrate the 50th anniversary of the journal. This milestone is an occasion to look back on 50 years of research activity and to provide a perspective for future research. To formally celebrate the 50th anniversary of WRR the Editorial Board has decided to publish a **Special Section**, entitled “**The 50th Anniversary of Water Resources Research: History and Future of Water Science for People**”.

As the title clearly reflects, the Special Section will focus on research activity on water for the development and benefit of society. It aims to provide an overview of the scientific challenges in water sustainability, the important issues at the interface of water science and society, and the new technologies of monitoring and assessment that offer new opportunities to move us forward in the 21st century relying on a delicate balance between economic prosperity (food, health, education) and environmental sustainability.

Why water for people?

The interaction between water and society presents relevant research challenges for the future, for which this Special Section aims to set the basis and provide inspiration. It is well known that the interrelation between water and humans is as old as humans themselves. The ancient Greeks recognized water as one of the four essential elements, and water is an essential part of Hinduism and Buddhism (see Figure 1). Challenges associated with water have marked human history and will be more and more prominent at the global level in the coming years. It is no surprise that the discipline of Hydrology, which started with its roots in engineering solving real water problems, emerged in the last 50 years as a primary discipline of Geosciences. It is now called upon to integrate across an enlarged interdisciplinary water science with fields such as geography, economics, public health, engineering and advanced monitoring technologies to solve an increasing number of water sustainability problems. WRR has witnessed the growth of the discipline of hydrology not as a passive publisher but as an instigator of science growth by defining new cutting-edge research, contributing to the solution of important open problems, and acting as a catalyst for interdisciplinary research by producing collections of papers and special volumes. The Special Section will take stock of this 50-year tradition in WRR, while looking forward to new endeavors in hydrologic science.

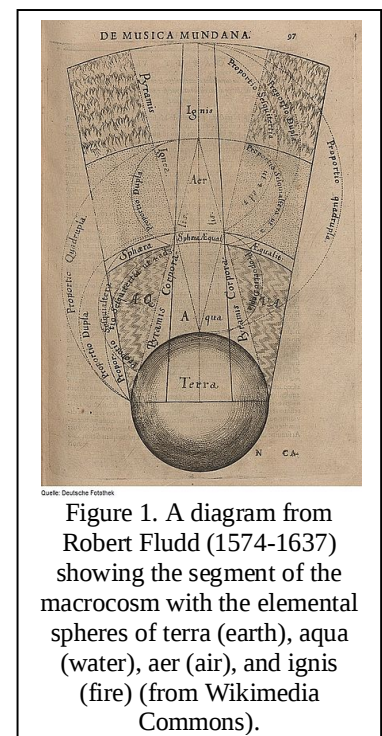


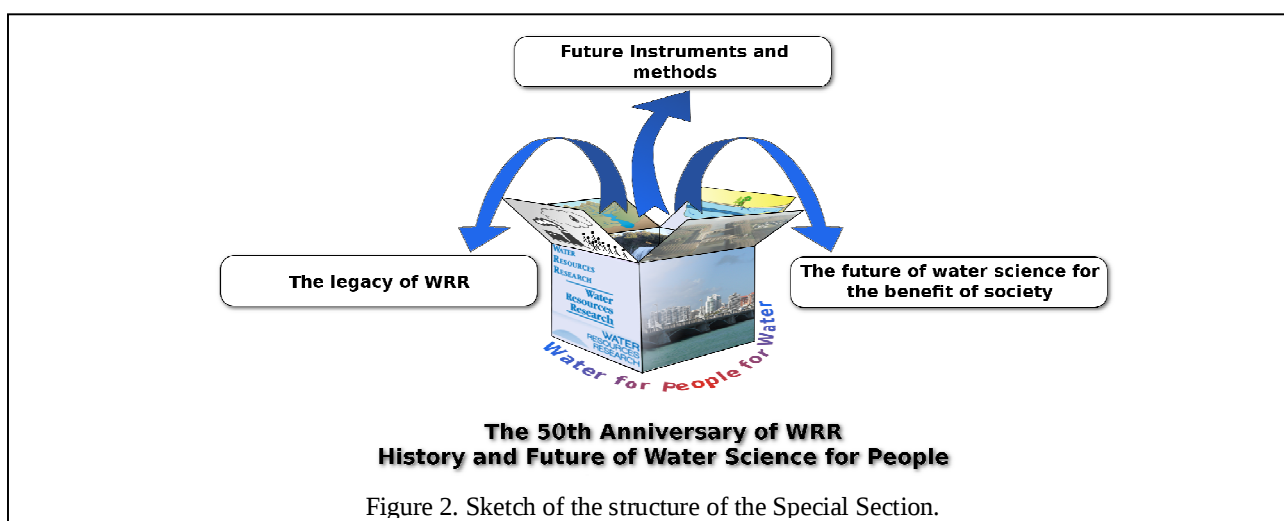
Figure 1. A diagram from Robert Fludd (1574-1637) showing the segment of the macrocosm with the elemental spheres of terra (earth), aqua (water), aer (air), and ignis (fire) (from Wikimedia Commons).

Structure of the Special Section

The theme of water science for people has an exciting history, in which WRR has played a key role marked by milestone contributions. The theme is also rich in exciting perspectives regarding future technologies in measurements and modeling. Finally, it is stimulating to look to anticipate the messages, philosophies and theoretical developments that WRR will deliver in the next 50 years.

In order to present to the reader a coherent scientific treatment, the Special Section will be divided into three subsections (see Figure 2):

- The legacy of WRR
- Future instruments and methods
- The future of water science for the benefit of society



Invitation to potential contributors and timeline

The Special Section is open to contribution from the community, upon approval of a preliminary abstract by the Editorial Board. All papers must fit one of the three subthemes introduced above.

The timeline for the production of the Special Section is the following:

- Submissions will be accepted starting Sept 1st, 2014.
- Papers should be submitted by December 31st, 2014 (a slight extension of the deadline may be granted on request).

Timeliness in the submission and revision of papers is an essential requirement. A contingency plan will be set up by the Editorial Board to avoid delays in the schedule if contributions are not delivered on time. It may include the possibility to publish late papers in subsequent regular issues of the journal. The target is to complete the Special Section by the end of 2015.

The papers will be allocated to one of the three subsections by the Editors. Papers will undergo the usual rigorous peer review process of WRR. The suitability of papers for the special section will be assessed by the Editors based on reviewers' assessment and the substance of the contribution to the

theme. Papers that are not accepted for the special section may be considered for publication in a regular issue of the journal.

Focus of the contributions

- Contributions to the subsection “**The legacy of WRR**” should provide an historical perspective on the most important WRR contributions on the theme “Water science for people”. Papers in this subsection will be organized by disciplines and therefore authors should focus on their main field of expertise, while maintaining a broad view (papers focusing on narrow fields may not be accepted). Contributions that span several fields can be also considered, as well as papers on the history of hydrology and water resources management. The above papers could be structured as reviews of the literature, or could assume the form of a historical review and perspective of the development of the discipline. Manuscripts are expected to provide a solid scientific basis for future research. They are expected to be a long lasting reference for young scientists.
- Contributions to the subsection “**Future instruments and methods**” are expected to focus on emerging techniques and models. These manuscripts are expected to focus on new methods and could assume the form of markedly technical papers. These include novel measurement methods as well as modeling approaches. However, they should keep a broad view and should be of interest to the international community of water scientists. It is expected that these contributions will be submitted as research articles or technical notes.
- Contributions to the subsection “**The future of water science for the benefit of society**” should deliver a profound and forward looking vision in order to shape the future of hydrology and water resources management for people. Contributions should focus on emerging principles and concepts in a broad scientific context and provide original ideas that will further the hydrological sciences and, potentially, bring together branches of the discipline that so far have been disparate. Therefore, they may have an element of synthesis. These papers could be submitted as opinion pieces or as research articles proposing new philosophies and approaches to the science underpinning water management. These papers are also expected to provide a solid scientific basis and reference for future research.

Authors’ preference for one of the above subsections can be specified in the cover letter or the comment box in GEMS.

The Editors are excited about the prospects of this special section of Water Resources Research and are looking forward to a fine set of contributions.

Alberto Montanari (Editor in chief), Jean Bahr, Günter Blöschl, Ximing Cai, D. Scott Mackay, Anna Michalak, Harihar Rajaram, Graham Sander (Editors)