

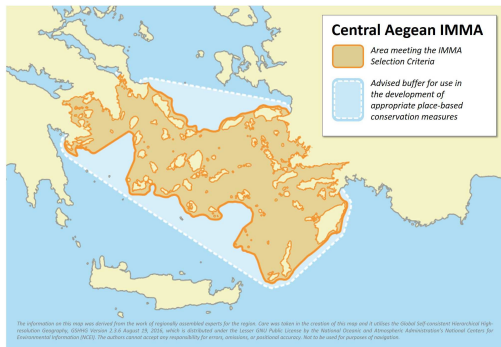
Central Aegean Important Marine Mammal Area - IMMA

Description

The Central Aegean Sea is characterized by an extensive archipelago of hundreds of small islands and bays which form a variety of habitats hosting a rich biodiversity. Important biological and ecological characteristics include the presence of habitats subject to degradation in the Mediterranean such as seagrass beds and coralligenous grounds, which provide habitats and highly important reproduction areas for a number of rare or vulnerable species (e.g., monk seal, various bird species, cetaceans, and sharks). Unique geomorphological features include hydrothermal vents, brine seeps, and submarine volcanoes. Owing to the area's high biodiversity and the presence of many threatened species, many sites are legally protected (CBD, 2014).

The Central Aegean Sea islands provide valuable habitat for monk seals. Important monk seal subpopulations can be found in Southern Evia and Lihades islands (feeding area for 5-15 individuals), the Saronic Gulf and Macronisos island (Macronisos hosts 15 caves and is a pupping area with 15-25 individuals), Cyclades Islands (Kimolos and Polyaigos with 49 individuals, Gyros with 55 individuals, Anafi with 20 individuals etc.) and the Dodecanese Islands (Karpathos and Saria – 23 individuals etc.) (Legakis & Maragou, 2009 and Kotzageorgis et al., 2015). Although the total number of seals inhabiting the area remains uncertain due to the lack of information on the mobility of individual seals amongst the above sites, it seems safe to assume that at least 150 seals are present in the area.

The area occupies most of the central and part of the southern Aegean and includes the Cyclades and Dodecanese Archipelagos, as well as the islands of Samos and Ikaria. Most of the area includes Greek territorial waters



Area Size
58,265 km²

Qualifying Species and Criteria

Mediterranean monk seal -
Monachus monachus
Criterion A; C (i)

Marine Mammal Diversity

[*Delphinus delphis*, *Tursiops truncatus*,
Stenella coeruleoalba]

Summary

This wide area of the Central Aegean encompasses a suite of important habitats for Endangered Mediterranean monk seals (*Monachus monachus*). The area extends outward to the 200m isobath, with certain parts of the area having depths greater than 200m. These occur around nearby islands; it is known from telemetry studies that monk seals easily cross such deeper areas even though they tend to spend their time in shallower water. Monk seals here concentrate in specific breeding nuclei, but the area also includes numerous locations where more isolated mother and pup pairs are observed regularly during the pupping season. Such activities are fairly dispersed in occurrence over the broad area and are consistent with the seals' known socioecology.

(extending to 6 nm), as well as the high seas (>6 nm from the baseline). To the east, the area extends beyond Greek and international waters into Turkish waters, all the way to the Turkish mainland's coastline.

The area is characterised by a very large number of islands, islets and rocks strewn over the region. Some of the large islands are inhabited by humans, but most are not. These rocky islands are situated over a moderately shallow bottom of sand, mud, and coralligenous bottom. The shallower portions around the islands are covered in many places by thick seagrass meadows (the endemic *Posidonia oceanica*). Islands, inlets and rocks are often of the geomorphological type that is amenable to the presence of caves where the seals find refuge for resting and pupping. In some of the least disturbed locations (e.g., Gyaros) seals even display behaviour which is rarely seen nowadays, i.e., resting in open beaches.

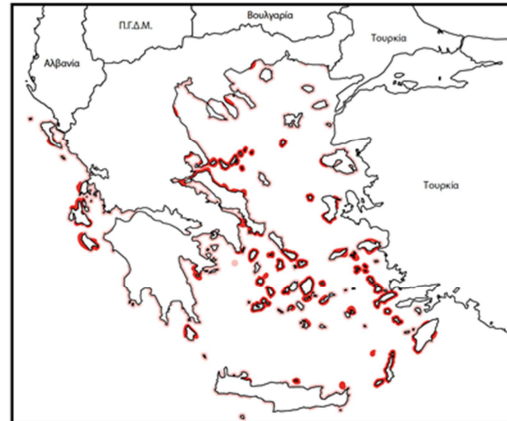
Criterion A - Species or Population Vulnerability

The Mediterranean monk seal *Monachus monachus* is assessed as Endangered [EN C2a(i)] in the IUCN Red list of threatened species (Karamanlidis, A. & Dendrinis, P. 2015). Minimum number estimated 151 animals including pups in the area, according to Legakis & Maragou 2009., which represents 23.2% of the global population, based on Karmanlidis and Dendrinis 2015.

Criterion C: Key Life Cycle Activities

Sub-criterion Ci: Reproductive Areas

The main criterion upon which the candidate IMMA was identified was based on the knowledge that the area contains pupping nuclei of monk seals (Legakis & Maragou, 2009). Therefore, Ci obviously applies. Information on the occurrence of breeding in the area is robust, recent, and undisputed, and summarised (amongst many others) in Legakis and Maragou (2009).



Locations of known monk seal distribution – Pink; important pupping habitat - Red (Legakis A., Maragou P. 2009).

Supporting Information

Cebrian, D. 1998. *La foca monje (Monachus monachus Hermann 1779) en el Mediterráneo oriental (Grecia y Croacia)*. Ed. Universidad Complutense de Madrid. Madrid. 367 pp plus 2 appendices.

Cebrian, D. 2005. *Information Report on the Status of the Monk Seal in the Mediterranean*. Ed. UNEP/MAP-RAC/SPA.

Convention on Biological Diversity. 2014. *Report of The Mediterranean Regional Workshop To Facilitate The Description Of Ecologically Or Biologically Significant Marine Areas. Mediterranean Regional Workshop To Facilitate The Description Of Ecologically Or Biologically Significant Marine Areas*. Málaga, 7 to 11 April 2014.

Karamanlidis, A.A., Dendrinis, P., Fernández de Larrinoa, P., Gücü, A.C., Johnson, W.M., Kiraç, C.O., Pires, R. 2015. *The Mediterranean monk seal Monachus monachus: status, biology, threats, and conservation priorities*. *Mammal Review* 46(2):92-105. DOI: 10.1111/mam.12053

Kotzageorgis, G., Mantzavelas, A., Hadjicharalambous, E., Defingou, M., Gioutlakis, M., Papagrigroriou, S., Alexandridou, E. (Editor) 2015, "Deliverable C7: New Natura 2000 areas or Natura 2000 sites proposal with digital or printed maps,

filled in Standard Data Forms and new updated Natura 2000 database (Access 2003) with data from the new proposed areas". YPEN, Athens, Joint venture of Enveco S.A., Omikron S.A., Karolidis T., Fyselias S., Consultant EKVY, pages 124

Legakis, A., Maragou, P. (Editors). 2009. *The Red Data Book of endangered animals of Greece*. Athens, Greece: Ministry of the environment and Hellenic Zoological Society.

Notarbartolo di Sciara, G., Bearzi, G. 2010. *National Strategy and Action Plan for the conservation of cetaceans in Greece, 2010-2015. Initiative for the Conservation of Cetaceans in Greece*, Athens. 55 pp.

Notarbartolo di Sciara G., Kotomatas S. 2016. *Are Mediterranean monk seals, *Monachus monachus*, being left to save themselves from extinction? In: G. Notarbartolo di Sciara, M. Podestà, B.E. Curry (Editors), Mediterranean marine mammal ecology and conservation. Advances in Marine Biology 75:359-386. <http://dx.doi.org/10.1016/bs.amb.2016.08.004>*

Notarbartolo di Sciara, G., Adamantopoulou, S., Androukaki, E., Dendrinis, P., Karamanlidis, A.A., Paravas, V. Kotomatas, S. 2009. *National strategy and action plan for the conservation*

of the Mediterranean monk seal in Greece, 2009 - 2015. MOM, Athens: 1- 19.

Dendrinis, P., Karamanlidis, A.A., Androukaki, E. and McConnell, B.J. 2007. *Diving development and behaviour of a rehabilitated Mediterranean monk seal (*Monachus monachus*)*. *Marine Mammal Science* 23: 387-397.

Frantzis, A. 2009. *Cetaceans in Greece: present status of knowledge. Initiative for the Conservation of Cetaceans in Greece*, Athens, Greece. 94 p.

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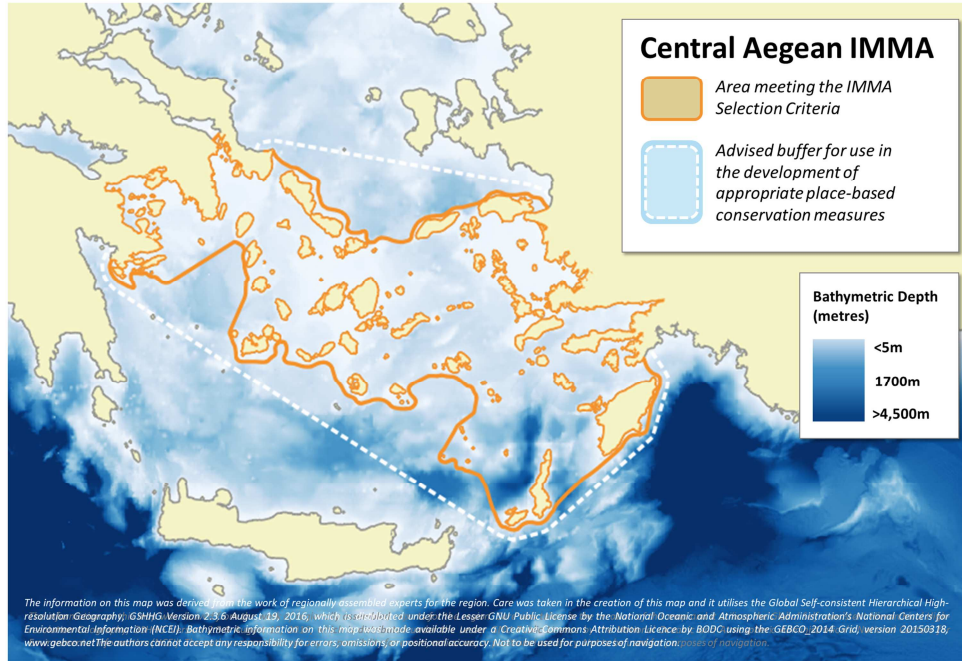


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Annex I

Supplementary Maps



Annex II

List of Primary and Secondary Species

Primary Species – Meet the IMMA Selection Criteria

Scientific Name	Common Name of Species	Population / Subpopulation Name	IUCN Red List Status
<i>Monachus monachus</i>	Mediterranean monk seal	Aegean subpopulation	Endangered

Secondary Species – Do not individually meet the IMMA Selection Criteria but are present within the area

Scientific Name	Common Name of Species	Population / Subpopulation Name	IUCN Red List Status
<i>Delphinus delphis</i>	Common dolphin	Mediterranean Subpopulation	Endangered
<i>Tursiops truncatus</i>	Common bottlenose dolphin	Mediterranean Subpopulation	Vulnerable
<i>Stenella coeruleoalba</i>	Striped dolphin	Mediterranean Subpopulation	Vulnerable