Integrated, adaptive and domanial water resources management

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Abstract

Arising from concerns that integrated and adaptive water resources management (I/AWRM) may not be sufficiently tailored to certain kinds of complex environments, this article examines their design through a governmentality framework, positing that I/AWRM could be enhanced by increasing accountability and local appropriateness through citizen's actions that address or are situated in three types of domains – spatial units termed 'holons', hydrological regime 'phases' and problem-solving 'tasks' – an exercise termed 'domanial'. For reasons explained in the paper, the geo-economic scope of this paper are countries as in Sub-Saharan Africa where climatic variability and widespread irrigation dominates river basins that in turn have limited capacity for well-financed administration commonly seen in Europe. The need to recognize irrigation in adaptive water management is born from the great proportion of freshwater depleted by the sector and its effects on water shortages and behaviors in other sectors. Because of these characteristics, there is a risk that in irrigated semi-arid environments, IWRM (with a regulatory emphasis on managing water use to effect water allocation between sectors in large river basin units) or adaptive versions of IWRM (emphasizing iterative refinement and wider system complexity) will not engender satisfactory outcomes. The relevance and definitions of domains are explored in the paper, as is a brief policy discussion on domanial water resources management (DWRM).