

Enhancing stakeholder engagement and information flow in collaborative marine conservation planning

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Motivation

Internet communication and information tools have been effectively used in Marine Protected Area (MPA) management and conservation planning for increasing engagement and informing decisions (Markantonatou et al., 2013). Additionally, the study of the position and relations of stakeholders in a social network where information exchange occurs, may highlight important hubs for communication, or actors with power to control the information flow and influence perceptions in conservation initiatives (Borgatti et al., 2013). Combining these strategies may increase stakeholder engagement and provide deep understanding of the context in which information flow and collaboration emerge in MPA social networks (Dale and Armitage, 2011).

Aim

- Who are the main channels of communication in Portofino MPA social network?
- Can we use the power of web communication technology to increase engagement in Portofino MPA?

Data collection

- Stakeholder Analysis & snowballing technique to identify important stakeholders
- Roster method to map a stakeholders' social network (Strong tie=2, Weak tie=1, No tie=0)
- Question on the number of web tools stakeholders use to communicate with each other
- 171 emails were sent to representatives of organisations related to Portofino MPA management

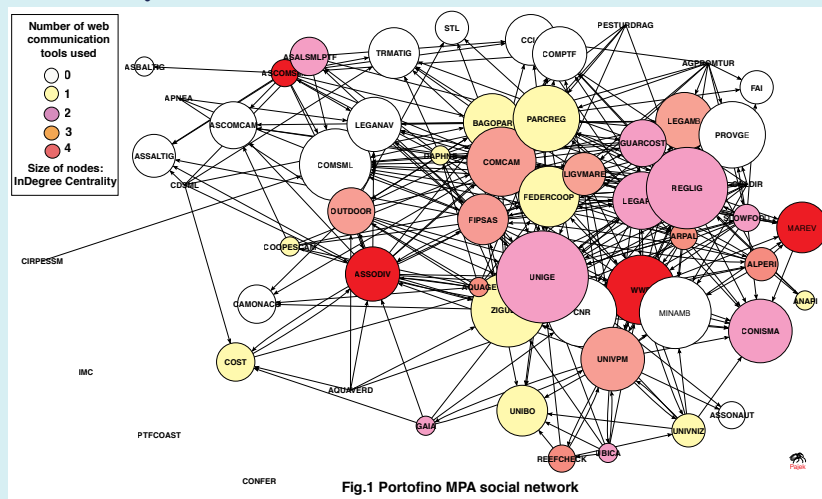
Analysis

- Relational distance between stakeholders was measured by InDegree centrality (number of connections a stakeholder has in the network) accounting for strong relations, using UCINET Software (Borgatti et al., 1999)
- Graph theory to examine relation of Centrality and the number of web communication tools used by stakeholders (Frutcherman Reingold force driven algorithm), using Pajek software (Batagelj & Mrvar, 1998).

References

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Preliminary results



- The most important stakeholders (received the most nominations up to the top 10%) with high InDegree centrality are the University of Genova (UNIGE), the Ligurian Region (REGLIG), an environmental association for sustainable fisheries (Ziguele), an NGO (WWF), the Community of Camogli (COMCAM) and the National Research Council (CNR) (Fig.1).
- 29.3% of stakeholders do not use web communication tools to interact with others regarding issues in Portofino MPA.
- The number of web tools did not influence the positions of stakeholders in the network.

Discussion

- Important organisations for the exchange of information in the social network of Portofino MPA were identified: considered reliable, tend to aggregate stakeholders around them and hold central positions in the network, capacity to act as communication channels facilitating two-ways information flow, due to their power they may control or block information, ideas and perceptions that flow within the network (Prell, 2012; Borghatti et al., 2013).
- The use of web technology does not seem to have a significant role in increasing the connectivity of stakeholders in the network. An important amount of Portofino MPA actors do not use web tools to communicate.
- Next steps: explore the role of technology on weak relationships, identify key stakeholders that may enhance cohesion of the social network in Portofino MPA.