Editorial

Maurits W. Ertsen¹

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In this issue, the results of a 2013 workshop entitled “Between Human Niche Construction and Imperial Power: Long-term trends in Ancient Water Systems” are presented. The workshop and related activities were co-designed and co-arranged by Maurits Ertsen from Delft University of Technology, The Netherlands, and Tony Wilkinson from Durham University, United Kingdom. Unfortunately, on 25 December 2014, before the work on this issue could be finalized, Tony passed away. Besides being one of the smartest archaeologists on the planet, Tony was the friendliest person one could imagine.

The topic of the workshop, in which we explored small systems, large empires, and their possible connections using the latest theoretical insights, is also clear proof that Tony was always open to and interested in new ideas. Furthermore, given his enormous support for the journal, it is only fitting that this issue of *Water History* is dedicated to Tony Wilkinson.

The workshop started with assessing Wittfogel’s analysis of ancient irrigation. Although he underplayed the importance of day-to-day actions, Wittfogel correctly assumed that central states initiated much irrigation development. There is one important issue, however: a growing body of evidence suggests that it were the later ancient states that encouraged the spread of irrigation systems by exerting power over vast areas, not the early ones. The main aim of our workshop was to generate an overall conceptual framework for dealing with ancient water systems—small or large. We wanted to shift the focus away from simplistic water and power links towards a more nuanced understanding of water management, including local management within an imperial or state-wide framework. Using the new concept of Human Niche Constructions (HNC), the workshop explored how human agents changed their environment and possible feedbacks from that environment as well.

In the first paper, Vern Scarborough explores different concepts of human-environmental interactions. He specifically assesses differences between societal development in

✉ Maurits W. Ertsen
m.w.ertsen@tudelft.nl

¹ Delft, The Netherlands

arid and wet environments and how societies altered environments to accommodate their (pre)historic trajectories. After this introduction to the topic of human-environmental change, two papers explore two dimensions of such change in the Near East. One of the last papers Tony has written—this one with his co-authors Louise Rayne and Jaafar Jotheri—discusses how the emergence of hydraulic landscapes in Mesopotamia can be understood as a process of human niche construction. In the next paper, Louise Rayne discusses the large imperial irrigated landscapes in one region of the Ancient Near East, the Balikh Valley.

A second set of papers discusses the close interactions between water systems, humans, and environment. In her paper on the Zerqa Triangle in Jordan, Eva Kaptijn succeeds in relating irrigation to typical concerns within human niche construction—for example feedback loops between human agency, environment, and well-being. Frank Braemer, Damien Gazagne, and Gourguen Davtian show that investment in small-scale water systems in the Fertile Crescent by one generation changed the selective landscape for a next generation, as this generation could benefit from the water made available. Looking in detail to water control in the kingdom of Qatabān (Yemen), Julien Charbonnier shows the importance of understanding management of water systems, given its strong influence on local landscape and hydrology.

In the last set of papers, we move away from the Near East. Robert Groß and Verena Winiwarter even move away from archaeology in their analysis of snow, skiing, and hydrological manipulation creating different landscapes in the modern Austrian Alps—including new species emerging. We move back to archaeological times with a discussion of long term relations between climate and Hohokam irrigation along the Gila River in Arizona. In this paper, Tianduowa Zhu, Maurits Ertsen, and Nick van de Giesen suggest that climatic changes alone would not have been the cause for change in Hohokam society. In another long-term study, Don van den Biggelaar and Sjoerd Kluiving use human niche construction to discuss how communities interacted with their surrounding landscapes in the central Netherlands over the last 220,000 years. Finally, Kluiving expands such analysis to selected European landscapes in his exploration how different types of landscapes were exploited and changed differently by human activity.

Applying the concept of Human Niche Constructions (HNC) to ancient water management, the group of scholars present at the workshop could think and write about feedbacks in four domains: (1) The material environment—modified by human agency; (2) The social arrangements—when modifying the environment and responding to the changes; (3) The genetic structure of the human group—as a result of modifications; and (4) The material environment for other species—which would transform those species. The workshop made clear that in the field of land and water studies, it is not yet easily possible to include genetic changes in the analysis—perhaps the relation may be simply too broad and as such blurred with other influences. Another conclusion of the workshop was that HNC is not something specific for small-scale systems. There is no reason to assume that larger-scale systems cannot be studied as niches.

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