



Sustainable Urban Drainage Systems

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Abstract

The selection and demonstration of Sustainable Urban Drainage Systems (SUDS) or Best Management Practices (BMPs) will be described in the context of the European Commission (EC) funded SWITCH project (www.switchurbanwater.eu) which has developed innovative and sustainable urban water management approaches and technologies. There are six research themes in the SWITCH project of which Theme 2 Stormwater Management has been co-ordinated by Middlesex University, London. This theme has investigated the use of natural systems such as ponds and wetlands and alternative hybrid and retrofit technological approaches for stormwater control, which contribute aesthetically to the urban environment and provide acceptable levels of prevention/protection against flooding, water pollution and water shortage when exposed to extreme events and conditions. Decision-making processes for effective urban stormwater management have been assessed and successful organisational structures and frameworks identified for the delivery of sustainable urban drainage systems. Approaches have been developed which will enhance stakeholder perception of and participation in the use of stormwater as a valuable urban resource. Environmental change studies for stormwater control and reuse options have also been addressed. Examples will be presented of the different types of sustainable drainage systems in SWITCH demonstration and other cities, their contribution to the enhancement of the environment and biodiversity and the participation of the community in their design.

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