



Summary REPORT: Inventorying, mapping and evaluation of Mediterranean Monk Seal ecological requirements and habitats



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Summary

The aim of the present technical report is to provide an overview of the status of the Mediterranean monk seal at the island of Andros and the wider study area included in the project LIFE16NAT/GR/000606 and more specifically in the Action: “Assessment of Mediterranean monk seal requirements and habitats, marine plastic debris, derelict fishing gear and interactions with fisheries”.

The project area included apart from the island of Andros (main study area), the islands of Gyaros and Tinos and the islet of Mandili.

Apart from performing visits to the marine caves (seal shelters) and installing automatic monitoring systems, the researchers of MOm collected and evaluated reports of seal sightings conducted by other observers (such as local citizens, tourists, divers, professional and amateur fishermen). Location, date and time of the observation, behavior of the animal, as well as visible characteristics (i.e., size, developmental stage, coloration, external pelage marks or scars, overall status of the animal) were recorded.

Field research at the wider study area of Andros recorded the existence of 11 caves suitable for the pupping/resting of the Mediterranean monk seal. Six of the caves are located at the island of Andros, four at the island of Tinos and one at the islet Mandili, Evia. The two most important reproductive caves of the island of Gyaros are also included in the current study. Considering the findings of Dendrinou *et al.* (2007) the six caves at Andros are considered to be suitable only for resting. These six marine caves are located at the southern and north-eastern part of the island. Marine debris and pollution were recorded in eight monk seal caves.

In regard to the reproductive parameters recorded for the Mediterranean monk seal at the wider study area of Andros, it should be noted that, the eleven (11) pups that were recorded in total in 2018 represent only the minimum number of pups born in the area. We speculate that intensive monitoring of the entire study area, including an important pupping cave at the island of Gyaros would have likely identified several more pups. With an annual pupping rate of more than 10 pups the importance of the wider study area at Andros is evident, when compared to other important

monk seal populations in Greece, such as the seal population at Kimolos - Polyaigos (7.9 pups/year) or the island complex of Karpathos – Saria – Astakidonisia (3.8 pups/year).

in regard to the size of the local monk seal population in the wider study area of Andros it is, considering the amount of data that has been collected so far, premature to try to make concrete population estimates. From the behavioral data collected so far, we speculate that the animals in the wider study area of Andros belong to the same population unit as the population at the island of Gyaros. This latter population unit has been identified as one of the most important monk seal population units in the country and estimated to consist of approximately 70 individuals with an annual pupping rate of 10.3 pups (MOM, 2018).

All evidence collected during sub-Action A.2 of the project LIFE16 NAT/GR/000606, but also information from the long-standing research efforts of MOM, indicate the potential of the monk seal population at the island of Andros of being part of a larger social and management unit that includes animals from the nearby-lying islands of Tinos and Gyaros. This assumption is based primarily on our knowledge of the movement potential of the Mediterranean monk seal in Greece (Adamantopoulou et al., 2011), and particularly that of reproductive female Mediterranean monk seals, that have been found to travel between islands in the area (MOM, unpublished data). It is also based on our knowledge of the social structure and behavior of the Mediterranean monk seal population at the island of Gyaros (Dendrinou et al., 2008; Karamanlidis et al., 2013), as well as habitat use preferences of the species (Dendrinou et al., 2007a). Monk seals at the island of Gyaros have a well-defined social structure, which dictates the use of a wide range of suitable caves in the area. This assumption is supported indirectly by information from the Rescue and Information Network of MOM, which indicates the regular presence of animals in all three islands. Considering the short distances between the three islands, it is very likely that these animals will interact. Effective research and management actions for the species in the area should take this fact into account.

Based on the aforementioned we believe that monk seals at Andros should not be considered a separate population or management unit, but should be considered an integral part of a wider north Cyclades monk seal population; obviously, this applies also to the monk seals of the

neighboring islands of Gyaros and Tinos. The size and range of this “northern Cyclades” (or in fact, if it is indeed only a “northern” subpopulation) are not yet known.

Considering the results of project LIFE16 NAT/GR/000606 so far and all the data available from previous research efforts in the area (i.e., mainly for the island of Gyaros, where intensive monitoring efforts have taken place over the past decade, but also including information from the Rescue and Information Network of MOM) we believe that more information is necessary in order to draw safe conclusions regarding the conservation status of the species in the area. This information will be collected within the framework of this project, but also through the general research efforts carried out by MOM for the study and conservation of the Mediterranean monk seal in Greece and will be used in order to prepare an updated version of the status of the Mediterranean monk seal in the wider study area of the island of Andros.



Photo. A mother and her pup resting on the beach inside cave TIN4

LIFE16 NAT/GR/000606: Conservation of priority species and habitats of Andros Island protected area integrating socioeconomic considerations

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ΕΛΛΗΝΙΚΟΣ ΓΕΩΡΓΙΚΟΣ ΟΡΓΑΝΙΣΜΟΣ - ΔΗΜΗΤΡΑ



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ΚΑΪΡΕΙΟΣ ΒΙΒΛΙΟΘΗΚΗ



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