



Water and Energy: Research in Europe and China

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Water and Energy are intrinsically related to each other: while most people are aware of hydropower as a renewable source of energy and the production, distribution and treatment of water requires a large amount of energy, water and energy are much more closely linked in many more ways. Examples of such nexus can be found in oil exploration where substantial amount of water is being diverted, consumed and polluted, damming of rivers causes environmental problems which need energy to resolve, desalination is energy intensive, and even modern eco-friendly water saving technologies require energy to achieve water savings.

All the above are well known to different parts of the water and energy research community, and more recently, water and energy industries have started exploring new technologies and processes to manage both in a sustainable manner. This paper attempts to discuss different ways of either enhancing the synergic links between water and energy, or breaking the link in order to achieve better efficiency and sustainability. There is a growing need to go beyond the 'water footprint' approach, which considers lumped consumption and fails to address spatial and temporal variations. It attempts to identify gaps in research in the water-energy nexus in Europe and China and also the need to form a long-term research platform to investigate this important issue.