



PHAROS4MPAs

SAFEGUARDING MARINE PROTECTED AREAS IN THE GROWING MEDITERRANEAN BLUE ECONOMY: RECREATIONAL FISHERIES

**POLICY
BRIEF**
JULY 2019



RECREATIONAL FISHING & MEDITERRANEAN MARINE PROTECTED AREAS:

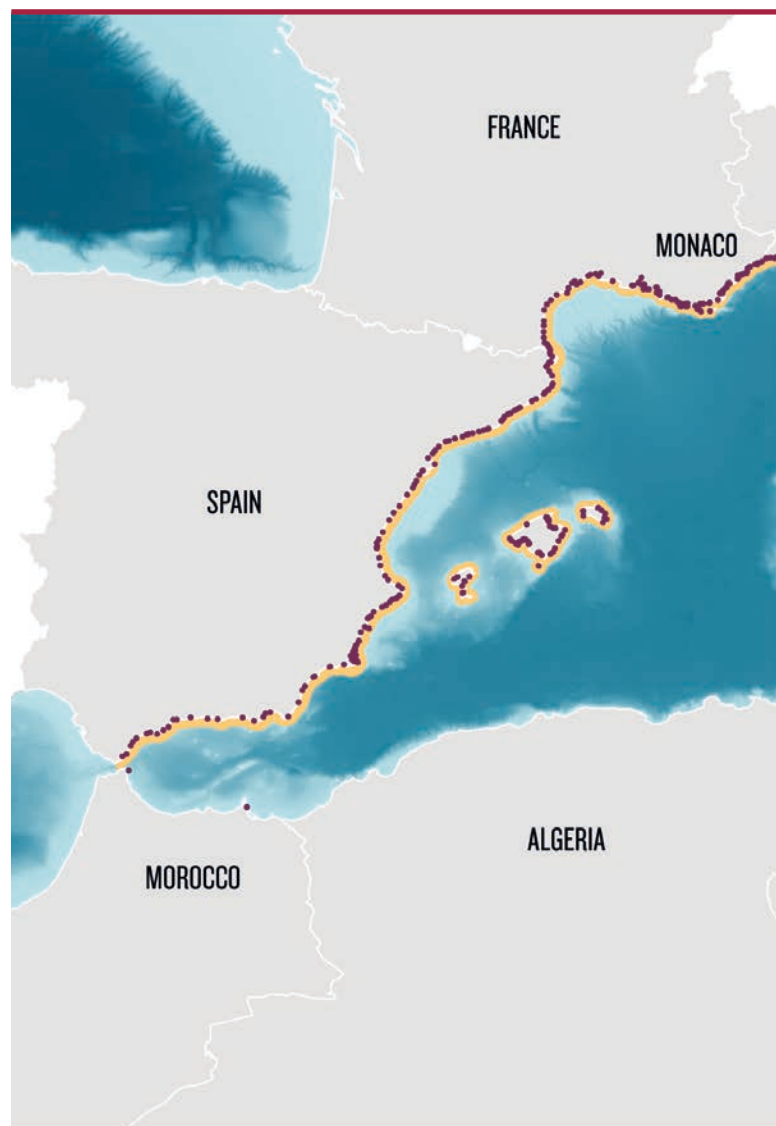
INCREASING INTERACTIONS

Recreational fishing is one of the most popular leisure activities in coastal zones worldwide: it involves large numbers of people, and high levels of fishing effort. In Europe there are almost 9 million practitioners, who generate around €6 billion annually for regional economies. The sector is present all along the Mediterranean northern coasts – it's easy to access a large number of potential sites where boat and spear fishers can operate.

The number of recreational fishers has been assessed in some locations (in MPAs in particular), but the overall number is still unknown. However, experts agree on the fact that the number of recreational fishers in the Mediterranean has reached a significant level. As an example, in the Balearic Islands the number of recreational fishing licences has quadrupled in the last 20 years.

Clearly, such an increase in fishing effort is likely to lead to increased catch volumes, which will have an impact on fish stocks and the protection of vulnerable species. According to rough EU estimates, recreational fishing could account for 10% of all fish production in the Mediterranean.

DISTRIBUTION OF MARINAS AND POTENTIAL RECREATIONAL

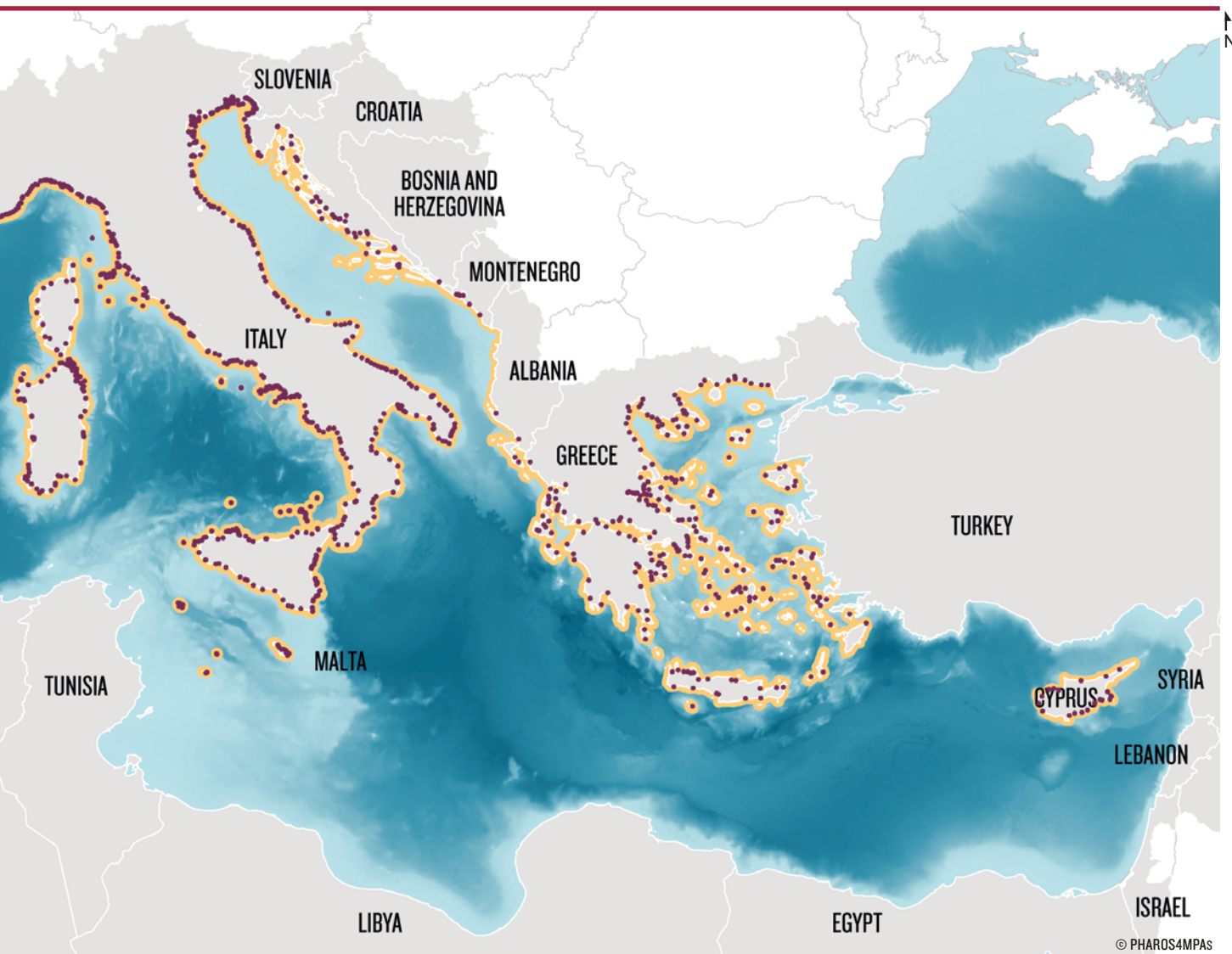


0 250 500 750km

SOURCE: IFREMER revised by WWF France (2019)

Due to the weak distinction between recreational fishers and small-scale fishers, the identification of port facilities exclusively or partially occupied for leisure activities is not yet possible in the other Mediterranean countries.

FISHING ZONES IN EU MEDITERRANEAN COUNTRIES, PLUS MONTENEGRO, ALBANIA, BOSNIA AND HERZEGOVINA



LOCATION OF MARINAS

● Marina

POTENTIAL FISHING ZONES

■ Area within 6 miles from shore

DEFINITION OF RECREATIONAL FISHERIES

EU Member States have not yet agreed on a common definition of marine recreational fisheries. The General Fisheries Commission for the Mediterranean define them as: "Fishing activities exploiting marine living aquatic resources for leisure or sport purposes from which it is prohibited to sell or trade the catches obtained".

A clear, agreed Europe-wide definition of marine recreational fisheries is still needed for regulation and enforcement purposes. **An appropriate definition should enable a clear distinction between different types of fishery, and the different methods of recreational fishing.** The definition should extend across the whole Mediterranean basin, where subsistence issues are also very important in some areas.

The recommendations in this report apply to strictly recreational fisheries, and do not consider subsistence fisheries¹.

INTERACTIONS WITH MARINE PROTECTED AREAS

MPAs play a significant role in protecting fish communities and enhancing fish stocks within their designated boundaries. Their success thus makes them attractive to recreational fishers, who may expect higher yields inside and in the close vicinity of these areas.

¹ One issue that remains to be solved is how to distinguish subsistence fisheries from strictly recreational fisheries.

The success of MPAs in attracting fishers and tourists can result in conflicts between sectors, involving recreational and commercial fishers, scuba divers and tour boats, among others, as well as harm to the marine environment. There is much debate over whether or not commercial small-scale fishers and recreational fishers should be given equal rights to access an MPA and its resources.

Most multi-use MPAs in the region allow regulated recreational fisheries within their boundaries. **However, recreational fishing, in all its forms, is considered to be an extractive activity and, therefore, is not always compatible with ecosystem and wilderness qualities protection.**

RECREATIONAL FISHERY: KEY IMPACTS ON THE MARINE ENVIRONMENT

Mediterranean fisheries are facing serious challenges: roughly 80% of all assessed stocks are fished outside safe biological limits, and catches are decreasing and commercial fleets shrinking across the region. Recreational fisheries can exacerbate this situation in a number of ways.



AERIAL VIEW OF LA VALETTE HARBOUR
PACKED WITH FISHING BOATS

© MALTESE ROBINSON ROBINSON / SHUTTERSTOCK

INCREASING FISHING EFFORT AND ITS IMPACT ON FISH STOCKS

Recreational fishing has been shown to be an important component of fishing mortality across the globe. **Failing to include recreational catch estimates in stock assessments can undermine their accuracy and lead to incorrect advice on fisheries management.**

Comprehensive data is lacking, but the EU broadly estimates that recreational fishing represents more than 10% of the total production of all fishing. Illegal fishing also adds extra pressure on fishery resources – this is a problem in most coastal areas and MPAs.

IMPACT ON VULNERABLE FISH SPECIES

Overall, vulnerable species make up nearly 20% of the total recreational catch in coastal waters (including MPAs) of the western Mediterranean. Some recreational fishing methods (e.g. spearfishing, jigging and trolling) target species – mostly larger individuals² with a high economic value – that are also exploited by artisanal fisheries.

Many of these species – e.g. grouper (*Epinephelus marginatus*), red scorpionfish (*Scorpaena scrofa*) and common pandora (*Pagellus erythrinus*) – are

² Larger individuals tend to produce a higher quantity and better quality of eggs and larvae, thus producing more offspring; or because, in the case of sex-changing species, the demographic structure of the population is disrupted as the larger sex will be disproportionately caught, leading to egg or sperm limitation.

endangered, and are included in international conventions (e.g. Barcelona, Bern or Washington conventions), laws (e.g. EU Habitats Directive) or lists (e.g. the IUCN Red List).

There are other environmental impacts associated with recreational fishing:

- **Disruption of trophic chains:** Some fish species targeted by recreational fishers are regulative species among marine ecosystems and help control the proliferation of other species, such as sea urchins.
- **Catch-and-release and fish welfare:** Certain handling techniques can cause great stress and subsequent death among fish.
- **Potential introduction of exotic species used as bait:** The use of living exotic species as bait by recreational fishers in the Mediterranean is common. Living material can displace endemic species, changing the structure of the trophic chain.
- **Potential environmental impacts of fishing gear lost or abandoned at sea:** Lines and nets can remain in the water column as litter and on the seabed for many years still capturing fish, particularly in rocky habitats, resulting in additional mortality of both target and non-target species as well as abrasive action on soft and hard habitats.
- **Damage to sensitive habitats:** Three negative phenomena are observed: 1) Shellfish collectors and shore anglers trampling on fragile *Cystoseira* forests in coastal areas. 2) Unintended contact of spearfishers with sessile organisms – inexperienced spearfishers, in particular, tend to come into contact more frequently with coralligenous assemblages. 3) Anchoring on *Posidonia* meadows – conventional mooring chains scrub the substrate, and can destroy the immediate environment.

SUMMARY OF PRESSURES AND IMPACTS AFFECTING TAXONOMIC GROUPS AND HABITATS, TOGETHER WITH THE LEVEL OF INTENSITY

PRESSURE	IMPACT	TAXONOMIC GROUP/HABITAT	INTENSITY
Overexploitation of vulnerable species	Insufficient population recovery	Different vulnerable species, e.g. groupers	High
Additive predation	Perturbation of trophic chain	Sea urchin in coastal habitats	Low
Physical contact from boat anchors and trampling on sensitive habitats	Habitat degradation	<i>Cystoseira</i> and coralligenous assemblages as well as <i>Posidonia</i> meadows	High
Catch-and-release	Increased mortality	All fish	Medium
Exotic species	Ecosystem disturbance	All types of coastal habitats	Medium
Fishing gear lost or abandoned at sea	Pollution/Ghost fishing	All type of marine habitats	High

PUBLIC AUTHORITIES CAN PLAY A MAJOR ROLE IN MINIMIZING RECREATIONAL FISHING'S IMPACTS ON MPAs



SPEARFISHER IN CÔTE
AGATHOISE MPA, FRANCE
© MATHIEU FOULQUIÉ

NATIONAL AUTHORITIES

Unlike professional fishing, recreational fishing in the EU largely remains under national control – however, in recent years it has been increasingly made subject to EU fisheries legislation. In 2009, a chapter on recreational fishing was included in the Council Regulation (EC) No 1224/2009. Article 55 of this regulation requires that “Member States should ensure that recreational fisheries on their territories and in Union waters are conducted in a manner compatible with the objectives and the rules of the Common Fisheries Policy”.

- It is strongly recommended that **national licence systems** should be developed so that the numbers of recreational fishers (among other parameters) can be better evaluated.
- The licence system should include the **obligation to report all catches** – this is an essential element to obtain greater accuracy on the status of fish stocks and a clear assessment of the share of catches from recreational fisheries in relation to commercial fishing.
- **Monitoring of the ecological, social and economic impacts of recreational fisheries** should be implemented by all Mediterranean states.
- The **establishment of recreational fisheries fees** should be explored as an effective mechanism towards sustainable management. These fees can contribute to lessening the environmental impacts of recreational fishing, covering the costs of management and – importantly – control measures.
- **Management measures** might be required at national level and in MPAs in particular when the fishing effort is too high, including the limitation of fish catches or the prohibition of particular fishing methods impacting vulnerable species such as groupers (*Epinephelus* spp. and *Mycteroperca rubra*), and brown meagre (*Sciaena umbra*).

Local public authorities can also be instrumental in implementing initiatives to incentivize and support recreational fishers to switch to more sustainable practices. At the local level, MPAs generally have the power to regulate recreational fisheries, along with other public authorities, thus acting as laboratories for sustainable development. For instance, the zoning of an MPA can be a key tool in the sustainable management of its recreational fisheries, including the establishment of no-take zones. Proactively establishing a dialogue with the recreational fishing sector is crucial for implementing management actions.

MPA MANAGERS

The following recommendations concern MPA managers: they are suggested to avoid or minimize impacts on target and non-target species and habitats, reduce conflicts with other sectors, and maximize the economic benefits of the sites.

- **Monitoring³** is a key starting point in order to identify and quantify both the number of recreational fishers and the impacts of their activity. Performing such studies regularly is necessary to understand not only the effects on marine communities but also the economic and social benefits produced by this activity. The collected data can contribute to establishing sites' carrying capacity and help develop science-based measures that ensure a sustainable recreational exploitation of the sea.
- In countries without a licence system, MPAs may still be allowed to **issue licences** themselves, depending on their regulatory framework. Whenever possible MPAs should establish an obligatory licensing system for fishers who want to fish within their boundaries, particularly in countries without a national licence system.
- **Environmental awareness-raising programmes** are most effective when MPA managers engage with all relevant stakeholders – primarily recreational fisher organizations, but also specialized shops and public administrations – in their campaigns. To help engage recreational fishers, charters or codes of good practice can be agreed in a participatory way, then they can be distributed and even signed as a 'moral' contract.
- **Regular surveillance** of users within and around MPA waters is the most effective way to ensure regulations are enforced and poaching is prevented.
- Involve recreational fishers along with other stakeholders such as **scuba divers and particularly small-scale fishers in management**.
- MPA managers can **implement different types of management measures** when the fishing effort is too high. Limitations include bans on fishing at night, catch limitations to reduce fishing effort (e.g. catch limits in number of fish or kilograms, limited number of rods per fisher or boat, shorter soak times, etc.), minimum landing sizes (different than for fish caught outside the MPAs), prohibition of particular fishing gears affecting vulnerable species (usually spearfishing and jigging, as well as electric reels), prohibition of competitions.

³ The MedPAN publication on recreational fisheries in Mediterranean MPAs provides a sound review of monitoring techniques



The PHAROS4MPAs project explores how Mediterranean MPAs are affected by activities in the growing Blue Economy, and provides a set of practical recommendations for regional stakeholders on how the environmental impacts of key sectors can be prevented or minimized. Encouraging international collaboration across MPA networks and cooperation between state, industry and other actors, PHAROS4MPAs aims to enhance MPA management effectiveness and improve the conservation of marine ecosystems across the whole of the Mediterranean.



Further details, see full report at <https://pharos4mpas.interreg-med.eu>

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FRONT COVER: Catching a greater amberjack (*Seriola dumerili*) from a big game fishing boat

© LIONEL ASTRUC / BIOSPHOTO

BACK COVER: Trolling from a boat with multiple rods

© LUNAMARINA / SHUTTERSTOCK



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