



Theme 4 - Adaptive Learning

Organisational, social and sustainability learning

Complexity, uncertainty and high decision-stakes are typical characteristics of many coastal systems. Adaptive management has recently emerged as a paradigm for responding to these characteristics within coastal systems. Adaptive learning essentially drives the adaptive management process by facilitating connections between science and management processes and thereby maximises pathways to science uptake.

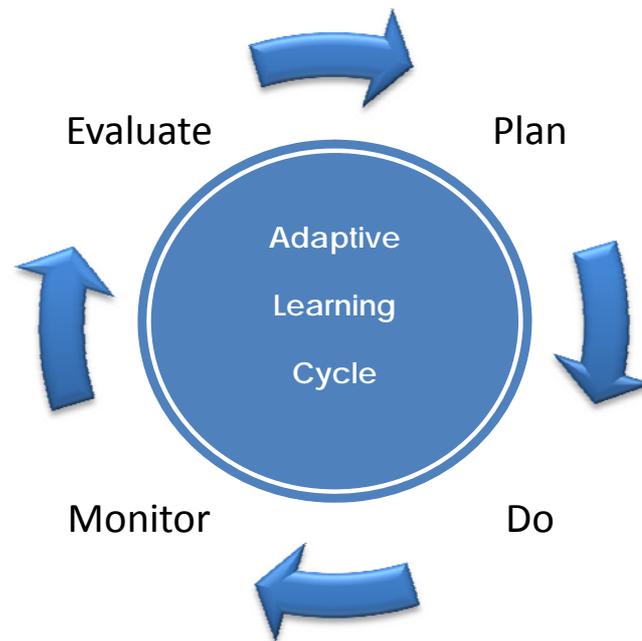
The Adaptive Learning Theme researched a range of national and international coastal management cases studies drawing on principles and practices of adaptive learning, organisational learning, sustainability learning, adaptive management, and integrated coastal zone management. These provide part of the knowledge base to enable adaptive learning within coastal organisations and informed the development of a simplified framework for coastal organisations to monitor and evaluate their institutionalisation of adaptive learning.

The Adaptive Learning Theme focused research on South East Queensland to analyse how a more communicative relationship between knowledge-makers and decision-makers could be enabled for the coastal zone.

BOX 1: Adaptive Learning Definition

Adaptive learning is a concept that combines organisational learning, social learning, and sustainability learning through the institutionalisation of learning processes and outcomes for improved integrated coastal zone management. It calls for action on the basis of the 'best' available information at the time, and to monitor and evaluate the results to derive 'lessons learned' that will aid in the improvement of our response to the problem.

BOX 2: Adaptive Learning Cycle (Source: D. Thomsen)



Aims

The research aims of the Adaptive Learning Theme were to:

- determine the processes by which adaptive learning frameworks function in the coastal management context
- analyse the barriers and opportunities to embed adaptive learning within coastal institutions
- assess institutional adaptability success factors
- develop and test a monitoring and evaluation framework for assessing adaptive learning about science uptake in the coastal zone

Design and Methods

This research focused on coastal organisations responsible for managing social-ecological systems that are characterised by complexity and uncertainty in relation to change. The study was grounded in the literature relating to three broad theoretical frameworks: (i) sustainability; (ii) resilience; and (iii) adaptive learning. Initially, desktop case studies of adaptive learning across Australia and international coastal organisations were analysed. These studies provided a basis for the development of a knowledge-base platform to enable adaptive learning within coastal organisations and informed the development of a simplified framework for coastal organisations to monitor and evaluate their institutionalisation of adaptive learning. In addition, three coastal organisations in South East Queensland were chosen to explore adaptive learning in more detail. These included a local community group, local government and a regional multi-government and multi-sector partnership organisation. The purpose was to evaluate organisational structures and processes and related information/knowledge sharing arrangements that exemplify adaptive learning. Qualitative interviews were conducted with individuals within the organisational structure of the case studies. An online survey was also conducted with coastal management organisations throughout Australia to explore current approaches to monitoring and evaluation. A monitoring and evaluation tool

developed by the project team was also trialled and refined with a regional coastal management organisation.

Key Outputs

- An on-line toolkit for institutionalising adaptive learning within coastal institutions, including:
 - mechanisms to enable adaptive learning within coastal organisations
 - principles of adaptive learning (searchable annotated bibliography)
 - examples of adaptive learning successes
 - a simplified framework for coastal organisations to monitor and evaluate their institutionalisation of adaptive learning
- Reports and articles that detailed a framework for monitoring and evaluating science uptake in the coastal zone. Key findings showed that:
 - There is very limited monitoring and evaluation that occurs within Australian coastal management organisations
 - There was a desire to undertake increased monitoring and evaluation, however, a number of structural and capacity constraints affected monitoring and evaluation activities.

BOX 4: Brainstorming and networking coastal management issues (source: University of the Sunshine Coast)



BOX 5: Take home message

The need for coastal organisations to become adaptive learning organisations and to contribute to improved system resilience is premised by the inherently dynamic nature of the coastal zone. Thus, mechanisms that assist coastal organisations to be more intelligent, flexible and reflexive and to become part of a collaborative adaptive learning network will aid in developing sustainable solutions and strategies for integrated coastal zone management.

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