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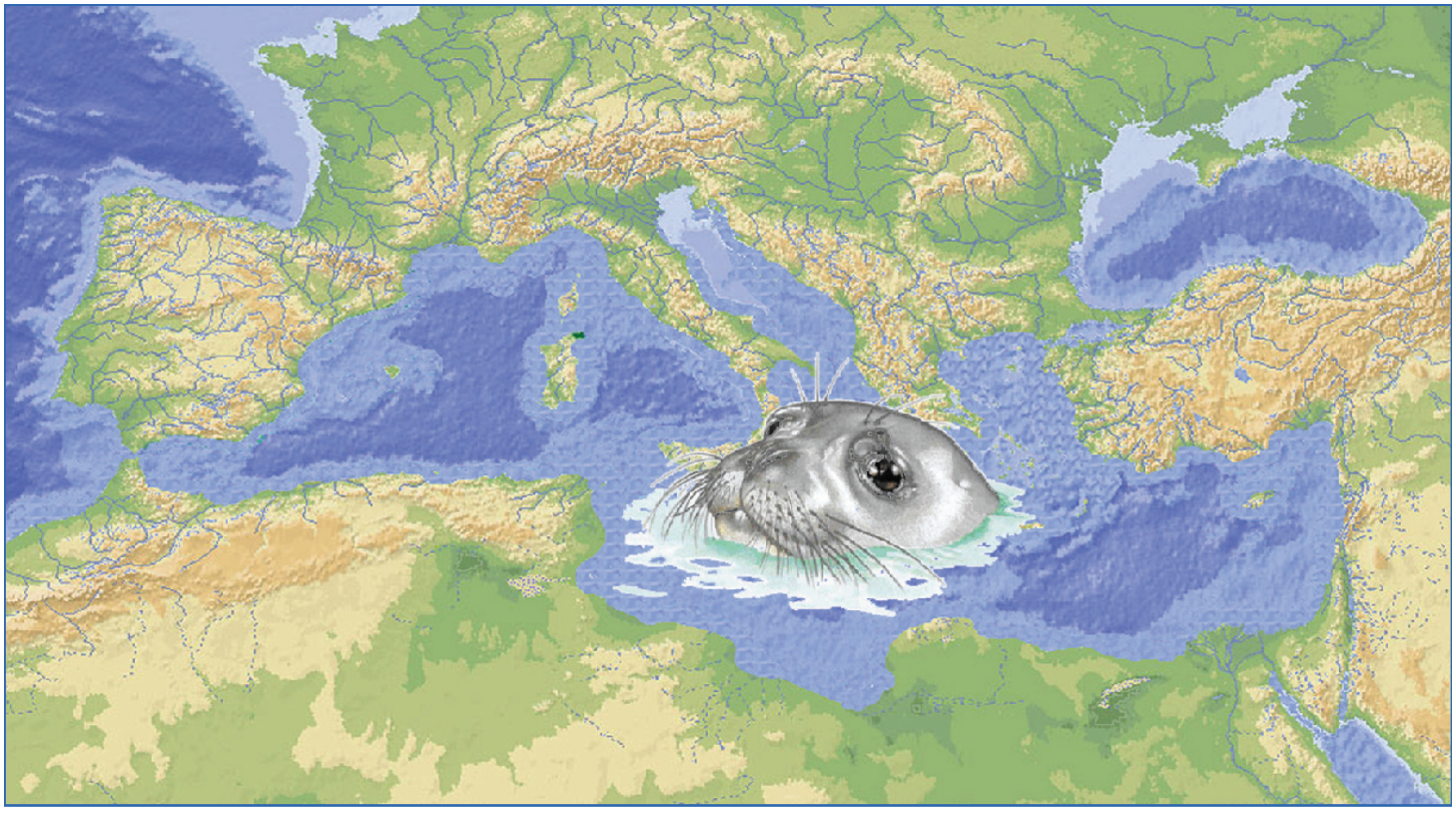
## The Monk seal in the Mediterranean Sea : General situation



# The Monk seal *Monachus monachus* in the Mediterranean

## General situation

The Mediterranean monk seal is one of the mammal species most threatened with extinction. It has been classified as Critically Endangered by IUCN and legally protected in virtually all countries within its range of distribution. However, important gaps exist in law enforcement. Deliberate killing and disturbance to seals still constitute a major threats to the species at several locations.

Not reliable estimations exist for the Mediterranean seal population when it was still a common species in the Mediterranean coasts, but its former presence and reproduction all around the region is well documented. The remaining number of individuals, in the new century, is under 350 in the whole Mediterranean. Most remaining individuals inhabit Greece and Turkey while the pinniped is almost vanished from the west basin

The main reason for local vanishing is scientifically established: human-related mortality, either by direct killing (mainly with shotguns or dynamite, carried onboard) or by entanglement in static nets (trammel and gill nets).

Legal protection is granted since long ago in the riparian countries where the species remains, but the reduction of killings favoured by full legal protection is not enough to halt the extinction, because there is an extremely poor enforcement. Such passive attitude in the Mediterranean contrasts with measures taken by nations in other world regions to preclude vanishing of big mammals (rhinoceros, pandas, tigers, etc), even in very poor countries.

Habitat loss or degradation constitute another major threat to seals. The establishment of protected areas, aimed at protecting important seal habitats, is recommended by the MAP action plan, but the number of protected sites encompassing seal habitats is still extremely limited in the Mediterranean, and existing ones are not always conveniently managed. The adequate protection and management of important seal habitats is recognized as a priority by the experts.

Even although national laws and international conventions protect the species from perturbation to its critical habitat (resting caves, feeding reefs), tourist activities develop close to, and even within, those habitats. Curiously, Mediterranean countries use to efficiently prevent equivalent activities on land, such as disturbance to endangered bird nesting sites.

Visits to seal caves and their surroundings are widespread in the region and scheduled tourist boat trips including their entrance in caves (also very polluting and extremely dangerous with regard to maritime traffic safety) are being allowed. Tourist surveys show that tourist themselves are not demanding such damaging activities from the operators. Proper regulations would not affect tourism.

Destruction of monk seals critical habitat still continues, even in areas already well identified. Such destruction frequently affects other sensitive coastal habitats and species covered by the SPA/BD Protocol.

Terrestrial habitat is also degraded by marine pollutants and debris (oil, floating garbage) provoking the unsuitability of resting and whelping sites.

In spite of the highly threatened status of the species, there is relatively few basic knowledge on population size and parameters, habitat use and movement. This lack of know-how constitutes a hindrance to the identification of adequate conservation measures.

Nevertheless, sound management actions for the recovery of the species can be already undertaken based on the present knowledge. Most of the species' breeding caves existing in the areas where the biggest populations remain are identified. It has been also verified that monk seal interactions with static nets conspicuously decrease when distance between seal caves and net settings increases.

Ad hoc protection of the surroundings of inhabited caves is necessary not only to implement protection of the critical habitats (while respecting conventions and national laws), but to avoid conflicts between coastal fisheries and the species. Local communities, notably local fishermen, have been for too long forgotten basic stakeholders at the time of designing local conservation frameworks. Only properly tailored projects involving in the management the different coastal communities, and linked to a synchronic enforcement of the law, have chances to succeed in the long-term.

## The Barcelona Convention and the Mediterranean monk seal

### Efforts by RAC/SPA within the countries along the last biennia

In spite of being a critically endangered species, strongly depending on the conservation of critical habitat, previous efforts for this seal, (notably support from the European Union) have concentrated on the few biggest existing populations, while the remaining countries possibly hosting colonies and habitat of unknown status needed to cover that basic knowledge

Support to actions to identify seal critical habitats and populations in those countries, involving national official institutions (ministries, universities, etc) and the formation of local research and conservation teams, is still under way. RAC/SPA field missions were undertaken in Albania, Croatia, Syria, Tunisia, Algeria and Morocco, and are ongoing in Libya and Cyprus. However, available funds for the species are too scarce.

As stated above, enough technical knowledge to protect the species exists, but national commitments to protect already identified critical habitat, even for the most important populations of the region, are not enough.

Further research, alone, will not much help at this moment to protect the species in the Mediterranean. A political take of position to improve the chances for the most endangered seal in the world has been seen as a real need at this stage.

## Efforts by RAC/SPA within the Barcelona Convention along the last biennia

In September 1985, the Contracting Parties to the Barcelona Convention included the protection of the Mediterranean monk seal among their priority objectives for the second decade of the Mediterranean Action Plan (Genoa Declaration, 1985). To assist the Mediterranean countries in achieving this objective, the Regional Activity Centre for Specially Protected Areas, in collaboration with Mediterranean experts and concerned organizations, prepared an Action Plan for the Management of the Mediterranean Monk Seal. The main aims of the Plan were to reduce the adverse pressures and ensure the gradual recovery of the species through the implementation of a number of immediate and long-term actions.

In order to know the efficiency of the Action Plan implementation, it was necessary to know the situation of the monk seal populations after its implementation started: an increase in the number of effectives would indicate a successful action plan, while a decrease would show the need to react on the matter, according to the findings. For that reason, several documents were prepared by RAC/SPA at different times. Notably, the document "Current status of Mediterranean monk seal (*Monachus monachus*) populations" (UNEP(OCA)MED WG.146/4) prepared in 1998 to asses the status of the remaining monk seal populations, constituted a thorough review both regarding previous work and concerning the actual situation confronted by the species. It provided an update of the document "Present status and trend of the Mediterranean monk seal (*Monachus monachus*) populations" edited by RAC/SPA in 1995. That 1995 document was produced after the meeting of experts held in Rabat on 7-9 October 1994 and was based on the data presented at that meeting as well as on previous publications and reports, in particular the RAC/SPA documents "Present status and trend of the Mediterranean monk seal (*Monachus monachus*) Populations" (UNEP(OCA)/MED WG.87/3), 1994; "The Mediterranean Monk Seal", published by RAC/SPA also in 1995; and "The Biology, status and conservation of the monk seal (*Monachus monachus*)" published by the Council of Europe in 1989 (Nature and Environment Series No. 41).

All the above background documentation, the majority of it prepared within the framework of MAP, drove to affirm within document UNEP(OCA)MED WG.146/4 about the last sizeable remaining Mediterranean populations that: "deliberate killing is probably the main threat to monk seals on the Aegean and Mediterranean coasts of Turkey" and regarding the Greek populations that "the decline in numbers is mainly attributed to deliberate persecution and killing".

No doubt, the origin of the problem –and linked responsibility to solve it- is not at all country-related. The same cause acting before has faded the species from the Mediterranean countries where it was historically not so abundant and consequently vanished earlier (see Table 1). That was aided by habitat alteration, including even

seal cave visits by tourist trips as mentioned above, which has been a parallel problem accompanying the species towards vanishing. Monk seal critical habitat deterioration is expected to accelerate in the near future if real respectful measures to preserve at least critical habitats (already mandated through several legal frameworks) are not promptly performed.

The implementation assessment of the Action Plan, prepared in 1998 (UNEP(OCA)/MED WG.146/5) for the same meeting than the above mentioned document WG.146/4, showed that legal measures protecting monk seals should be strictly enforced given that deliberate killing keeps being the main mortality cause.

A further meeting of experts, held in Lathakia on 29-30 September 2002, aimed to define actions to contrast the seal populations decline, prepared a document presented to the Sixth NFP Meeting for SPA, held in Marseilles on 17-20 June 2003 (UNEP(DEC)/MED WG.232/Inf.6). It comprised proposals of activities on behalf of the species regarding capacity building, awareness, conservation, and improvement of knowledge.

The document depicted four groups of threats for the species: 1) negative interactions with fishing activities; 2) degradation and loss of habitat; 3) disturbance; 4) pollution. Conspicuously, 17 out of 21 threats depicted within those four groups are provoked by the lack of a proper implementation of regulations regarding the protection of the individuals, both from direct elimination and from degradation of their specific trenches of coastal habitats. The activities proposed within the document were accompanied by a cost estimation for their implementation, which would need sound financial support from the Parties or other sources in addition to the biennial allocation to RAC/SPA for the Action Plan. Nonetheless, this document is presently a basis for the implementation of actions (although necessarily modest ones) on behalf of the species by RAC/SPA, upon request of the 13th Contracting Parties Meeting celebrated at Catania in 11-14 November 2003.

Following an additional recommendation by the Contracting Parties at that gathering, RAC/SPA prepared a further document on the status of the species in the Mediterranean. In order to complement the information already available to the Parties from several previous RAC/SPA works, a population viability analysis was undertaken to ascertain the real status of the species. This analysis allows to predict the most feasible scenarios for a species under risk in relation to different pressures, in order to aid clarifying the weight of each threat on its chance for survival after concrete periods of time. Such method allows managers to elucidate main priorities when the menaces are acting synchronously.

The monk seal population viability analysis was presented to the 7th NFP meeting for SPA at Seville (31 May -3 June 2005) in the document ”Evaluation Report on the Status of the Monk Seal in the Mediterranean” (UNEP(DEC)/MED WG.268/Inf.3). The report was focused on the last sizeable Mediterranean populations, those of the Aegean and Ionian Seas, which are the populations with the highest chances to survive.

The analysis showed that the present monk seal status keeps the species at the risk of vanishing from the Mediterranean in a few decades, since even the biggest

remaining population, that of the Aegean Sea, is endangered. Synthetic conclusions of that information document were:

- Regarding the main immediate threats to survival, intentional killing is the main drive to extinction, while entanglement in nets alone would not suffice to provoke it. Whatever management measures are appointed to wildlife managers to follow, positive results are not expected as far as illegal killing is not strongly reduced through an specific strategy to improve related laws enforcement and prosecution of such actions.

- Measures to increase natural survival of wild pups would be useful in situations without intentional killing, but not ecologically practical to preclude extinction, if intentional killings is not also sufficiently investigated and restrained by appropriate authorities.

- Management measures related to fisheries using static nets should be attempted since the remaining population still may recover if kills stop. Actions on that direction might be initiated in collaboration with bodies playing a role on fisheries and conservation, such as the GFCM of FAO, and in cooperation with other Conventions concerned with this species survival, such as Bern and Bonn Conventions.

Following the presentation of document UNEP(DEC)/MED WG.268/Inf.3 at the 7th NFP meeting, a working group composed by SPA Focal Points met during that gathering to discuss the situation of the monk seal and the most urgent key measures, at Parties level, necessary to halt the decline of the species.

All the above mentioned documents were made available by RAC/SPA to the group, in order to facilitate any necessary consultation and autonomous take of position. Based on that documentation, the NFP working group agreed that the Mediterranean countries should officially commit themselves to implement immediate actions. The group prepared the “draft declaration on the monk seal risk of extinction in the Mediterranean” (UNEP(DEC)/MED WG.270/17), and proposed its presentation to the Contracting Parties for adoption.

The effort succeeded: The Parties to the Barcelona Convention met and adopted on 11 November 2005 the Portoroz Declaration (UNEP(DEPI)/MED IG.16/13). That declaration included a specific decision on the Monk seal, in order to urgently take all the necessary measures to implement the action plan and preclude the species extinction through: cooperation, including voluntary contributions; elaboration and application of legislative measures; halting deliberate killing and habitat degradation involving fishermen and other stakeholders; and promote the exchange of information on experience regarding conservation attempts.

The Conference on Monk Seal Conservation (Kemer, Antalya 17-19 September 2006) was convened within the framework of the implementation of recommendations contained in the Portoroz Declaration to boost coordinated cooperation actions and information exchange.

Table 1: Records on Mediterranean monk seal populations remaining along the species´ range to be updated in the Conference on Monk Seal Conservation (Kemer, Antalya, 17-19 September 2006)

| Population | minimum N° of seals reported | Last scientific record | Last reproduction data | Source or endorsing authority |
|---|---|---|---|---|
| West Sahara coast | +109 | 2005 | 2005 | Aguilar pers. com. Gonzalez pers. com. Forcada et al 1999 |
| Canaries | Vanished | 1992 | 1441 | Monod 1948; I.R.S.N.B. & S.M.R.U. 1993 |
| Madeira & Desertas | 23 | 2005 | 2005 | Costa-Neves pers. Com. R. Pires pers. Com. |
| Mediterranean Morocco | Vanished? | 2004 | 1981 | RAC/SPA 2004; Mo et al 2004 |
| Chafarinas islands | Vanished? | 2001 | 2000 | González 1989; Cebrian pers. com. |
| Algeria | 10 | 2006 | 2006 | Lefevre et al. 1989, Boutiba 1993, 2006 |
| La Galite | Vanished | 1986 | 1983 | Gonzalez 1989 |
| Mainland Tunisia | Vanished | 1986 | 1975 | Gonzalez 1989; Ktari-Chakroun 1978 |
| Libya | +2 | 2002 | 1968 | Norris 1972, Boutiba 1993, Mo et al 2002 |
| Egypt | Vanished | 1981 | No records | Norris 1972; Marchessaux 1989 |
| Israel | Vanished | 1968 | around 1928 | Bertram 1943; Marchessaux 1989 |
| Lebanon | Vagrants | 1997 | No records | Marchessaux 1989, RAC/SPA 2003 |
| Syria | Vagrants | 2003 | No records | RAC/SPA 2003 |
| Cyprus | + 2 | 2003 | 1994? | Hadjichristophorou & Dimitropoulos 1994; Ozturk 1994. Cebrian pers. com. |
| Turkey | 100 (overlap with Greece) | 2003 | 2001 | Gucu et al 2004; Guclusoy et al 2004 |
| Russia | ? | No records | No records | Cebrian 1998 |
| Ukraine | Vanished | No records | No records | Ozturk 1994 |
| Romania | Vanished | 1960 | No records | Schnapp et al. 1962; Ozturk 1994 |
| Bulgaria | Vanished | 1975 | 1950-60 | Schnapp et al. 1962; Avellá 1987; Ozturk 1994 |
| Greece | 250 (overlap with Turkey) | 2006 | 2006 | Cebrian 1998; Cebrian and González, pers. com. |
| Albania | Vanished? | 80's | 1944 | Lamani pers. com. ; Vaso pers. com. |
| Serbia & Montenegro | Vanished | No records | No records | Cebrian 1995 |
| Bosnia | Vanished | No records | No records | Cebrian 1995 |
| Croatia | Vanished | 1993 | | Cebrian 1995 |
| Slovenia | Vanished | No records | No records | Cebrian 1995 |
| Mainland Italy | Vagrants | 2003 | 1976 | Di Turo 1984; Marini 1994; RAC/SPA 2003 |
| Sicily - Pantelleria | Vagrants | 1998 | No records | González 1989; Marini 1994; RAC/SPA 2003 |
| Sardinia | Vagrants | 2001 | 1986 | Marchessaux 1989; Marini 1994; Mo pers. com. |
| Malta | Vanished | 1997 | No records | Marchessaux 1989; Mo pers. com. |
| Mainland France | Vanished | 1990 | 1930-35 | Duguy & Cheylan 1978; Maigret 1990 |
| Corse | Vanished | 1982 | 1947 | Troitzky 1953; Marchessaux 1989 |
| Mainland Spain | Vanished | 1984 | 1950 | Avellá 1987; Marchessaux 1989 |
| Balearics | Vanished | 1977 | 1951 | Avellá 1987 |
| Mainland Portugal | Vanished | 1817 | 1797 | Avellá 1987 |