

# Extending the HELP approach through the system harmonisation philosophy#

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## Abstract

The sustainable management of the water resource will become more and more important as population demands and environmental custodianship awareness grows. The Hydrology for the Environment, Life and Policy (HELP) program aims to bring together scientific research in catchment management with practical application of policy and on-ground management practices. This paper builds on an existing foundation of knowledge and exposure, within the Murrumbidgee HELP catchment already recognised as a leader finding real solutions while working with multiple stakeholders. The HELP program has now moved into the implementation stage and includes 67 catchments from around the world that are looking to better utilise their water resources for sustainable communities. Of those 67 basins there are 7 demonstration basins, one of which is the Murrumbidgee. There is a need for extending HELP to non-HELP basins through lessons learnt from existing efforts. In this context System Harmonisation Framework is introduced as an integrative framework for extending HELP in irrigated catchments across the globe.

The 'System Harmonisation' philosophy seeks to identify business opportunities for irrigators to become an integral part of an expanding environmental services industry and in so doing support a truly sustainable and diversified irrigation business environment. A good understanding of system wide harmonisation can be gained from how irrigation systems are linked with the catchment water cycle and how life support systems and regional economies depend on them. The system harmonisation framework involves an all encompassing approach that combines research and business principles to achieve productive and environmental improvements at the catchment level. The framework involves five feasibility steps including three research components and a business analysis component: The research components comprise analysis and characterisation of hydrologic systems, water productivity, markets and ecosystem services, and mechanisms and processes for change. The business component is based on the formation of Regional Irrigation Business Partnerships (RIBP) to explore and implement opportunities for improved productive and/or environmental outcomes through changes in water management. The system harmonisation process establishes the base physical, economic and social position of the region, identifies the key pressure points in the system and the system constraint. System harmonisation thus offers great opportunity for extending HELP to other catchments around the globe to enhance the multifunctional productivity of water resources.

**Keywords:** environmental services, multifunctional water productivity, sustainability, system harmonisation