

## **Mediterranean Monk Seal in the Levant Sea – Responses to mitigation measures applied –**

**Gucu, A.C., (1) Ok, M., (2) Sakinan, S. (3) and Rappé, K. (4)**

(1,2,3) Middle East Technial University Institute of Marine Sciences P.O.Box 28 Erdemli 33731 Mersin, Turkey  
(4) Krommedijk 66; 8300 Knokke-Heist; Belgium

Levant Sea has been proven important for the survival of critically endangered Mediterranean monk seal. With the 11 pups joined into the colony between 1994 and 2000, the number of seals inhabiting the area had been estimated as 25 individuals. Although reproductive capability had been uninterruptedly maintained, the annual reproductive rate was very low when the demographic structure of the colony is taken into account. Lack of food and destructions/disturbance on the breeding habitats were listed as the key threats. In order to protect the species, the area has been banned to large scale fishery in 1999. The breeding habitats were also set aside against human disturbance.

This study evaluates the consequences of the mitigation measures launched on the colony's reproductive capacity and expansive behaviour. Recovery in the fish stocks has been monitored through control catches. Considering the similarity between landing composition of the artisanal fishery and the diet of the monk seal, daily catch statistics of fishermen were used as an indicator to the food availability to the seals. Finally, habitat partitioning and whelping success have been monitored through field surveys carried out on the habitat of the seals during their breeding season. The results indicated a slow but consistent recovery in the fish stocks as a response to protection. The CPUE, has increased from 8 kg/hour to 24 kg/hour. The landings in the local fishermen and hence food availability to the seals showed an increasing trend very similar to CPUE. The evaluation of seal survey results reveals that the anual birth rate in the colony on the west coast of Mersin is increasing, and the colony is also following an expanding trend. Caves which have not been used in the last 10 years are now frequented by the seals, which may indicate that the measures are effective.