

Management of Urban Stormwater: Advancing Program Design and Evaluation

This postdoctoral research project will examine the policy design and institutional implementation of stormwater programs that are primarily focused on enabling organisational change at the local government level. According to a number of international commentators (Brown, 2005; Peltenburg, de Wit, & Davidson, 2000; Wakely, 1997), local government bears the weakest institutional capacity relative to other levels of government and the business sector, yet is recognized as the most significant sector, to facilitate on-ground change towards sustainability.

In addition to reviewing and assessing the outcomes of these stormwater programs, the research will draw on contemporary inter-governmental program design and evaluation literature with a specific focus on sustainable governance, organisational change and socio-technical transitions.

Institutions are “the sets of rules or conventions that govern the process of decision making, the people that make and execute these decisions, and the edifices created to carry out the results” (Gunderson, Holling, & Light, 1995, p. 497). Institutional frameworks for stormwater management overlie the natural systems and the multiple resource streams or benefits they provide (Cowie & Borrett, 2005). Because of the complexity of institutional arrangements around stormwater management, it is important to understand how best to devise appropriate programs that are inclusive of the key stakeholders while targeting a set of agreed goals or outcomes.

Internationally, there are a number of alternative program design and coordination concepts advocated, such as ‘adaptive program implementation’ and ‘inter-governmental partnerships’ for addressing complex sustainability issues such as the management of urban stormwater.

Melbourne Water’s ‘Urban Stormwater Quality Program’, which forms part of the Victorian Government’s ‘Yarra River Action Plan’, provides a unique case study opportunity to advance this growing area of research. The effective delivery of the program relies on the cooperation of Melbourne Water and the local councils. By applying an ‘action research’ approach that provides ongoing feedback and evaluation, the research would form a valuable tool for program delivery. This research is likely to require both qualitative and quantitative research techniques involving field work with water management professionals.

The objectives of the research project include:

1. To both inform and map the evolving program logic (existing understandings of current local and state government capacity needs) that underpins the design and implementation of the 'Urban Stormwater Quality Program'.
2. To develop and apply a program evaluation process that provides a reliable assessment and tracking of the broad stormwater program design and implementation through an action research approach.

The expected outcomes of the research include:

- ◆ An improved *knowledge* of inter-governmental program design, implementation and evaluation for promoting more sustainable forms of stormwater management.
- ◆ An *evidence-based evaluation tool* to guide the planning and implementation of future inter-governmental programs
- ◆ Improved *communication and coordination* between state and local government for the collective environmental management of urban stormwater.
- ◆ Ongoing *evaluation* of the influence of the Urban Stormwater Quality Program on the response and capacity of local government across metropolitan Melbourne.

Melbourne Water has committed funding towards this 3-year research project.

References

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