Chapter 10
Overall Impact of Local and Recreational Fisheries: Approaching the Case in the NE Atlantic and Mediterranean

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ABSTRACT
This chapter presents and discusses updated information related to fishing in the NE Atlantic and Mediterranean from a perspective that focuses on three main interchangeable and multidisciplinary issues: a) local/artisanal fisheries, b) recreational fishing and c) marine protected areas. A comprehensive introduction is followed by an updated literature review. Perspectives and solutions show that recreational and artisanal fisheries are clearly understudied and possibly have several impacts that are being unmeasured and often unknown. Another major issue is the lack of a serious long term European compromise to standardize these fisheries since a strong political interference does dominate the whole issue. No solution is possible without knowledge. No knowledge is possible if countries within the Mediterranean basin and NE Atlantic are not strongly and apolitically committed to a wider research scale with the overall interest of small fisheries sustainability and maintenance of healthy stocks as a major goal.

INTRODUCTION
Fisheries are widely spread in the World’s oceans and still increase in effort and captured biomass. While aquaculture is also rising, it does appear obvious that it will not, at least in the forthcoming years, either replace or decrease fishing efforts. This is due to several complex causes including politics, economics, sociological aspects and commerce. Industrial fisheries are reasonably known, although not quite so well managed, but there is a possible high amount of resources that are collected on a daily basis which are attributed to local/artisanal fisheries and a vastly unknown biomass extraction that is collected through several forms of recreational fisheries in their various forms.

An additional problem from aquaculture of marine fish species is that most production units...
require huge quantities of wild caught fish to feed reared biomass. Mackerel is known to have suffered episodically stock collapses because of over fishing for feeding tuna in cages.

The world’s oceans are also widely unprotected and recent estimates point to a global protected area roughly the size of South Africa. This being small the fact is that Marine Protected Areas (MPAs) worldwide are managed, in most cases, in a manner that often include some kind of exception regulations that allow effective fishing inside those same MPAs based on the - arguable - point that traditional and/or exceptional permits should be granted to local populations.

This being said, it is estimated that only a minuscule area roughly the size of The Netherlands is totally protected from any kind of fishing. Obviously, this is just next to zero.

Scientists agree that something between 10 to 20% of all marine areas should be fully protected.

At the same time, recreational fishing is also widespread but, while eventually playing negligible effects/impacts, are possibly being strongly under measured since the vast majority of the countries that have responsibilities in the area discussed in this chapter do not have and/or demand accurate data from this fishing niche and most of the collected biomass is simply unknown or episodically published in a very limited number of scientific papers.

One of the main problems of fishing is not just how much we fish but instead how we fish. Most, if not the vast majority, of local/artisanal and recreational fishing is performed in shallow coastal waters that exert their pressure on the first 100m or so. Most fishing gear is non-selective and a number of those, also because of its coastal use, are lost by storms, rocky/reef bottoms or other causes. In reality, about 45% of all fisheries collect non targeted species that are frequently discarded and do not even enter commercial lines. The total amount of biomass killed by lost and/or discarded fishing gear is absolutely unknown but is surely very high.

Selectivity is then a major and urgent issue to address too. Unfortunately, selective fishing methods are not the rule and some highly selective ones – mostly connected to recreational/sports fishing – like spear fishing in free diving and invertebrate collection with scuba gear are, especially in European Mediterranean waters and in the French and Portuguese Atlantic coasts including the Azores and Madeira Archipelagos, “politically incorrect” due to anecdotal information that generates confrontations either with artisanal fishermen and/or with scuba diving touristic operators. Spanish coasts seem to be an exception since spear fishing is generally well regarded and accepted in that country.

This last issue leads us to the next question: how to conciliate artisanal/local fisheries and recreational fishing with tourism? One simple fact is also that this is being successfully done in many countries (e.g. USA, South Africa and Australia) where mentalities have changed and fishing is evolving towards a process of achieving sustainability. Nevertheless, various degrees of conflict do undermine conciliations between artisanal fisheries, recreational fisheries and MPAs.

The question of proper MPAs management poses the scientific community the following issues when we debate if MPAs really work as a complement – in both ways – to the above fishing methods:

1. MPAs as sanctuaries for scientific and touristic underwater activities.
2. MPAs as generators of biomass exported to its borders and increasing fishing possibilities and
3. MPAs working as a net of reserves that will surely complement themselves and introduce overall benefits either for tourism but especially for sustainable forms of fishing and long term prospects for fisheries in a multi-set interactive program based on solid scientific data.