coastal Collaboration Cluster

Coastal Adaptation Governance Framework

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Introduction

The framework in Figure 1 has been developed as the basis for ordering and analysing the themes emerging from the interviews and workshops undertaken over the duration of the Governance Theme's research. Four 'domains of influence' relevant to the policy process are represented in the figure and it is necessary to have all of these domains represented in a dialogue if it is to create legitimate responses. The domains are:

1. Knowledge, consisting primarily of scientific knowledge, but also of managerial, lay and Indigenous knowledge

2. Governance, representing the domain in which policy decisions are made. It consists of federal, state and local levels of government, statutory authorities and NGOs together with inputs from other stakeholders such as professional bodies, through formal and informal network and processes

3. Constituency, consisting of the present and future generations of private, corporate and civil society

4. Implementation, relating to the management strategies and monitoring regimes that enable the decisions of governance to be realised and assessed. This is an important domain to include as the gap between policy and implementation is often wide.

The roles of these four domains in our society are often strongly separated by boundaries: for example, government scientists are not supposed to comment directly on policy; and the constituency often has little access to good, understandable science. However, the domains do need to engage with each other across these boundaries (shown by the yellow arrows in the figure). In order to have productive engagement across these boundaries, specific boundary-spanning processes can be used. These processes can enable different knowledge types and values to be shared and co-produced while maintaining the integrity and legitimacy of all parties involved. These processes can lead to deep learning and productive relationships.

Four institutional processes stand out as being able to improve the quality of the interactions across the boundaries of these domains. These processes are convening, translating, collaborating and mediating.[1]

[1] Cash, D., Borck, J., Patt, A., 2006. *Countering the loading-dock approach to linking science and decision making: comparative analysis of El Nino/Southern Oscillation (ENSO) forecasting systems*. Science, Technology & Human Values 31 (4), 465–494.

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Figure 1. Coastal adaptation analytical framework

Convening is the process of bringing parties together for face-to-face contact. This is an important process as it forms the background for relationships of trust and mutual respect. Bringing parties together is a first step in enabling a constructive dialogue.

Translating is about providing accessible information across different types of language, culture and experience, and surfacing taken-for-granted assumptions.

Mediating means representing and evaluating the different interests so that conflict can be resolved and the parties involved have fairness and procedural justice.

Collaborating is the process of co-producing new knowledge with input from the various parties[2].

Boundary processes can be facilitated by 'boundary organisations', which play an intermediary role between knowledge production and decision-making. Boundary organisations bring together actors across boundaries to co-produce shared knowledge and decision-making. They can be organisations specifically created to provide this function or exist within larger organisations. Boundary organisations tend to operate over a period of time with a consistent composition of partners. Boundary processes also can be achieved through 'pop-up' action-learning-research workshop(s) developed by institutions with specific and relevant expertise in response to perceived needs. For further discussion of boundary processes and organisations, see the Final Report of the Governance Theme.

The central feature in the framework is the notion of '*legitimacy*'.

Legitimacy includes:

• Legitimacy of knowledge about coastal adaptation to climate change
• Legitimacy to make significant governance decisions around coastal adaptation
• Legitimacy of the means by which those decisions are implemented
• Legitimacy of the governance process as perceived by the voting constituency.

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[2] The difference between adequacy and cogency can be illustrated with an example: the alchemical model of the world rested on the existence of four fundamental elements earth, air, fire and water. The model was cogent, that is it had internal coherence, but it was not able to explain all the empirical facts that became so it ultimately failed the adequacy test and was replaced by the periodic table and modern chemistry.

Legitimacy can be conferred when certain criteria are met. The criteria are:

1. Adequacy. The term adequacy is used to connote the relationship of a knowledge system to the external or empirical world. It relates to the question: 'Does the model or theory fit the facts?' In order to confer legitimacy, any model of climate change impacts on the coast needs to be seen to be comprehensive and detailed enough not only to account for observable events but also to justify decisions about coastal planning and management.

2. Cogency. The term cogency refers to the internal coherence of a knowledge system, to the epistemological integrity of the system.1 In order to confer legitimacy, the components of a model of climate change impacts on the coast should be consistent and commensurable with each other. Contributing disciplines and accounts should confirm each other's explanations rather than contradict them.

3. Efficacy. The term efficacy relates to the effectiveness of governance. In the present context, it relates to the questions: 'What approaches to coastal adaptation will work? Which options are the best?' To confer legitimacy on choices about coastal adaptation, governance has to demonstrate that decisions have been based on the best available knowledge, the best structures and the best processes.

4. Accountability. This term relates to due process and diligence. It responds to the questions: 'Is this pathway lawful and is it fair? Does it have a political mandate? Is it transparent? Is there an appropriate allocation of responsibility and funds? To confer legitimacy on choices about coastal adaptation, governance has to demonstrate that decisions it makes are accountable.

5. Salience. This term relates to the relevance of knowledge to its users and to those in the constituency who give political mandate for governance decisions. Salience can be increased when information is presented at the appropriate geographic and governance scale and communicated in the most suitable medium. Salience improves the legitimacy of decisions and actions, even where a general model is already adequate and cogent.

6. Credibility. This term relates to the believability of a model. The worldviews of constituents or knowledge users may be resistant to appreciating significance of the impacts of climate change on the coast for a wide variety of social, cultural or economic reasons. Credibility is also decreased where there are any hints of inadequacy or lack of cogency in the model. Uncertainty and complexity are particular challenges for credibility and hence legitimacy, sometimes disingenuously so.

7. Standards. The notion of a standard relates to the question: 'Is this option compliant with laws and industry codes?' Implementation of coastal adaptation measures can be legitimated by creating regulations and standards if it is quite clear what actions needs to be taken.

8. Professional practice. The notion of professional practice suggests continual improvement in a field and mutual agreement about boundaries of acceptability. Professional practice with respect to coastal adaptation relates to the question: 'Are sustainability principles embedded in best practice?'

The analytical framework becomes the basis for model of good coastal governance when all the issues are identified for each criterion. These issues have been identified through interviews with key respondents and are discussed in section 3.6 in the full and Final Report of the Governance Theme of the Coastal Collaboration Cluster.