

### Summary of Academic History:

PhD, Environmental Science and Management (2006 - present) University of California, Santa Barbara  
Bren School of Environmental Science and Management

MSc, Fisheries and Wildlife (2006)

Michigan State University

Thesis title: *The Changing Value of Water: The conundrum for future water managers*

BSc, Fisheries and Wildlife (2004)

Michigan State University, Honors College

### Research Interests and Experience:

- Institutional change and social discourse
- Implications of urban growth and maintaining environmental flows for water management
- The role of values in collaborative resource management
- Virtual water and the global trade of biofuels
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- The Global Water System
- Ecosystem and Population management
- Gender and environment

### Activities of Note:

- 2007-2008 Fulbright Fellow
- 2004 National Wildlife Federation Women in Sustainable Development Fellow
- 2001, 2003 USGS Biological Resources Division Field Technician



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# Evaluating Change in the Murray River:

*Institutions, Discourses, and the  
Environment*

Sara Hughes



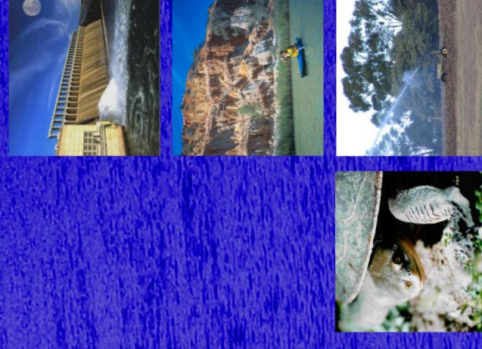
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South Australia

Centre for

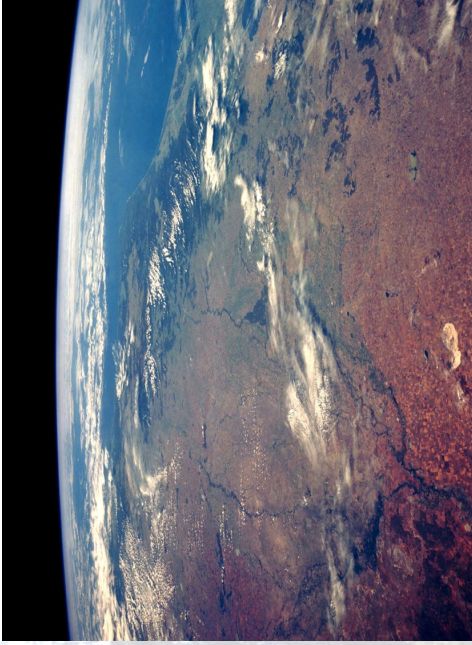
Comparative Water  
Policies and Laws



Bren School of  
Environmental  
Science and  
Management







Satellite photo of the Murray River System

## Project Synopsis

The Murray River is the primary source of drinking and irrigation water for millions of Australians.

This dependence on the Murray has serious implications for Australia. With climatologists predicting significant changes in the rainfall patterns, an ever increasing level of demand for water allocations, and wide spread changes in governing policy and legislation, it is critical that Australia manage the Murray effectively and sustainably.

This research is focused on identifying the nature and impact of social, political, and environmental factors that are promulgating and influencing the future course of Water Management of the Murray River.

Developing a better understanding of the differing needs and agendas of water users will hopefully lead to better water management.

## Many needs, many challenges

River management is a complex task, particularly for a river system such as the Murray.

- The Murray crosses through and is relied upon by four states and the Australian Capital Territory.
- It supports a complex web of ecosystems, many of which are currently under threat.
- It is a source of social and cultural identity for millions of people.

The rules that have been designed to manage the flows of the Murray have recently been the subject of much scrutiny.

Threatened ecosystems such as the Coorong Delta, pressure from prolonged drought conditions, and a widespread increase in public and political awareness have caused many to reconsider how to best manage this critical resource.

The influencing factors that have led to this rethink of Water Resource Management include institutional, social, and environmental pressures.

In South Australia, cities, ecosystems and irrigators depend on extracting water from the river each year. Each of these sectors has rules associated with their use of the river, and many of these rules overlap.

The social context of river management is different within each of these groups as well. For example, a discussion on urban water management might involve identifying cost

and distribution issues, while a conversation about the water needs of the environment may focus on values and sustainability. These differences may prove to be just as important as laws and policies when determining the agenda for managing the Murray River.

During this research, multiple stakeholders in the areas of urban, agricultural and environmental water management will be interviewed and their perspectives assessed.

Public dialogue and discourses surrounding each of these sectors will be analysed and compared to the associated changes in policy, legislation and institutional arrangements.

By contrasting and evaluating these, a clearer map of change in management and use of the Murray River can be developed.

Determining the role and impact of each of these factors in shaping the course for the river's future is a central goal of this research project.



The Murray River and significant urban localities