

Chapter 9

Integrating science within the West Australian Rural Towns Liquid Assets project

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ABSTRACT

The RTLA project aims to develop a Water Management Plan (WMP) for Western Australian towns that will be used by decision makers to improve the rural town water cycle and supply. To facilitate development of an adequate WMP, the project has adopted a systematic approach to acquiring biophysical data that in itself is essential, but also necessary for subsequent engineering and economic analyses. The approach that was developed enabled a 'paradigm shift' from addressing a biophysical problem (water table and salinity effects on infrastructure and natural resources) to the social and economic advancement of the rural town (conservation of biodiversity, reduced water imports from external sources, and economic opportunities from increased supplies of treated, fit-for-purpose water and from products extracted during water treatment). Accordingly, a conceptual system model was designed that integrated all these aspects and required inputs from numerous disciplines, agencies, professions and manufacturing industries. This chapter demonstrates the application of the systems approach in a case study for Wagin, one of