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Comment

**BRIDGING THE GAP BETWEEN SCIENCE AND POLICY:
THE IMPORTANCE OF MUTUAL RESPECT, TRUST AND THE ROLE OF MEDIATORS**

The role of environmental non-governmental organizations in fisheries: scientific knowledge, its value in lobbying, and its underestimation in debates aimed at solving contingent issues

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ABSTRACT: Despite an initial tendency to disregard Non-Governmental Organizations (NGOs) contributions, NGOs have now entered the fishery world, where debates should be carried out on the basis of different interpretations of sound scientific data. Such an approach is expected to be obvious, but this does not prove to be always true. NGOs and the research body that produced the scientific data are confused by other stakeholders and understanding scientific publications is regarded as not necessary. Further, there is a gap between the progress of scientific knowledge and the scientific approach adopted in policy resolutions. This opens new opportunities to carry out focused scientific communication.

Over the last twenty years, Non-Governmental Organizations (NGOs) - each one according to its "genetic code" - have been active in the most diverse sectors of the fishery world.[1] Such an engagement has even been classified by the European Commission, which has grouped NGO representatives into activists, diplomats and communicators. Among activists, Greenpeace is the most widely known. Diplomats are represented by WWF. Great communicators are Sea at Risk and Oceana.[2]

Good examples of WWF's diplomatic activity are provided by the lobbying and advocacy carried out by the NGO in Bruxelles, at the European Commission and the European Parliament, for the reform of the Common Fisheries Policy, and by the presence of WWF representatives in boards and committees dealing with fisheries issues (e.g., European Fisheries Fund – EFF; Regional Activity Centre – RAC; General Fisheries Commission for the Mediterranean – GFCM; International Commission for the Conservation of Atlantic Tunas – ICCAT), environmental issues (e.g., Habitat Directive; identification and management procedures for marine Sites of Community Importance – SCIs), natural and fish resource protection and management (e.g., Barcelona Convention; Convention on Biological Diversity – CBD). WWF representatives sit in management committees of national and international Marine Protected Areas (e.g., Miramare MPA; Torre Guaceto MPA) and in boards of MPA network associations (e.g., MedPan; AdriaPan).

Despite an initial tendency to disregard the contribution of NGOs to the global fisheries debate, not considering their voice to be authoritative, concrete and above all, reasonable, non-governmental organizations have now entered with full rights the debates on illegal fishing (Illegal, Unreported and Unregulated Fishing - IUU), on control regime compliance, on integrated basin management to harmonize fisheries and Natura 2000 habitat and species conservation objectives (marine Sites of Community Importance – SCIs according to the European Habitat Directive), and last but not least, on the reform of the Common Fisheries Policy.

Accepted *obtorto collo* by the other stakeholders, NGOs through their specific mandates, have been and still are in the position to facilitate the identification of solutions on a scientific basis. They can suggest specific answers stemming from a different perspective than that of fishermen and ship owners,

especially insisting on compliance to legislation and regulations, and on the promotion of a scientific and ecosystem management of fishery resources and exploitation.

By definition, NGOs are called to play an independent role in society.[3] For this reason, they can facilitate decision processes carried out by governments (ministries, governmental departments and agencies), local communities and "constituencies" (policy actors that join their efforts to find a solution to pragmatic or ethical issues, or to defend acquired rights, such as certain artisanal fishermen communities). In the framework of such debates, NGOs can provide transversal views and perspectives, and improve solely sectorial approaches (for example, fishermen dealing only with fishermen). Furthermore, NGOs can bring into the debate specific knowledge (such as scientific knowledge) and outer competencies not strictly related to the sector itself, that in most cases prove to be valuable for a better planning and management of natural resources and their use. For example, a good number of NGOs are currently already involved in Marine Spatial Planning (MSP) processes. MSP is a not so new concept, and it deals with the allocation of "marine territory shares" to different uses (fishery exploitation, recreational use, extraction of resources, etc).[4]

NGOs are in the position to deliver messages that are usually distant from the general public, such as scientific ones, to specific communities and stakeholders (for instance to the fishermen), thus promoting a sort of cultural "training" in the public and private sector. In this area, NGOs may also work in partnership with academic institutions.

Such a mandate of NGOs has been recognized by a high number of international agreements, including UNCLOS (United Nations Convention on the Law of the Sea),[5] CBD (Convention on Biological Diversity)[6] and Agenda 21 (a sustainability action plan adopted at the United Nations Conference on Environment and Development – UNCED, held in Rio de Janeiro in 1992). Indeed in 1992, UNCED strongly supported and promoted NGO participation in environmental negotiations. Since then, NGOs have played an increasingly prominent role within environmental institutions, participating in many activities such as policy negotiation and implementation monitoring.

UNCLOS Article 169 envisages the consultation and cooperation between international Governmental Organizations (GOs) and NGOs on matters within their specific and declared competence. Finally, CBD's preamble highlights "*the importance of, and the need to promote, international, regional and global cooperation among States and intergovernmental organizations and the non-governmental sector for the conservation of biological diversity and the sustainable use of its components*".

NGOs' action can therefore rely on both international mandates and *ad hoc* scientific contents for lobbying and advocacy. However, an ignorance of specific scientific outcomes, or even just a plain belief in statistical "truths" often make information sources toothless when facing counterparts in the debate on natural resource management. It is apparent that stakeholders in this sector tend to make confusion between the respective roles of NGOs and academic bodies. Only (but not always) in the latter case, we can rely on a *super partes* opinion. Debates should be carried out on the basis of different interpretations of sound scientific data. If a species catch rates decrease as demonstrated by a peer-reviewed scientific journal, the confrontation between the NGO and, for example, shipowning industry's representatives to find a solution to prevent stock collapse of the fished species should be based on two different interpretations of the same scientific publication: WWF's version versus shipowner's version. Such an approach is expected to be obvious when it comes to debates dealing with sustainable development, where a balance is sought between economic growth and ecological conservation. However, this does not prove to be true, especially in Italy, for two reasons: firstly, the respective roles of the NGO and the research body that carried out the study are confused (that is, the objectivity and value of scientific data are not perceived) and secondly, striving to understand the scientific publication is regarded as not necessary. The debate is never on specific scientific outcomes, but rather on different world perspectives.

Therefore, there is a methodological gap, as stakeholders do not read scientific publications and usually rely on scientific counsellors for decision making, often without even evaluating hard data. Furthermore, there is a gap between the progress of sectorial scientific knowledge (based on cutting-edge modelling) and the scientific approach adopted in policy resolutions.

A striking example is given by the Maximum Sustainable Yield (MSY) case. The MSY will be used as an upper limit value to bind European Union Member States to fish sustainably over the next decade. Indeed, it represents one of the pillars of the reform of the Common Fisheries Policy. The MSY is the maximum available harvest of a stock; in other words, it is the maximum (fish) production generated by a population exploited by commercial fisheries. If the stock is exploited above the MSY, more fish are caught than the

stock can produce, and thus the resource is overexploited. Due to its over simplicity MSY is an obsolete concept, as it implies that there is only one specific stock in the sea, and consequently, that such a stock does not interact with any other biological factors. It is easy to understand why MSY is not the best model to be applied, but it is nevertheless the simplest to be used in a complex system such as that of European fisheries. Hence, it has been promoted and will be adopted for the next ten years, even if authoritative publications aimed at the general public, such as "Ocean. An illustrated Atlas" edited by S. Earle and L. Glover for the National Geographic Society and published in 2009 in collaboration with NASA and NOAA, have already reported the inadequacy of MSY for fisheries management. The book's authors have described MSY in these terms: *"A popular theory of "maximum sustainable yield" encouraged fishermen to believe it was all right to reduce unexploited fish population by about half, and at that point the reproductive potential of those remaining would perpetually reproduce to a level that could be fished repeatedly. Now thoroughly discredited, the idea remains embedded in fishery policy, encouraging unrealistic expectations and, inevitably, overexploitation"*.

These examples alone demonstrate how, in a sector such as that of fisheries, so-called "science to action" communication actions are utterly required. Fisheries is a strategic sector, and there is a wealth of high-quality research activity going on. But in the debates aimed at identifying mechanisms to promote sustainable management, the value of scientific data is still underestimated. This opens new opportunities to carry out focused scientific communication.

Notes and references

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[4] See Calado et al. (2012).
[5] UNCLOS (1982), United Nations. United Nations Convention on the Law of the Sea, (http://www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf).
[6] CBD (1992), *United Nations*, Convention on Biological Diversity, Rio de Janeiro Brazil (http://www.cbd.int/convention/text/S).

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