Geophysical Research Abstracts Vol. 17, EGU2015-1199, 2015 EGU General Assembly 2015 © Author(s) 2014. CC Attribution 3.0 License.



English Water Meadows: historic relics or focus for environmental management and inter-disciplinary research?

Hadrian Cook

Kingston University, London, UK

Irrigated water meadows are found across Europe, from southern Scandinavia to Spain and in the Alpine regions and Italy. While the practice of engineering 'floated' meadow land for deliberate irrigation on hillsides and floodplains is widespread and ancient, since about 1600 AD the practice was widely adopted on floodplains in southern England where they improved the timing and productivity of grazing land and produced hay crops. They also became a part of English consciousness through art and literature.

To some, water meadows are a relic of an agrarian past, to others they are the object of a range of foci for conservation, education, sustainable grass production, community engagement and recent research suggests water returned from meadow irrigation is beneficial to river water quality.

Historically floodplain 'bedwork' water meadows grew from, and were integral in, the farming system of 'Wessex' involving sheep which produced dung for arable land and later supporting dairy and beef production, as well as hay. Where systems remain, this is largely due to the whim of individuals, the outcome of agri-environmental schemes. Water meadows may be managed by public, voluntary or private sector bodies. What is needed is a fresh look at how land owners, or communities, might micro-target them for heritage, habitat and grassland management.

There are therefore interesting questions concerning their future: Who might invest in their restoration and maintenance? How might they be integrated into commercial farming? Are they of sufficient interest to restore en masse to become (once more) a major feature of the English chalk stream valleys? Do they provide a way into academic and public perception, combining environmental science, history, cultural heritage and environmental management? How might restoration and management become vehicles for public engagement?

While each of these questions represents a major topic for discussion, this paper is an attempt to consolidate what we know and frame such questions. It is concluded that these curious, but once widespread features of English floodplains do in reality provide for a range of interests. These include: outside laboratories for floodplain process research, an arena for democratic public engagement and for the spread of social learning and (with co-productive policy development in mind) sustainable conservation practice for soil, water and agriculture for this and for subsequent generations.

Key words: Water meadows, irrigation, chalk valleys, landscape, habitat diversification, public participation, floodplain management

Selected Publications

Cook, H.F., Cutting, R.L. and Valsami-Jones, E. (in press). Impacts of meadow irrigation on temperature, oxygen, phosphorus and sediment relations for a river J Flood Risk Management

Cook, H., Inman, A. (2012). The voluntary sector and conservation for England: Achievements, expanding roles and uncertain future J. Env.Man.112 (2012) 170-177. http://dx.doi.org/ 10.1016/j.jenvman.2012.07.013

Cook, H.F., D. Benson, A. Inman, A. Jordan and L. Smith (2012). Community-based catchment management groups in England and Wales extent, roles and influences. Water and Environment Journal 26 (1) 47-54. DOI: 10.1111/j.1747-6593.2011.00262.x

Cook, H.F.(2007). Soil Nutrient and Sediment Dynamics on the Kentish Stour. Water and Environmental Journal 21 (2007) 173-181

Cook, H.F.(2010). Floodplain agricultural systems: functionality, heritage and conservation Journal of Flood Risk Management 3, 1-9 DOI:10.1111/j.1753-318X.2010.01069.x

Cook, H.F. and T. Williamson (eds.) (2007): Water Meadows: History, Ecology and Conservation Windgather Press, 152 pp.

Stearne, K. & Cook H.(2013). Water Meadow Management in Wessex: Dynamics of Change from 1800 to the Present Day, Landscape Research, DOI: 10.1080/01426397.2013.818109