

A System Dynamics Decision Support System for Holistically Orientated Government Policy Making in the Natural Resources Development Area

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Major water infrastructure developments invariably involve interlinked economic, ecological and community/cultural dimensions. The task of assessing proposals is no less complex than that which should underpin their initial articulation by a proponent. The Australian Land and Water Audit, an official Federal Government initiative, initiated a project early in 1998 to develop a methodology that would facilitate the application of a consistently holistic focus to both project design and assessment. This paper reports on how the appointed consultants, lead by the author, have responded to the brief and on the attributes of the ensuing system dynamics based methodology as a process that is tractable for existing institutional decision making structures and is pragmatically relevant to real world political processes.

Combining work in the Learning Organisation, Strategic Environmental Assessment and Ecological Economics areas, the ensuing methodology provides guidance from the initial project articulation stage right through to project implementation and monitoring stages. It facilitates a consistently high degree of diverse stakeholder interaction and $\text{C}\text{E}\text{learning}^1$ as the foundation for effective project scoping as well as providing a platform that can satisfy the usual analytical/assessment requirements of public agencies. Through its capacities in managing diverse stakeholder interaction and to integrate the ecological, economic and community/cultural dimensions of resource development planning, the methodology was intended as an articulation of recent sustainability agendas at the international, national and state levels. The methodology will serve as an effective proforma for application to other related resource policy applications as well as providing the foundation for the development of a consistent set of national guidelines for Australia's highest level resource policy administration.