



Challenges for Planning and Maintaining of Urban Rain Harvesting Systems- the case of Hammarby Sjöstad and Årstafältet in Stockholm

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Planners and policymakers' concern escalates over conventional systems dealing with rains in cities based on domination and control of nature rather than harmony and design with nature. A new spatial planning paradigm is needed to put in place systems which mimic natural water systems and promise multiple values instead of systems consider rain as a source of problem. However, such approach embodies significant planning challenges.

Urban rain harvesting systems (URHs) are inherently viewed as 'sociotechnical' systems. As such, planning processes should consider the interdependence of 'social' and 'technical' aspects as essential elements if a transition towards sustainable urban water systems is to be realised. Drawing on a common understanding for what urban rain harvesting systems should deliver in terms of 'functions' and 'added values', a generic planning framework is developed to inform practitioners on how the 'socio' and 'technical' elements should be assimilated in a long-term and integrated planning processes of URHs. Using the developed framework, the paper examines the planning and maintenance processes of urban rain harvesting systems in Årstafältet and Hammarby Sjöstad respectively. Results show that planners lack a common operational understanding on how these systems should be designed holistically in a long term and integrated planning processes creating working gaps or positional conflicts. In practice, urban planners and water engineers look at these systems as either urban design component or water drainage system to deal with technical functions hindering a smooth transition path towards urban rain harvesting systems. The paper concludes on the urgency for reordering roles and relations within a new set-up organisation to incubate these systems in long-term planning and maintenance processes.

Key words: 'Sociotechnical' system, Water, Planning, Urban Rain Harvesting systems (URHs), Hammarby Sjöstad and Årstafältet