Communication strategies for sustainable management of mussel culture in Mar Piccolo (Mediterranean Sea)

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Abstract

The coastal problems encountered today worldwide are primarily the result of unsustainable use of natural resources. Mar Piccolo in Taranto (Mediterranean Sea; Southern Italy) represents an example of an ecosystem heavily affected by human activities but it is also one of the most important mussel farming site in Italy for both production and sales, with a valued yearly turnover of ~13 millions. Despite the natural vocation of this basin for mussel cultivation, a sustainable management policy for this resource has never been implemented. In the last years, research has aimed to improve communication between researchers, decision makers and stakeholders and thus establish knowledge as a reference starting point for strategies and management decisions.

Besides an intensive mussel commercial fishery, Mar Piccolo harbors moorage for the region’s fishing fleet, the largest Italian naval base and a large heavy industry site. The heavy industry and navy docks are two of the main employers in Taranto. The quality of water and sediment is under high constraint from the steel industry, the navy docks as well as drainage of agricultural soils and sewage inputs. Mar Piccolo is one of the Sites of National Interest for the highly polluted areas.

In the period 2007-2011 Mar Piccolo has been chosen as one of the eighteen Study Sites throughout Europe by the Integrated Project SPICOSA (Science and Policy Integration for COastal Zone Assessment). This project primary goal was to develop a methodology (System Approach Framework, SAF) to improve the communication of science to policy makers using system models of the complex coastal social-ecological systems.

Meetings, private interviews, encounters, consultations, questionnaires, phone interviews, leaflets, and web operations (i.e. Facebook group) were organized with individuals or groups belonging to public, private organizations, and media. The social networks (Facebook) was used to communicate quickly and efficiently with large numbers of people. The Facebook page "The Friends of Mar Piccolo" was particularly helpful, with videos explaining the meaning, and objectives of the project. Facebook was useful also because some members responded to questions on public perception of the Taranto mussels through the willingness to pay method.

∗Speaker
Since 2012 mussel culture is banned in an area of Mar Piccolo due to an inorganic (heavy metals) and organic (PCBs) pollution and heavy social crisis is exploding. We are using again the Facebook strategy to inform public on research activities of the Mar Piccolo Study Site in this period of further crisis for the mussel culture in the frame of the Italian Flagship Project RITMARE (2012-2016) and the previous experience of the SPICOSA project is showing to be very precious.

In this context of highly evolving environmental situation and social tension, the SAF "exercise" associated with the use of social networks brought us a new approach to integrated multidisciplinary research and the ability to create a much wider, more accurate tool with important benefits both on the Science and Policy in the framework of environmental sustainability.

**Keywords:** Community engagement, Marine, Social, ecological systems, Social network, Stakeholder engagement, Sustainability.