



Theme 3 Knowledge Systems

Towards more engaged and interactive knowledge generation, exchange and use

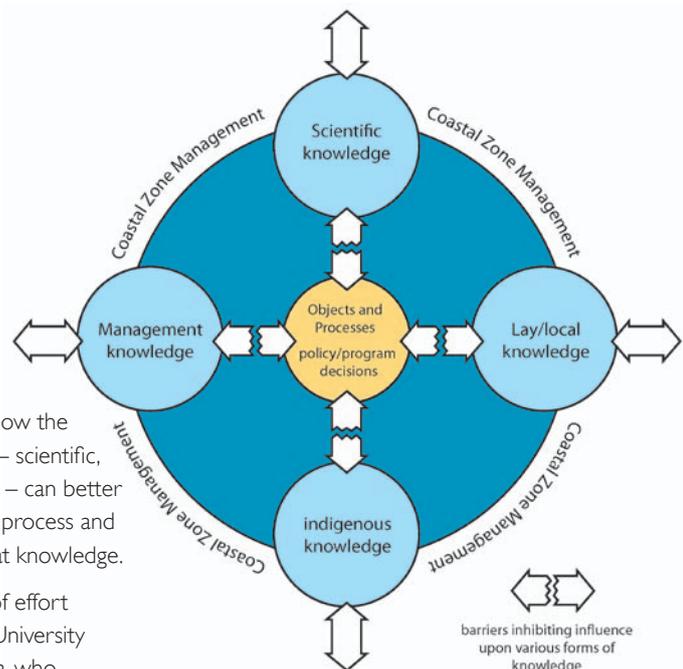
Sustainable management of the coastal zone represents a considerable challenge to Australian society. This challenge is rooted in the complexity of the biophysical and socio-cultural characteristics of coastal areas, including:

- uncertainty about system characteristics and processes
- the diversity of stakeholders, their interests, values and perspectives
- the jurisdictions involved in coastal governance and management.

The Knowledge Systems Theme analyses the process of knowledge interaction and exchange as it presently affects coastal zone management. It addresses

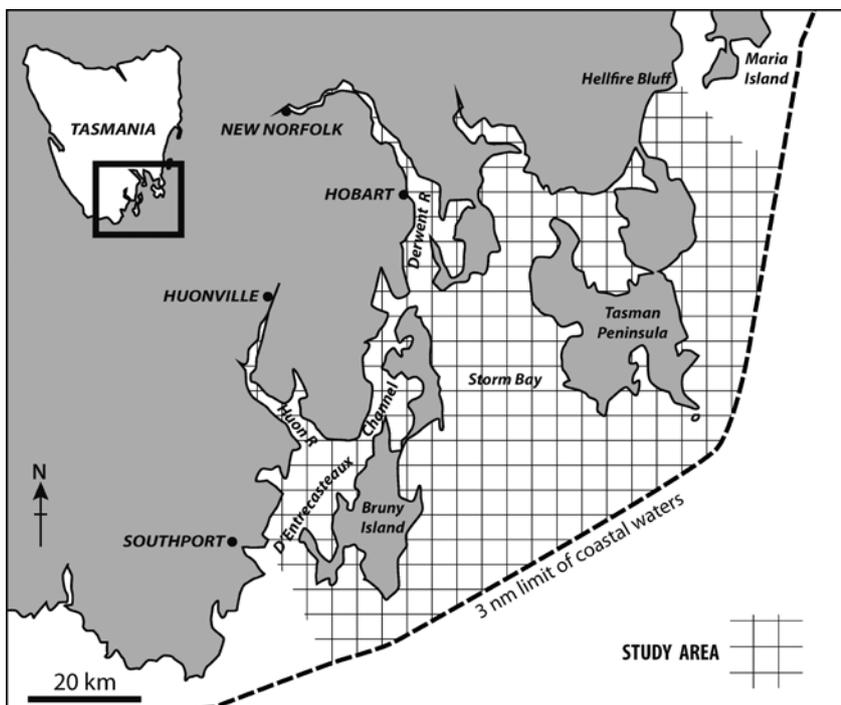
both barriers to uptake, and how the different forms of knowledge – scientific, managerial, lay and indigenous – can better influence the decision-making process and outcomes for end users of that knowledge.

Theme 3 provides the focus of effort for researchers from Deakin University and the University of Tasmania, who work collaboratively to conduct comparative studies into the operation of knowledge systems in two regions:



1. the Derwent-Huon region in southern Tasmania
2. the South West Victoria region in Victoria, with this centred around the regional cities of Portland and Warrnambool.

The selected regions enable comparisons to be made between an area that has consolidated science and one that has dispersed science.



The concept of knowledge systems provides a means for re-conceptualising coastal knowledge relations as dynamic and interactive, rather than static and linear, which improves how integrated coastal zone management may be understood and practised, and highlights the potential contribution of different forms of knowledge

Aims

The research aims of the theme are to:

- develop a model of current coastal knowledge systems
- identify constraints to knowledge communication (resulting from, for example, power, funding, complexity, uncertainty, scale and self-referentialism)
- investigate whether systems of knowledge can be more open and communicative with governance and decision-making processes; and more reflexive and civic in orientation
- understand how situated and relational knowledge affect the specific outcomes of decision-making in particular areas.

Design and Methods

Evidence regarding the way that science and other forms of

knowledge inform coastal management will be explored using five key principles:

1. making different forms of risk and uncertainty transparent
2. enabling stakeholder engagement in framing issues
3. addressing the potential for controversy and conflict
4. considering social and cultural boundaries and their implications for knowledge and decision making
5. recognising common heuristics and cognitive biases.

The theme members apply these principles using a comparative dimension in the two case study areas: Derwent-Huon estuary in Tasmania and South West Victoria.

Key Outputs

- A model of credible, communicative, reflexive, valid and transdisciplinary knowledge system capable of supporting change in the coastal zone.
- Report presenting a critical analysis of the knowledge system in the coastal zones under study.
- Papers published in scholarly journals and conferences.

A knowledge system approach involves actors, organisations and objects that perform a number of knowledge-related functions. An important element of such a system is boundary spanning between knowledge generators and knowledge users.



Proudfoot's Boathouse Warrnambool.

Image: EEMSS Background Report & User Manual, GHMA 2006

Given this complexity of coastal zone management, scientific and other forms of knowledge can affect decision-making and human action in diverse ways, which will often depend on the ability of scientists to effectively engage with relevant stakeholders.

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