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# COMMITTEE ON FISHERIES

## SUB-COMMITTEE ON FISH TRADE

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## THE IMPACT OF MARINE PROTECTED AREAS ON LIVELIHOODS, TRADE, FOOD FISH SUPPLY AND CONSUMPTION

### Executive Summary

This paper provides a summary of marine protected areas (MPAs) and their impact on fish trade, which in turn can affect the incomes of fishing communities and actors along the value chain and impact food security. It gives a summary of FAO's work in this field and suggestions for future activities.

### Suggested action by the Sub-Committee

- Comment on the information provided and share national experience;
- Provide guidance for future work of FAO in the area of MPAs and trade, including planned activities on MPAs;
- Identify initiatives and capacity building activities in which FAO can assist member countries for the fisheries sector affected by the introduction of MPAs, especially in developing countries and economies in transition;
- Provide guidance on possible collaboration between FAO and other institutions or regional networks with respect to MPAs and trade.

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## INTRODUCTION

1. The use of MPAs<sup>1</sup> as a biodiversity conservation tool to protect marine ecosystems and reverse the degradation of aquatic habitats continues to receive general attention from global to national levels. Governments have made international commitments through the Convention on Biological Diversity (CBD), in particular the Aichi target 11 and the Sustainable Development Goal (SDG) target 14.5, both envisaging conservation by 2020 of at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information. According to the World Database of Protected Areas (WDPA), MPAs (as per the International Union for Conservation of Nature (IUCN) definition with biodiversity protection as the main objective) cover 3.4 percent of the world's total marine waters with almost 8 percent of all Exclusive Economic Zones (EEZs) protected.

2. MPAs are also increasingly promoted as a measure to address overfishing and unsustainable resource utilization. Spatial-temporal fishing closures, including full ones, as a management tool have a long history in fisheries and predate the current concept of MPAs for biodiversity conservation. However, closures are not always the preferred management approach for achieving sustainable fisheries<sup>2</sup>. Moreover, MPAs often have immediate negative impacts on fishing costs and revenues and they do hence not always provide direct benefits to fishers, especially not in the short-term in coastal and inland areas and when designed mainly for conservation purposes through a top-down process. MPAs generally need to be combined with other management measures as part of an ecosystem approach to fisheries management to avoid potential negative effects, including increased fishing pressure outside the MPA. This said, MPAs can be very useful in a number of contexts, e.g. for fisheries targeting relatively small stocks of sedentary fish or invertebrate species, in some data-poor contexts or for addressing bycatch problems when in discrete areas or specific seasons.

3. This paper summarises current discussions on MPAs and their interactions with fisheries, livelihood and food security, and outlines possible implications of current initiatives on fish trade. While recognizing the significance of MPAs in the high seas, this paper focuses on MPAs in coastal areas where the interactions with fishing based livelihoods are more direct. Additionally, this paper highlights the role of FAO in the broader MPAs and fisheries discussion.

## EFFECTS OF MPAs ON FISHERIES AND THE IMPORTANCE OF PROCESS

4. The implementation of MPAs in coastal areas where local communities depend on marine resources for food and income can be perceived as negative with impacts such as reduced income and loss of livelihoods when fishers are displaced by MPAs. This is particularly the case for MPAs that are designated in a non-consultative manner. At the same time, there are examples of MPAs that are established at the initiative and involvement of fishing communities who see the MPA as a useful tool in a particular context. The effects of an MPA – and its success as a biodiversity conservation and/or fisheries management measure – are strongly dependent on the process by which it is established and how environmental, socio-economic and governance circumstances and specificities are taken into

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<sup>1</sup> There are several definitions of MPAs. The IUCN definition is the most generally used: “A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.” According to this definition, conservation has to be the main objective for an area to be considered an MPA. For the purposes of the Technical Guidelines on MPAs and fisheries (FAO, 2011), FAO used a broader definition: “...any marine geographical area that is afforded greater protection than the surrounding waters for biodiversity conservation or fisheries management purposes will be considered an MPA” (p. 9). It should also be noted that the specific rules related to an MPA vary and different terms (reserves, no-take zones, etc.) are used in different countries and contexts.

<sup>2</sup> FAO. *Technical Guidelines for Responsible Fisheries*. Marine protected areas and fisheries. No. 4, Suppl. 4. Rome, FAO. 2011. 198 p. [www.fao.org/docrep/015/i2090e/i2090e00.htm](http://www.fao.org/docrep/015/i2090e/i2090e00.htm)

account. In coastal areas where local communities are directly affected by the declaration of MPAs, it is particularly important to involve communities as early in the process as possible.

5. Establishing an MPA implies generally reallocating resources and thereby reallocating use and tenure rights and wealth, and thus conflicts can arise. Members within and outside the local community may poach or otherwise fish illegally. In line with the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT; FAO, 2012), recognition of legitimate customary use and tenure rights<sup>3</sup> is imperative. Provisions for conflict resolution need to be part of MPA design processes and related management plans to alleviate potential allocation (and other) conflicts.

6. It is also important that costs and benefits of the MPA, both short and long-term, are fully understood and equitably shared. A potential cost to the fisher is that catch (and revenues) may be decreased, at least in the short term, as a result of the implementation of a closure. Coastal communities adjacent to the MPA, especially those with a high economic dependence on the fishery, may face a disproportionate impact as a result of aggregate reduction in fishing revenue.

7. MPAs may also restructure economic opportunities (e.g., tourism instead of fishing). However, those who benefit from alternative economic activities provided by the MPA are not necessarily the same as those who were previously earning an income from fishing. These changing patterns may alter the demographic profile of resource users and coastal communities and lead to changes in the local economy, providing both new opportunities and risk to traditional livelihoods. Hence, where the benefits of MPAs accrue elsewhere or could be gained by other stakeholders, mechanisms must be established to ensure that benefits (economic and sociocultural) flow directly back to the community, guided by the principle of equitable benefit-sharing and internalization of costs and benefits. These could involve compensation and, in situations where complete or partial closure of the fishery is required, long-term sustainable alternative livelihood options should be identified and developed in consultation with the affected communities. When designed through a participatory process and respecting existing legitimate use and tenure rights, MPAs can lead to the protection of fishing areas (for example, demarcation of an exclusive coastal area for fishers) and enhancement of local livelihoods where fishery resources recover and catches improve over time, in the MPA and in surrounding waters. Such benefits may not occur immediately, although there are cases in which the positive biological response – and hence the socio-economic impact – is quite rapid. MPAs can also potentially generate some benefits in adjacent fishing areas in the form of reduced variations in aggregate catch levels, increased total catches or more valuable larger-sized specimens in the catch.

8. In summary, the effects of MPAs and the way costs and benefits are distributed among the stakeholders will depend on the particular circumstances and the way the MPA has been designed – including use and tenure rights arrangements.

## **MPAs AND FISH TRADE**

9. When MPAs have an effect on fish production and related economic activities, they can also impact fish trade, which in turn can affect the incomes of fishing communities and actors along the value chain and impact food security. However, research in these areas is limited prompting the High-Level Panel of Experts on Food Security and Nutrition (HLPE) statement on MPAs and food security to note that there is no clear causal link between MPAs and food security, with MPAs being neither uniformly good nor bad (HLPE, 2014).

10. In some cases, MPAs could be used to gain a market advantage (e.g., certification or specialized labelling, especially in data poor areas), adding value to those fisheries and increasing profit margins for fishers. There are very few examples so far, where the installation of MPAs has clearly resulted in

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<sup>3</sup> For definition of use and tenure rights refer to the VGGT: [www.fao.org/docrep/016/i2801e/i2801e.pdf](http://www.fao.org/docrep/016/i2801e/i2801e.pdf)

certification or labelling of fishery products of the area as sustainable fish products. However, with more MPAs implemented in close collaboration with fishing communities, there is an increasing potential to give credit for MPAs to local fishers, and certify/label their products. Gender issues and attention to indigenous peoples and youth have to be taken into account, when measuring the impact of MPAs on local fish trade. Women are often the main players in the post-harvest and trade sector, and in the discussion of MPAs at community level it has to be ensured that their concerns and interests are well taken into account.

### **FUTURE POSSIBLE DEVELOPMENTS AND FAO ACTIVITIES IN MPAs AND FISHERIES**

11. The engagement by FAO in the work on MPAs is based on the notion that as MPA implementation moves ahead, there is a high risk of continued misalignment with fisheries aspects, since they are usually not fully understood nor always appropriately taken into account. MPAs are not always integrated within overall fisheries management frameworks or following good practices with regard to participatory approaches, especially for small-scale fisheries. Due to these issues and based on recommendations by the FAO Committee on Fisheries (COFI) and United Nations (UN) General Assembly, FAO published technical guidelines on MPAs and fisheries in 2011<sup>4</sup>. With a view to disseminate these guidelines and promote cross-sectoral collaboration, several regional workshops – bringing together a broad range of MPA and fisheries stakeholders – have also been organized. FAO has also been engaged in other meetings, conferences, articles and projects in the arena of MPAs and fisheries.

12. There are many organisations involved in MPAs and substantial funding is being channelled to the establishment of MPAs by governments, NGOs and foundations around the world. However, most do so from a conservation point of view without consideration of the fisheries sector and the fishery communities. The latest IUCN World Parks Congress (WPC) in Sydney, Australia, in 2014 recommended increasing the coverage of MPAs from 10 to 30 percent. A concrete concern from FAO in this regard is that by 2050 the world will require 60 percent more food than today. Sustainable fisheries could be an essential contribution to the fight against hunger and malnutrition since fish accounts for almost 20 percent of the global population's intake of animal protein and is a vital source of essential micronutrients. If closures of 30 percent of all marine habitats results in a significant suppression in the supply of seafood this could result in much more environmental damage than the impact of the suppressed fisheries, as the ecological footprint of alternative animal protein sources is known to exceed that of capture fisheries. Additionally, the funds needed to maintain and enforce closures may be taken from fund allocation to current sustainable fisheries management and enforcement, leading potentially to more damage outside protected areas, thus negating or decreasing the benefits of MPAs.

13. Hence, there is an urgent and important need to continue promoting a better understanding of MPA impact on fisheries and fishing communities – and especially on food security and poverty eradication - and promoting communication and knowledge sharing. FAO with its technical competences and, as a UN agency, access to international processes has a role to play in this, both in terms of the global actions and especially for the benefit of vulnerable and marginalised coastal communities in developing countries. In this regard FAO work on MPAs is helping to rebalance the discussions about MPAs within a comprehensive perspective, and it would seem important to continue and to capitalise on achievements thus far.

14. MPAs and fisheries are closely thematically linked to other ongoing efforts by FAO Fisheries and Aquaculture Department (FI). The COFI endorsed the International Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication

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<sup>4</sup> See footnote 2.

(SSF Guidelines)<sup>5</sup>, which provide an important framework for supporting small-scale fishing communities through the application of a human rights based approach. The SSF Guidelines are closely linked to the VGGT that recognize the importance of secure and equitable access to natural resources for food and nutrition security and sustainable livelihoods, in particular for vulnerable and marginalized groups. Both these instruments are of direct relevance to MPA management, and especially in the context of small-scale fisheries, in particular with regard to use and tenure rights and the rights and responsibilities of small-scale fisheries actors in the context of responsible fisheries and sustainable livelihoods.

15. It is proposed that FI continues to provide support to knowledge generation and awareness-raising on MPAs and fisheries. This could include the following types of engagements:

- Participate in relevant conferences and meetings to create awareness on MPAs and fisheries, fishing communities and food security, including events organised by other UN programmes, IUCN and CBD;
- Continue work with regional fisheries management organizations to better integrate MPAs for conservation within fisheries management;
- Support countries and programmes to increase effectiveness of MPAs by improving the understanding of the need and processes for establishing MPAs; the both positive and negative impacts over short and long-term inside and outside designated areas and including biological effects on fish stocks as well as social and economic factors on fishers or fishing communities;
- Include MPAs within the new work programme on use and tenure rights in fisheries. COFI:32<sup>6</sup> welcomed the work carried out thus far and the activities planned under the global work programme (GWP) (para. 117);
- Collect global knowledge and information on MPAs following up on the workshop held in June 2015.

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<sup>5</sup> [www.fao.org/3/a-i4356e.pdf](http://www.fao.org/3/a-i4356e.pdf)

<sup>6</sup> [www.fao.org/3/a-i6882e.pdf](http://www.fao.org/3/a-i6882e.pdf)