IWRM Action Hub

CASE STUDY

Australia: Technological Innovation amidst Complex Regulation in Kalkallo

Summary

Kalkallo project was the first large scale construction project in Australia attempted to harvest and treat stormwater to a standard acceptable for direct injection into water supply system. Because the project was innovative there was no regulatory framework dictating the rules. That was considered a barrier to move forward. The project turned out to display a high degree of success in some policy dimensions while a negligible in others.

Background

The Kalkallo project was a construction project in Melbourne's northern growth corridor intended to capture and treat stormwater using constructed wetlands and settling ponds to a standard that is suitable for various purposes. The research sought not only to identify the regulatory and risk allocation frameworks that impacted the Kalkallo Project, but also to understand the role these played in decision making. Melbourne has recently experienced extreme weather conditions due to the millennium drought, the city has also undergone a period of rapid population expansion. Due to concerns about water security, harvesting stormwater became a key focus for water managers.

One impediment to this project was the absence of formal regulatory process directing how such water reuse project should be conducted. This work identified the regulatory risk and allocation frameworks that impacted on the project. This absence of regulation was seen as an enabling space for innovation to occur. The clarification of requirements provided certainty and ensured that risk was allocated to appropriate parties by considering both policy and state planning context. It also identified the complexity in the current regulatory framework that affect urban water management in Melbourne and many existing legislative provisions that can be used to encourage water sensitive

practices.

Actions taken

To begin with, it was described how the project was innovative. This was followed by data collection. Two sources of data were collected for the Kalkallo Project case study. The primary data source was semi-structured interviews with key project participants who had direct experience of the phenomenon of interest. A secondary data source was documentation about the Kalkallo Project, both that supplied by participants, and publicly available documentation about the Kalkallo Project and its surrounding context. There was a constant focus on regulatory impediments such as complexity, uncertainty, lack of incentives and gaps in framework. The factors that played key roles in impeding and enabling the project were identified.

Publicly available regulatory documents were analyzed afterwards to identify the requirements and

approvals required for the project and subsequently integrate them within the conceptual frame of Australian urban water regulation. Instead of looking for legislative blockers, the requirements were seen as new ways of creating an enabling environment for experimentation.

To continue, the relationship between the key events and decisions in the Kalkallo project was chronologically described. In the course of this project an environment where risks of innovation are shared between stakeholders was created. A culture of trust around institutional arrangements for the safe delivery of drinking water was established. Conclusively, a model suitable to regulate innovative practices which consider certainty and risk allocation was developed.

Outcomes

The Kalkallo project showed a meaningful degree of success in some dimensions while it performed low in some others. A number of approvals which have been expected to have been required to

enable the project were not in fact required. The project has enabled the government to take significant actions towards sustainability, livability and resilience values.

Policy success may exist on at least three levels; process, political and program levels. It may not be possible to achieve success in all three dimensions. At the end of the project the need to reframe how regulation is understood in the context of urban water management was pointed out. Furthermore, the existence of a culture of trust when there was gap in regulatory framework was important in overcoming impediments to innovation.

Uncertainty resulted from risk assumptions can raise costs and lessen the desire for a broader innovation uptake. The clarification of policy can be a strong force for action as it integrates society values into the action agenda. Without subsidy from the government the project wouldn’t have succeeded.

In particular, we observed that elements within existing legislative and regulative frameworks played a crucial role, both directly and indirectly, as project enablers; either by providing an incentive to take action, or by providing a broader supportive environment within which innovation could occur.

Lessons Learned

Liveability, sustainability and resilience should all be integrated in the current urban water management framework.

Failure to consult water specialists, in a timely fashion, can lead the stakeholders to take position that is more combative than collaborative.

Impediments to an innovative project can be resolved through effective communication with all relevant stakeholders, but patience is strongly required.

Regulatory and risk allocation frameworks can play both an enabling and a hindering role in relation to urban water innovation.

Corresponding Author
McCallum, Tara

Corresponding Author Contact
e.admin@crcwsc.org.au

Organisation
Cooperative Research Centre for Water Sensitive Cities

Year
2015

Country
Australia

Keywords
Urban/WASH

Thematic Tagging
Urban , Private Sector , Water services
Language English

Supporting Materials
GWP Southeast Asia
Australia: Technological Innovation amidst Complex Regulation in Kalkallo

Related IWRM Tools
Integrated Urban Water Management Plans, Private sector water service providers , Risk Assessment

---

Source URL: https://iwrmactionhub.org/case-study/australia-technological-innovation-amidst-complex-regulation-kalkallo