



PHAROS4MPAS

SAFEGUARDING MARINE PROTECTED AREAS IN THE GROWING MEDITERRANEAN BLUE ECONOMY: CRUISE SECTOR

**POLICY
BRIEF
JUNE 2019**



CRUISE SECTOR AND MEDITERRANEAN MPAs: INCREASING INTERACTIONS

The global ocean cruise industry has expanded rapidly in recent decades, with an annual passenger compound growth rate of 6.63% from 1990-2020. Several factors have contributed to this growth, including increasingly large vessel capacity, greater port availability, new technologies, and on-board and on-shore tourist activities geared to satisfying growing consumer demands.

Cruise activities in the Mediterranean and its adjoining seas are developing fast: in 2007 there were 8.7 million cruise passengers in the Mediterranean, in 2018 there were more than 25 million. Cruise tourism is also rapidly changing as ships have evolved from carrying fewer than a thousand people in the 20th century to today's mega-cruisers that can hold more than 6,000 guests and 2,000 crew. As a result, their environmental impact is growing in volume and intensity.

These trends are putting increasing pressure on some marine protected areas (MPAs). Cruises operate near and sometimes within many Mediterranean MPAs, posing a serious risk to the conservation of key biodiversity hotspots. Examples are numerous: Portofino MPA (Italy) and Kas -Kekova Special Protected Area (Turkey) are particularly popular attractions for cruises, while other MPAs such as Calanques National Park (France) or Scandola (France) are located in close proximity to large cruise ports and routes. In the case of Venice, the cruise port is actually located inside a marine Natura 2000 site.

The cruise sector's pressure on MPAs and other sites of ecological importance is expected to continue to grow, and public authorities across the region have an important role to play in monitoring and managing the overall situation. Clearly, efforts must be made to limit the environmental impacts of cruising as far as possible, particularly in ecologically vulnerable areas – but strategies need to be realistic and practical, acknowledging that the industry is not likely to stop visiting popular destinations. If carefully managed, collaborative multi-stakeholder maritime spatial planning (MSP) processes can go some way towards achieving effective compromises between economic and environmental considerations.

With these processes in mind, this policy brief highlights the key impacts of the cruise sector on Mediterranean MPAs, and proposes priority policy responses.



CRUISE SECTOR: KEY IMPACTS ON THE MARINE ENVIRONMENT

Although modern ships have significantly reduced their environmental impacts relative to their size, cruises remain a major source of air, noise and marine pollution.

However, while the capacity of the biggest new boats – which can accommodate up to 8,000 passengers, equivalent to the size of a small Mediterranean town – is a key factor behind the environmental impacts of the industry, smaller boats can also harm the marine environment.

IMPACT	CONSEQUENCES	
EMISSIONS AND DISCHARGES	Solid waste	Waste management practices on cruise ships often fail to meet adequate levels for communal and hazardous waste disposal.
	Wastewaters	Wastewater emissions reduce ocean oxygen levels and increase the potential for algal blooming. Bacteria and viruses can also be released into the sea and transferred to other organisms.
	Ballast water	Ballast water can contain wastewaters, oil and other hydrocarbons, bacteria and invasive species. This has numerous consequences for marine resources, human health, and the ecosystem and the economic activities depending on it.
	Antifouling coatings	Antifouling coatings contain high concentrations of biocides which can seriously harm marine organisms.
	Hydrocarbons	Polluting hydrocarbons enter the marine environment through 'routine' activities such as the discharge of bilge water, ballast water, and fuel intake.
	Acid rain	Caused by emissions of sulphur dioxides (SOx) and nitrogen oxide (NOx), acid rain can fall large distances from the actual site of the emissions.
	Air pollution	Gaseous emissions cause localized smog and ground-level ozone, increasing ocean acidification and contributing to global climate change. Cruise ships also add to air pollution in ports.
PHYSICAL DISTURBANCE	Collisions	Collisions with marine mammals and sea turtles are a major concern. Ship velocity and mass have significantly increased in recent years, as well as the total number of ships – and so have the chances of collision.
	Noise pollution	Ship engine noise can alter ecosystems by displacing fish and/or predators.
	Light pollution	Light pollution from brightly-lit ships poses problems for species that need darkness for orientation in daily and seasonal migrations, feeding and breeding.



BOTTLENOSE DOLPHIN
(*TURSIOPS TRUNCATUS*) AND
THE COSTA MEDITERRANEAN IN
THE NORTHERN ADRIATIC SEA
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PUBLIC AUTHORITIES: KEY ROLES

Public authorities can play a major role in minimizing the cruise sector's impacts on MPAs:

- **National environmental authorities** can highlight issues relating to areas which are particularly exposed to cruise impacts/threats. Maritime spatial planning (MSP) processes are an opportunity for cross-sector dialogue: public authorities can drive solutions by encouraging engagement between cruise sector representatives, port authorities, environmental protection specialists and MPA managers.
- **Local authorities** can also play an important role in spreading awareness of the impacts from or risks posed by cruise traffic in the MPAs under their territorial jurisdiction. Where necessary, they can bring the need for better MPA protection to higher decision levels.

RECOMMENDATIONS TO PUBLIC AUTHORITIES

- National authorities should establish strict limitation and buffer zones regarding the minimum distance cruise ships are allowed to navigate, moor or stop from the borders of MPAs. This would minimize existing impacts and counterbalance the growing interest from the industry in visiting these areas.
- National environmental authorities should promote continuous monitoring of cruise activities, with close cooperation between MPA managers and relevant public authorities (e.g. registration of operational data, emissions and discharges, fuel type).
- The granting of authorization for navigation in highly sensitive natural areas must be a well-informed process, with the close involvement of MPA managers to help limit the risks (e.g. grounding, collisions).
- Maritime authorities should implement speed restrictions to mitigate collision risk. In addition, lower speeds reduce potential acoustic impacts and emissions of air pollutants.
- National authorities should make use of MSP tools such as IMO Particularly Sensitive Sea Areas (PSSAs) which can prevent accidents and consequent environmental impacts.

INTERNATIONAL AND REGIONAL COOPERATION

Cross-border, sub-regional and regional cooperation between public authorities is particularly important given the geographical scale across which the cruise sector operates – coordinated solutions are essential if they are to have wide and lasting impacts across the Mediterranean. Collective transnational action is also needed to balance the considerable lobbying force of the industry.

On a regional scale, each country should comply with MARPOL (International Convention for the Prevention of Pollution from Ships) rules, and enforce the application of relevant international standards.

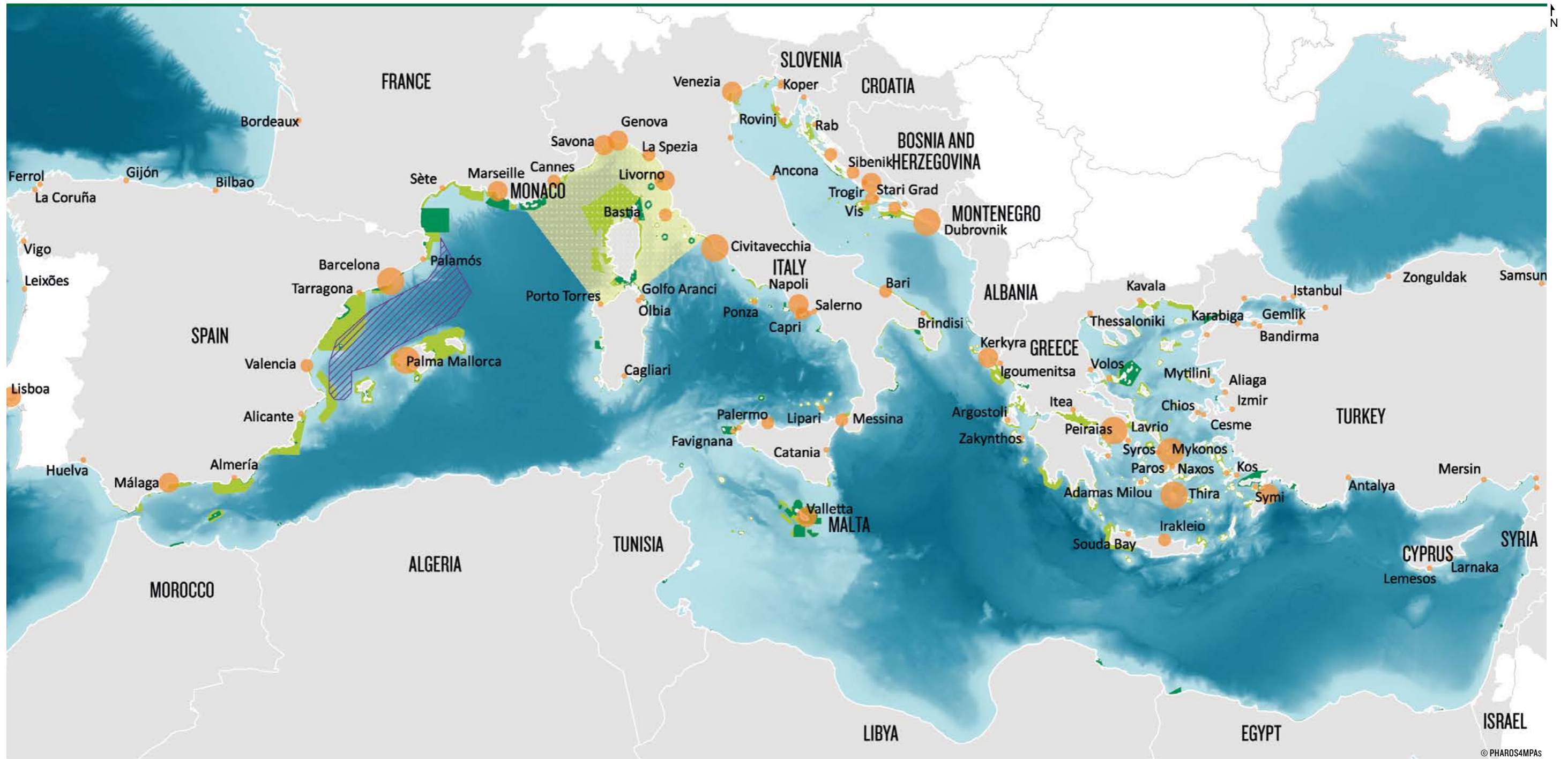
RECOMMENDATIONS TO COUNTRIES IN A REGIONAL COOPERATION FRAMEWORK

- Regional regulations promoting stricter controls on airborne emissions from the cruise industry (e.g. SECAs) are needed to limit impacts on ecosystems, both in MPAs and at the level of eco-regions and regional seas.
- The Barcelona Convention should be used as guidance to Contracting Parties on how to prevent or minimize the impacts of cruise ships on MPAs and beyond, fostering regional cooperation. This could be achieved initially through the implementation process of strategic documents that support the Barcelona Convention: e.g. the Conceptual Framework for Marine Spatial Planning, the ICZM Protocol and relevant action plans.
- In addition, a specific regional action plan to better regulate the cruise sector's operations in relation to marine conservation should be urgently created, adopted and implemented under the Barcelona Convention.



CRUISE SHIP IN THE VENETIAN LAGOON
ON OCTOBER 22, 2011 IN VENICE (ITALY)
© SHUTTERSTOCK

ANNUAL CRUISE VESSELS FREQUENTATION IN NORTH MEDITERRANEAN CRUISE PORTS (2016)



0 250 500 750km

- CONSERVATION AREAS**
- National MPA
 - Marine Natura 2000 Site
 - Pelagos Sanctuary for Marine Mammals
 - ▨ Mediterranean Cetacean Migration Corridor

- N° OF CRUISE VESSELS IN NORTH MEDITERRANEAN CRUISE PORTS IN 2016**
- 10 - 100
 - 100 - 200
 - 200 - 500
 - 500 - 914

Conservation areas
SOURCES: MAPAMED (2017), EMOdnet (2018)
Cruise ports
SOURCE: EMOdnet (2016) adapted by ISMAR (2018) and NSO Malta



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: Wooden traditional Maltese water taxi (dghajsa boat) offering trips from Valletta ferry port around Grand Harbour (Malta)

© REINE NASSAR

BACK COVER: Docking cruise ships: TUI Discovery (front), Thomson Cruises & Norwegian Epic (behind) in Barcelona cruise port, Spain

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