

Interaction between Monk seals *Monachus monachus* (Hermann, 1779) and marine fish farms in the Turkish Aegean and the management of the problem

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ABSTRACT

Mediterranean monk seals *Monachus monachus* attacked fish on 11 marine fish farms in the Turkish Aegean between 1992 and 2000. There were 40 attacks on fish farms where Gilthead sea bream *Sparus auratus* and European sea bass *Dicentrarchus labrax* were raised in holding cages. Single seals usually attacked cages at night, regardless of the size of fish in the cages. The seals damaged both holding nets of the cages and fish, and most of the time fish escaped as a result of the attacks. With exception of only one facility, all fish farms attacked by monk seals were concentrated on the large peninsulas including Karaburun and Bodrum Peninsulas, and the number of seal attacks were higher during winter months. A direct intervention to deter seals such as the use of lights, feeding with pesticide injected fish, noise generation, and warning and direct shots with rifles, and physical exclusion of seals from holding cages by installing anti-predator nets were applied to prevent or to reduce seal attacks. Our study shows that deterrents such as lights and warning shots were not effective in preventing monk seal attacks. However, both curtain and bag type anti-predator nets were found effective.

Reference: Güçlüsoy, H. & Savas, Y. 2003. Interaction between Monk seals *Monachus monachus* (Hermann, 1779) and marine fish farms in the Turkish Aegean and the management of the problem. *Aquaculture Research* 34:777-783.