

# FARMS, RIVERS AND MARKETS

DOING MORE WITH LESS WATER



## DOING INTEGRATED RESEARCH

### Recommendations for interdisciplinary research teams

To advance innovation in water management, a study was undertaken on how to do integrated research, using the Farms, Rivers and Markets project<sup>1</sup> (FRM) as a case study. The study revealed that actively facilitating integrated research needs specialist skills and resource allocation, processes to support integration, and knowledge partnerships for learning and change.

#### METHOD

FRM researchers' work explored how to do more with less water, and was organised in interdependent sub-projects spanning disciplines including engineering, agricultural science, ecology, hydrology, social science, economics, law and systems dynamics.

The challenge commonly noted in FRM was how to best integrate diverse disciplines in practice – an issue universal to interdisciplinary work. The project aimed to address this challenge by:

- 1 Researching the practices of integrated research and community engagement in FRM by identifying disconnects between research and practice; exploring opportunities for changing practices, and, documenting and evaluating the integrated research process for the benefit of other catchments.
- 2 Designing and supporting a catchment engagement process to connect the FRM project team with stakeholders at key points in the co-development process, to identify feasible options and improve the applicability of FRM research.

## KEY FINDINGS

The following findings may benefit research teams and institutions who are seeking advice on how to do integrated research:

### Specialist skills and resource allocation

- Resourcing for specific role(s) responsible for facilitating joint inquiry and social learning, with specialist skills in knowledge brokering is important for integrated research success.

### Processes to support integrated research

- Processes that support integrated research are characterised by:
  - Careful planning so that integration is a focus of project design
  - Iterative design of processes to support integration
  - People-place connections
  - Having time to mature into an integrated research team
  - Reflexive practice that enables learning and shared ownership of new knowledge
  - An ongoing commitment to integration and co-development

### Knowledge partnerships for learning and change

- Knowledge partnerships between integrated research projects and communities of catchment management practitioners and interest groups enable social learning and practice change. These should be carefully planned and iteratively designed to include:
  - Some level of shared power to make decisions
  - A mutually negotiated commitment to co-development

- Shared resource investment
- Incentives for participation including processes to recognise and promote the value of diverse
- Flexibility to evolve and change in negotiation with partners knowledge.

## MORE INFORMATION

The Farms Rivers and Markets series includes factsheets, an overarching project report, and in-depth reports on doing more with less water through innovative farming systems, modern river operating systems, new markets in water products and services, integrated research, and balancing the needs of farms and rivers.

[www.frm.unimelb.edu.au](http://www.frm.unimelb.edu.au)

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i. Farms, Rivers and Markets (FRM) research advanced Australia's capacity to do more with less water in agricultural and environmental systems under a highly variable climate, for improved returns to the community and environment. Its portfolio of research from 2008-11 drew on expertise from a multidisciplinary team spanning University of Melbourne faculties and schools including Land and Environment, Engineering, Business and Economics and Law, Monash University's Faculty of Science, and the Murray-Darling Freshwater Research Centre.

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