

# Saving the Mediterranean Sea, the Great Pending Issue

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An increasing number of scientific studies warn of the fragile situation of the Mediterranean Sea. Some even consider that we could be reaching a point of no return. Many fish stocks are in decline and, although there is no doubt that the Mediterranean Sea is suffering numerous pressures, due to its impact on the marine environment fishing is a key factor. However, although the numerous existing regulations could resolve this situation, the lack of implementation, added to the Blue Growth model supported by the European Union, could make the achievement of the good environmental status of the Mediterranean even more difficult.

Marine ecosystems are extremely important in terms of food security and provide critical ecosystem services for humanity. The oceans play an essential role as regulators of the Earth's temperature, provide almost half of the oxygen in the atmosphere, are also the biggest carbon sinks and have a major role in the first cycles of nutrients of the planet (Globe, 2010). Moreover, they are not only a mass of salt water but are full of life.

Specifically, the Mediterranean is considered to be one of the biggest reservoirs of biodiversity, as it hosts 4% to 18% of all identified marine species, which is considerable given that the Mediterranean only represents 0.82% of the global ocean surface area (Coll et al., 2010). The Mediterranean basin is also characterised as having unique and sensitive habitats such as posidonia meadows, coralligenous outcrops and maerl beds that, due to their extension, biodiversity and production, are among the most important habitats in the Mediterranean Sea (Stergiou et al., 2016).

However, these ecosystems and the marine resources they host are strongly influenced by the human activities that have many impacts on them. These impacts are currently driven by demographic and economic growth as well as by the diversification and intensification of coastal and maritime activities (SoMFi, 2016). Overfishing, illegal fishing, degradation of habitats, eutrophication and the increase of invasive species are threats not only for the marine ecosystems but also for the economy and the welfare of millions of people. To these pressures we must add climate change, an impact that in the next few years will become increasingly significant and whose effects are already being seen in our waters, as noted by several studies.

With currently available data, there is no doubt that marine biodiversity and fish stocks in the Mediterranean are declining rapidly and that, due to its impact on the marine environment, fishing is one of the key factors in this decline (Coll et al., 2010; Piroddi et al., 2017).

However, although in recent years millions of euros in public subsidies have been allocated to attempt to improve this situation, the measures taken to date have not been enough to halt the fishing sector crisis, recover the fish stocks to sustainable levels, or stop environmental degradation.

For decades, short-term decisions and economic growth have been prioritised over conservation of resources, the precautionary principle and ecosystem management have had little consideration, scientific advice has been frequently ignored and, among other factors, there has been no incentive for more selective fishing practices that consume less fuel (Ecologistas en Acción, 2015).

Therefore, and despite some recent success stories such as the recovery of the red tuna,<sup>1</sup> in the Mediterranean most fish populations are extensively overfished and, although since the distant past the inhabitants of the Mediterranean have exploited marine resources, current pressure levels greatly exceed those of any previous period.

## State of Fish Stocks

While some fish stocks in North East Atlantic waters are already showing signs of recovery (as a response to the reduction of fishing pressure over the last decade), scientific evaluations available for the Mediterranean show the opposite trend. According to the Scientific, Technical and Economic Committee for Fisheries (STECF), around 40% of fish stocks evaluated in the North East Atlantic are subject to overfishing (STECF, 2017). In the Mediterranean, the environmental state of marine resources is alarming, over 95% of populations suffer

overfishing (STECF, 2016) and some stocks are even at risk of collapse (DG Mare, 2016).

Focusing exclusively on the species of commercial interest analysed by the STECF, some of the stocks that suffer overfishing in the Western Mediterranean are hake, blue whiting, anchovy, sardine, sea bream, sole, turbot, striped red mullet and red mullet, black bellied monkfish, poor cod, and the red prawn, Indian white prawn and Dublin Bay prawn.<sup>2</sup> In terms of the hake caught in the Mediterranean, data currently available confirms that it is a species that suffers most from overfishing in the whole of Europe, given that catches in the Gulf of Lion are up to fifteen times higher than sustainable levels (DG Mare, 2016). This data suggests a very worrying panorama for the species in the region.

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In fact, according to the results of a recently published study, the risk of overfishing in the Mediterranean could reach a “point of no return” (Piroddi et al., 2017). According to this research, between 10,000 and 12,000 marine species inhabit the Mediterranean Sea, a biodiversity that is in serious danger because of three threats: overfishing, pollution and climate change. The article also indicates that in the last fifteen years the number of large predators (such as sharks, tuna and sword fish) has declined by 41%; there has been a drop of 34% in commercial and non-commercial fish; and

1. Thanks to the adoption of a Multi-Annual Recovery Plan for Atlantic Bluefin tuna in the eastern Atlantic and Mediterranean.

2. For more information you can also consult the STECF online database: <https://stecf.jrc.ec.europa.eu/dd/medbs/ram>.



Fishing in Croatia (IEMed Collection).

a significant increase in catches of young fish has been recorded. This same study indicates that climate change and fishing pressure are expected to intensify in the Mediterranean Sea, so ecosystem services available for future generations would be seriously limited.

### More Than Three Decades Advocating “Sustainable Fishing”

These figures highlight that, for many years, neither fishing resources nor the marine ecosystems as a whole have been managed responsibly. In fact, in 2008, the European Commission was already warning that failed policies and

lack of political will provoke “poor economic efficiency, high environmental impact, high fuel burn and low contribution of European fisheries to food supply.” But the current regulatory framework and the available scientific knowledge provide a unique opportunity to reverse this situation before 2020, specifically since the reform of the Common Fisheries Policy came into effect in 2014.<sup>5</sup>

The Common Fisheries Policy (CFP) is very clear about the management objectives and the deadline for achieving sustainable fishing. Specifically, it states that “in order to reach the objective of progressively restoring and maintaining populations of fish stocks above biomass levels capable of producing maximum

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3. Regulation (EU) N° 1380/2013 on the Common Fisheries Policy.

sustainable yield, the maximum sustainable yield [MSY] exploitation rate shall be achieved by 2015 where possible and, on a progressive, incremental basis at the latest by 2020 for all stocks” (Article 2 of the CFP).

It is important to note that achieving sustainable fishing (and specifically the objective of reaching the MSY) was already on the political agenda in 1982 when it was included in the United Nations Convention on the Law of the Sea (UNCLOS). It was also in the World Summit on Sustainable Development held in Johannesburg in 2002, when UN member states committed to maintain or restore the fish stocks to a level that can produce the MSY at the latest by 2015, a deadline that has now obviously passed. Once again, this commitment was repeated in the results of the 2012 United Nations Conference on Sustainable Development (RIO+20) and in the United Nations Sustainable Development Summit held in New York in 2015, where world leaders adopted the 2030 Agenda for Sustainable Development, which includes a set of seventeen Sustainable Development Goals (SDGs) including goal 14 to “Conserve and sustainably use the oceans, seas and marine resources.”

The SDGs14 include the goals of reaching sustainable fishing, fighting against illegal fishing and significantly preventing and reducing marine pollution. Among other relevant measures for sustainably managing and protecting marine ecosystems, it also includes the prohibition of “certain forms of fisheries subsidies which contribute to overcapacity and overfishing.” In this way, the objective is to stop subsidising with public money measures not aimed at fostering sustainable fishing.<sup>4</sup>

In any case, after more than thirty-five years of declarations advocating the achievement of sustainable fishing, only a few years from the

deadline (postponed from 2015 to 2020), most stocks in the Mediterranean are still highly overfished, so it is necessary to redouble efforts to stop environmental decline and use all tools available to ensure a real change of direction in fishing and maritime management. Otherwise, the gradual loss of the fishing sector, especially in the Mediterranean, will be unstoppable.

### Other CFP Measures: Management Plans and Reduction of Discards

One of the best channels for achieving sustainable fishing is through the establishment of catch limits in line with scientific recommendations, as well as the creation of multi-annual management plans. The latter are the framework established by the CFP to implement appropriate management measures in each fishery to guarantee its environmental sustainability and, consequently, the socioeconomic sustainability of the fisheries sector. These are long-term management systems that aim to reduce decision-making based on short-term interests and maximise sustainable fishing practices (Chaparro and Martínez, 2016).

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The first multi-annual management plan prepared under the umbrella of the CFP has been the Baltic Sea Action Plan. It is now the turn of the Multi-annual plan for demersal fisheries (species that live in the sea bed) of the North Sea, which will be approved in the

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4. More information on the SDGs14 available online: <http://www.un.org/sustainabledevelopment/es/oceans>.

next few months, and it will later be the turn of the Plan for demersal fisheries in EU western waters (in the west of Scotland and Ireland). In the Mediterranean, for now, the Multi-annual plan for small pelagic fish stocks in the Adriatic Sea fisheries and the Multi-annual plan for demersal in the North-Western Mediterranean Sea. The latter is of great importance for Spanish and French fisheries.

However, apart from these multi-annual plans framed within the CFP, in recent years other major management plans have also been developed, not because of their geographical scope but their collaborative process. This is the case of the Co-management of the Mediterranean Sand Eel in Catalonia, whose committee is formed by associations of fishermen, public administrations, research centres and non-governmental organisations, and where the decisions are approved by consensus (Leonart et al., 2014). It is one of the first pioneering cases of fisheries co-management in Europe and, in the same line, the Catalan Government is developing a new fishing governance model fundamentally based on joint responsibility of all the actors involved and the bioeconomic management of fishing activity.<sup>5</sup>

Therefore, in the next few years, not only because of the legal obligation to re-establish fish stocks at sustainable levels but also the new increasingly more participatory governance systems, it is expected (and desirable) that along the coast new management plans are gradually developed to guarantee responsible fishing, expand the joint responsibility of the actors involved and thus foster the culture of compliance.

At the same time, the member states must bear in mind and implement, in their turn, many other aspects that are also covered by

the CFP, including the application of Article 17 that obliges member states to use “transparent and objective criteria including those of an environmental, social and economic nature” when assigning fishing possibilities. In this way, the challenge of achieving sustainable fisheries and healthy marine ecosystems could be done by protecting the most sustainable part of the fleet.

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Moreover, another of the main objectives of the CFP is to avoid and reduce to the maximum undesired catches and waste practices (in other words, discards) through the gradual introduction of the landing obligation. Specifically, Article 15 establishes the obligation to land “all catches of species which are subject to catch limits and, in the Mediterranean, also catches of species which are subject to minimum sizes.” To facilitate the adaptation of this regulation, the obligation will be gradually introduced between 2015 and 2019. In the case of the Mediterranean, the regulation establishes that from 1 January 2019 all fisheries must land all their catches (albeit with certain exceptions).

Although quantifying the discard rates is no easy task, due to the difficulty of monitoring and the lack of information on many fisheries, it is estimated that in the national fishing ground of the North East Bay of Biscay the trawl and gillnet fleet discards an average of

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5. The decree proposal can be consulted online on the DGPAM website <http://agricultura.gencat.cat>, last accessed 6 June 2017.

40% of the fish that fall into its nets (Valeiras et al., 2014). With respect to the Mediterranean, it is considered that up to 18% of total catches is discarded (in other words, around 230,000 tons are rejected annually), with the trawl fleets responsible for 15 to 65% of the discards generated (Soriano-Redondo et al., 2016). In addition to the waste created by these fleets, the catch and discard of fish and invertebrates, as well as the accidental catch of other vulnerable species such as birds and mammals, which are not the object of fishing activity, also negatively affects biodiversity (Soriano-Redondo et al., 2016).

Given all of this, and bearing in mind that the discards as well as being a waste of resources also generate a high impact on the marine environment and fishing activity itself, it is logical that the EU has wanted to legislate to strengthen the selectivity of the fisheries, reduce fishing mortality and, consequently, drive the recovery of fish stocks. However, bearing in mind the complexity of this regulation, it is essential to first guarantee a real reduction in undesired catches (to avoid possible adverse effects that could generate poor application of this regulation) and, in its turn, exhaustive control and monitoring.

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In this respect, it is also essential that in parallel to the aforementioned measures technical improvement programmes and other measures are established that control how, where and when fishing is done; space-time restrictions are implemented in fisheries and biologically

sensitive zones; scientific knowledge and data collection are considerably increased; collaboration and participation are expanded; and, no less important, the commercialisation and traceability is improved throughout the distribution chain.

All these measures, which should have sufficient funding through the European Maritime and Fisheries Fund,<sup>6</sup> would enable us to advance decisively towards fishing with less environmental impact. Otherwise, without the safeguards or the application of the necessary measures, the landing obligation could increase the extraction of biomass with unfortunate consequences for the ecosystem (Sardà et al., 2015).

## Fishing Less and Better Works Out Cheaper

Achieving sustainable fishing would enable the recovery of fish stocks to healthy levels, help stop the loss of biodiversity and generate many benefits, as noted by a study carried out by the New Economics Foundation based on bio-economic models. This research estimates that the recovery of European fish populations to sustainable levels could provide up to 2 million extra tons of fish (enough to satisfy the annual demand of the EU), over 800 million additional euros and over 20,000 jobs linked to the fishing sector (NEF, 2015). In fact, this research highlights that poor management of European fishing resources is reducing the number of jobs and the beneficiaries of the sector.

Another scientific study commissioned by Oceana suggests even greater benefits. According to this study, efficient management of catches in European waters could offer up to 5 million extra tons of fish; that is, an increase of 57%. For some specific zones of the Mediter-

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6. Regulation (EU) No 508/2014 on the European Maritime and Fisheries Fund.

ranean the research shows that with sustainable management of fishing, catches could increase by up to 200% (Froese et al., 2016).

Globally, according to another World Bank report, fishing less and better could generate up to an additional 83 thousand million dollars every year for the fishing sector (World Bank, 2017). This report also indicates that world food security would be improved. This is of great importance, above all bearing in mind that over 50% of fish and seafood imports to the European Union comes from developing countries, so as citizens we have great responsibility to ensure that we only buy products from sustainable and responsible sources (WWF, 2015).

## Conservation Versus Blue Growth

With the goal of reversing the decline of the Mediterranean, the European Commission has supported the Malta MedFish4Ever Ministerial Declaration. This is an action plan of all coastal member countries – which has also been signed by Albania, Montenegro, Morocco, Turkey and Tunisia – for cooperation and development of sustainable fishing for the next ten years, with the objective of safeguarding the fish stocks and protecting the ecological and economic wealth of the region.

The MedFish4Ever Declaration is without doubt a great step forward in guaranteeing the future of the Mediterranean Sea, above all bearing in mind the decline of numerous species. Moreover, the declaration recognises that the Mediterranean is affected by a series of impacts, including overfishing and unsustainable fishing practices, prospecting, transport, coastal urbanisation, agriculture and industrial pollution, climate change and invasive species. Therefore, it is important to note that member states should also decisively advance in achieving numerous other current regulations and directives – such as the Marine Strategy

Framework Directive (Directive 2008/56/EC), the Water Framework Directive (Directive 2000/60/EC), the Birds Directive (Directive 2009/147/EC) and the Habitats Directive (Directive 92/43/EC) – given that they are solid legal instruments that should guarantee the health of the oceans through the achievement or maintenance of the “Good Environmental Status” of the seas by 2020 at the latest.

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Moreover, in order to conserve the Mediterranean, compliance with Article 192 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) should also be guaranteed, which asserts that “States have the obligation to protect and preserve the marine environment,” as well as the implementation of the Convention on Biological Biodiversity and its Aichi Targets. The latter form part of the Strategic Plan for Biological Diversity 2011-2020 that includes, among other objectives, that “at least 10% of EU coastal and marine areas protected are designated marine protective areas by 2020.” With the political will we would still be in time to achieve the latter goal in particular but it is important to note that currently many protected areas lack proper management and control, so the objectives agreed in this convention, which include establishing “efficient conservation areas,” are diluted as they do not guarantee effective management in numerous areas that already have a category of protection.

Among other important instruments, in addition to the aforementioned 2030 Agenda for Sustainable Development, it is also worth mentioning the Barcelona Convention, the Integrated Maritime Policy, and the Directive framework for maritime spatial planning (Directive 2014/89/EU). This directive, passed in 2014, aimed to be an important advance in the coordination of human activities in coastal and marine areas and encourage member states to contribute to the development of maritime transport, fishing, aquaculture, sustainable tourism and the extraction of raw materials, while protecting the environment in a participatory way. This directive is complemented by the EU Blue Growth strategy.<sup>7</sup>

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In recent years this Blue Growth has been strongly promoted and become a central theme in European Commission policies, which seeks to foster new economic and employment opportunities in the maritime sector (Delacámara et al., 2015). In short, it seeks to drive the growth of sectors such as tourism, transport or mining even further, sectors not free of impacts and that in recent decades have developed to the detriment of less intensive economic activities and, in particular, of conservation.

Therefore, and given the proven fragile environmental state of the Mediterranean Sea, doubts emerge about the real advances made

by member states in complying with their obligations in the aforementioned environmental matters and, above all, about whether the strategy pursued by the EU will really help to organise and offer a “sustainable growth” of the Blue Economy sectors or if, in contrast, it will add even more pressures on the marine environment, delaying even further the essential achievement of the Good Environmental Status.

Bearing in mind that the roots of the problems that the Mediterranean Sea (and the oceans in general) must confront are directly linked to the paradigm of economic growth, as well as to our way of life, the solution should lie in a global transition towards far more responsible and sustainable consumption and production systems; only commit to a Blue Economy that does not add more pressures to marine ecosystems that are already very weakened by human activities; and establish a maritime governance that ensures proper long-term coordination and management.

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