



Editorial, January 2019

In these times of human, economic and political change as well as that related to natural environment and climate change, research has become more relevant.

A January 2018 publication of the American Meteorological Society (Herring et al. 2018) that aimed to explain the extreme events of 2016 concluded that most of them would not have been possible without human-caused climate change. In Asia, the most important events were record high temperatures, record low temperatures, and extreme rainfalls. Record heat was unusually widespread in South-East Asia, southern India and northern Eurasia, causing human casualties. In Thailand, it also caused crop devastation and extremely high energy use. The extreme rainfall in June and July in the Yangtze-Huai region, especially in the middle and lower reaches of the Yangtze River basin, caused severe flooding, water-logging and landslides, with losses estimated at USD 10 billion. Qian et al. (2018) reported that in January record-breaking cold events affected most areas of China, especially the eastern regions, and that 1.18 billion people lived in the areas where daily mean temperatures fell by more than 6 °C.

The IPCC (2018) special report on global warming of 1.5 °C states that human activities are estimated to have caused approximately 1.0 °C of global warming above pre-industrial levels, with a likely range of 0.8 °C to 1.2 °C; that this warming will persist for centuries or millennia and continue to cause further long-term changes in climate systems; and that climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase (p. SPM.10). These findings force the world to take longer-term perspectives that respond to the enormous challenge facing humanity, that are less political, and that are followed with actions that respond to the 'new' climate.

In the face of far-reaching change, one of the countries that are implementing numerous measures aiming at improving environmental quality is China. Regarding water resources, management, governance and infrastructure, actions have been taken and continue to be implemented all over the country.

One of them is the River Chief System. This is a horizontal and vertical system that makes party members and government leaders responsible for control of pollution and ecological restoration of rivers and lakes. They have the authority to coordinate activities among departments and regions. They also supervise river chiefs at lower levels, from provincial to municipal, county and township levels. First implemented in Wuxi City, Jiangsu Province, in 2007, it has been extended all over the country. Its incentive structure has made it effective: the performance of officials as River Chief System officials affects their overall performance, which means they can be either promoted or suspended on this basis (Dai, 2015).

In this regard, in this first issue of 2019, our articles emphasize the importance of investigating aspects that have proven to improve water resources management in practice.

These include aspects of governance, shared values, understanding of other actors' concerns, conflict resolution and social learning processes. They also note the complexity of implementing policies that require integration of elements. This is problematic at city, regional and country levels but even more at interstate, interbasin and transboundary levels.

Two articles in this issue discuss the complexity of managing water resources in a transboundary setting. These include a state-of-the-art review on the Euphrates-Tigris river basin (Kibaroglu, 2017) and water security perspectives in the Suchiate transboundary river basin between Mexico, Guatemala and Belize (Kauffer, 2017).

In her state-of-the-art review, Aysegül Kibaroglu comprehensively analyzes the Euphrates-Tigris basin from a transboundary governance perspective. She argues that in the basin, there are both political confrontation and cooperative institutional development. Despite the 'water wars' literature positing the likelihood of conflicts due to demand imbalances and water quantity and quality concerns, it has not happened in this basin, and it is highly unlikely to happen in the region. A more likely alternative is the coordination of the management of water resources and good transboundary water governance, which will render benefits to all the concerned actors.

In the case of the Suchiate River basin, Edith Kauffer discusses in detail the different water-security perspectives of the local population in Mexico compared with that of the state, as well as the diverse meanings this concept has among the local population. She stresses the importance of understanding who the 'stakeholders' are, as they can represent very different groups of individuals and formal and informal institutions with varied social and cultural backgrounds as well as interests. It is the range of viewpoints (those of human security in the case of non-state actors, compared to the traditional views of the state) that determine the actions of the diverse groups, and thus the possibility of success of specific alternatives. Little work has been published on this topic that is so well researched. Kauffer's is thus a welcome contribution to the literature.

The study of bridging organizations in environmental governance and management at a regional level in Calgary, Canada, by Stewart and Tyler (2017), brings complementary views. In this study, bridging organizations – self-interested and self-regulating volunteers – worked jointly to address complex problems such as land use, water resources and air quality management. The legal and institutional frameworks were more supportive of non-state actors compared to the cases discussed in the previous two articles. The analysis shows that non-state actors do influence formal (municipal) participation. In addition, their contribution was recognized by the governments at provincial and municipal levels who funded the operations, pilot projects and ongoing management programmes.

Finally, from this year, in addition to six regular issues, the *International Journal of Water Resources Development* will publish a series of online supplements which will be Open Access. We invite interested guest editors to prepare whole or themed supplements, and authors may submit papers to both the regular issues and Open Access supplements.

References

- Dai, L. (2015). A new perspective on water governance in China: Captain of the River. *Water International*, 40(1). doi:10.1080/02508060.2014.986702
- Herring, S.C., Christidis, N., Hoell, A., Kossin, J.P., Schreck III, C.J., and Stott, P.A. (Eds.). (2018). Explaining extreme events of 2016 from a climate perspective. Special supplement to the

Bulletin of the American Meteorological Society 98(12), Retrieved from http://www.ametsoc.net/eee/2016/2016_bams_eee_low_res.pdf

- IPCC. (2018). Global warming of 1.5°C, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Summary for policy makers, http://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf
- Kauffer, E. (2017). Contrasting water securities: The Mexican state facing downstream stakeholders in the Suchiate transboundary river basin. *International Journal of Water Resources Development*. doi:10.1080/07900627.2017.1393400
- Kibaroglu, A. (2017). State-of-the-art review of transboundary water governance in the Euphrates–Tigris river basin. *International Journal of Water Resources Development*. doi:10.1080/07900627.2017.1408458
- Qian, C., Wang, J., Dong, S., Yin, H., Burke, C., Ciavarella, A., Dong, B., Freychet, N., Lott, F.C. and Tett, S.F.B (2018). Human influence on the record-breaking cold event in January of 2016 in Eastern China, Explaining extreme events of 2016 from a climate perspective. Special supplement to the *Bulletin of the American Meteorological Society* 98(12), S118–S122. doi:10.1175/BAMS-D-17-0095.1
- Stewart, J., & Tyler, M. E. (2017). Bridging organizations and strategic bridging functions in environmental governance and management. *International Journal of Water Resources Development*. doi:10.1080/07900627.2017.1389697

Cecilia Tortajada
Editor-in-Chief

 cecilia.tortajada@gmail.com  <http://orcid.org/0000-0001-6308-4924>