

coasta! Collaboration Cluster



Social network analysis in coastal contexts

What is a social network?

Social networks are structures made up of sets of people (actors), individuals and/or organisations. It is possible to explore the nature of interaction between the actors to help identify patterns, locate influential entities, and examine network dynamics.

Why should coastal managers be interested in social networks?

The coast is an important part of the Australian psyche. It is highly valued socially, economically and environmentally but it is a highly contested space. Many different and often competing interests are expressed at the coast. Coastal management therefore occurs in complex, multilayered ecological and social contexts. There are often many different players involved with diverse values, capacities, and perspectives about how to best use and manage the coast. It can be difficult to make coastal decisions that suit everyone.

How can you enhance the adaptive learning of your organisation by using social network analysis?

Social Network Analysis can be used to explore how different interests are represented at the coast. Knowing the patterns of interaction between people or groups who are interested in or involved in decisions that will affect the coast can help to enhance the adaptive learning capacity of a coastal organisation. SNA can help to:

- Develop trust between coastal stakeholders
- Facilitate the diffusion of scientific information
- Identify the flows and/or blocks in a network
- Build consensus and common goals

When should I think about using Social Network Analysis?

Social Network Analysis might be a valuable research method for you, if in your current role you are:

Trying to resolve a coastal management challenge that involves people in opposed positions

Finding members of the broader community who might be interested in a coastal management decision that needs to be made by your organisation

Planning a consultation strategy.

Social Network Analysis can help you to identify how different individuals or groups might influence your immediate coastal challenge or community engagement task.

How can I get started?

First of all it is important to find out who is in the network. Begin by making a list of people that you know are involved in the particular issue you are investigating. Think about people who may be involved in the network through both formal and informal roles (e.g. do they work for a government department, council, or community group). Include yourself in the network, if you are connected to any of the individuals/organisations. Keep a record of the role of individuals and the organisations to which they belong (this could be formal or

informal organisations). Then begin 'snowballing'. This involves making contact with people on your list and directly asking them in relation to your particular investigation a number of questions: who else they are working with or in contact with, or about other people they can identify who hold important or influential roles.

Keep a record of:

- Who is in contact with whom
- How strong is the connection between people.
- How often are people in touch with each other

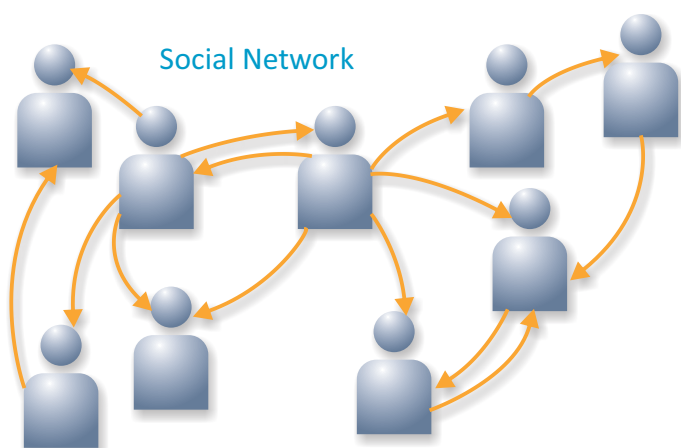
Once you have a comprehensive list of people, and you think you have identified the most important and relevant people or organisations in the network and collected some information about the nature of the connections between people you can begin to analyse how this network is operating.

Mapping the network

Drawing a network map can help to identify how actors are connected to one another and what these connections are like (e.g. who is well connected?, who is not connected to the network, but should be?, how strong are the connections?).

Working with the names that you have generated from your list you can begin to create a network map.

1. On a large sheet of paper draw a circle in the centre place the name of the person or organisation who you perceive to be very important in terms of your particular investigation (they might be the most connected, most powerful, most informed).
2. Add more individuals or organisations (actors) from the list to the paper.
3. Draw lines between actors that share a connection (shade these lines to represent strength of the connection)
4. Continue adding names from the list until your network map is finished.



Of course this isn't hard science, and there may be some gaps in your list but researchers have found a strong link between people's perception of social networks and their actual, research based representation.

Analysing the network

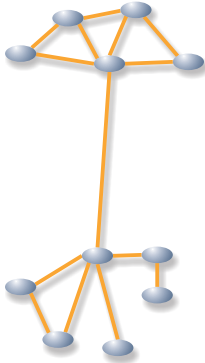
Now that you have drawn network map look for:

- How well **connected** is the network: are there key groupings?
- Is there a **central** person or group who is connected to lots of other people or groups who may not be connected to each other? Is this person or group assisting or blocking?
- Who **holds** relevant information? Is this person well connected to the network?
- Are there people or groups who are important in this decision but who are **disconnected** from the decision making process or influential subgroups?

Network types

There are some basic network forms with specific characteristics. Multiple forms may exist on your map. Recognising these structures give you insight as to how you might facilitate a more effective network.

Segmented subgroups connected by bridge



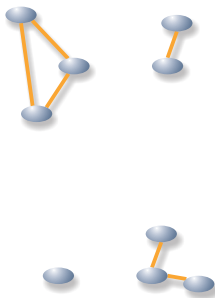
Strength: knowledge held by one subgroup can be diffused to the other group

Weakness: break down in the binding connection between subgroups may result in loss of knowledge transfer

Opportunities: create more inter subgroup connections to avoid reliance on the bridging tie

Threats: selective knowledge sharing between bridging ties

Isolated subgroups



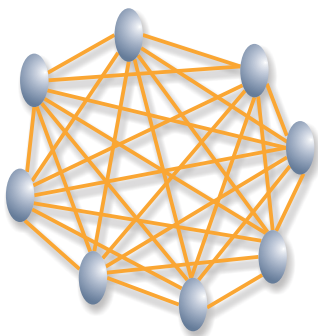
Strengths: maintenance of in-group norms and values

Weakness: little knowledge transfer, unconnected 'outlier' may hold relevant knowledge

Opportunities: identify key bridging actor(s) who could join-up and facilitate more connections

Threats: entrenched value positions may block inter-group communication

Clique



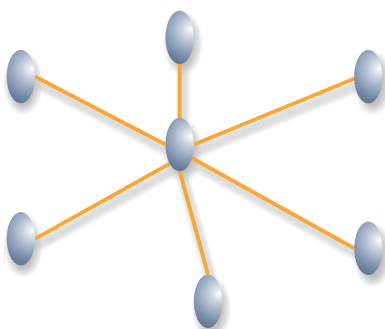
Strengths: all nodes have access to the same information

Weakness: risk of 'group think'; no new information entering network.

Opportunities: outside actors connecting to the clique can access knowledge held by the whole group

Threats: potential for introducing outside information or ideas is limited

Wheel-star form



Strength: one actor controls flow of information

Weakness: one actor controls flow of information

Opportunities: connecting to central actor may give access to other actors

Threats: if the central actor leaves the network may dissolve

Applying network analysis

Can your network be manipulated for an enhanced outcome? Yes. Networks can be constructed, facilitated, and sustained. To build more robust linkages within and between networks 'deliberative forums' can be fostered.

- Through mapping a network and then intervening you may be able to make yourself a bridging point in a network structure.
- Introductions can be made, meetings convened and contact made between weakly connected parts of the network.
- Although you might become a conduit for knowledge sharing.

By actively building networks key elements of adaptive learning can be fostered: experience, views and institutional linkages can be developed to facilitate knowledge transfer and shared learning.

Useful reading

Borgatti, S. P., Mehra, A., Brass, D. J. & Labianca, G. 2009. 'Network analysis in the social sciences', *Science*, 323, pp.892-895.

Note: This article is a useful introduction to SNA, its key concepts and applications.

Diani, M. 2003. 'Networks and social movements: a research programme'. In M. Diani and D. McAdam (eds.) *Social movements and networks: relational approaches to collective action*. Oxford University Press, Oxford, pp.299-319.

This chapter provides a useful introduction social networks. It discusses how network types influence action through social movements. The ideas in this chapter could be applied in coastal governance context.

Krackhardt, D. 1987. 'Cognitive social structures', *Social Networks*, 9, pp.109-143.

This article suggests that perceptions of networks can have real consequences. For example, how we perceive a network is a useful starting point for modifying the network.