



BIODIVERSITY IMPACT OF THE MOROCCAN DRIFTNET FLEET IN THE ALBORAN SEA (SW MEDITERRANEAN)

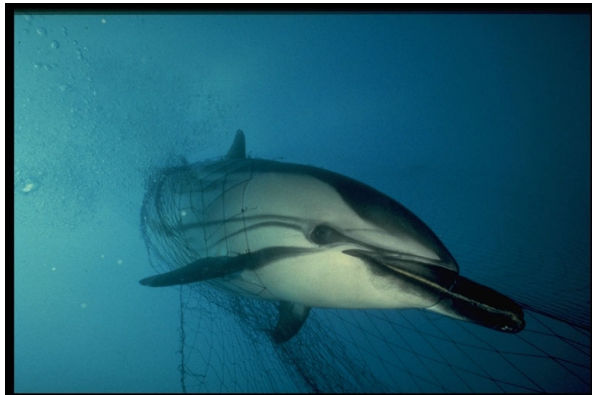
A CASE STUDY OF THE HARMFUL EFFECTS INFLICTED BY CURRENT IUU LARGE-SCALE DRIFTNET FLEETS IN THE MEDITERRANEAN ON PROTECTED AND VULNERABLE SPECIES

Background

Driftnets are defined by FAO as a fishing gear "consisting of a string of gillnets kept more or less vertical by floats on the upper line and weights on the lower line, drifting with the current, in general near the surface or in mid-water". Worldwide, the use of modern light fibers allows to medium-scale and even small-scale boats deploying driftnets of many kilometers long, which in most cases have devastating effects on marine biodiversity through the capture of unwanted vulnerable and protected species in high numbers.

The few studies available on the effect of driftnet fleets targeting swordfish in the Mediterranean, carried out in the early 1990's, pointed to the annual killing of thousands of protected cetacean species (dolphins and whales), particularly in the Central Mediterranean¹.

Owing to this intrinsically low selectivity of the gear, Resolutions 44/225 and 46/215 adopted in 1989 and 1991 by the General Assembly of the United Nations imposed a moratorium on large-scale driftnetting by 30 June 1992. Consequently, in 1997 the General Fisheries Commission for the Mediterranean (GFCM), through the binding Resolution 97/1, banned large-scale driftnets in the Mediterranean (that is, driftnets measuring more than 2.5 km in length). The European Commission, in turn, totally banned the use of all driftnets – irrespective of the size- in the Mediterranean by its member states from 1 January 2002.



¹ Di Natale, A. (1995) Driftnet impact on protected species: observers data from the Italian fleet and proposal for a model to assess the number of cetaceans in the by-catch. ICCAT Collective Volume of Scientific Papers 44: 255-263; Silvani, L., Gazo, M. and Aguilar, A. (1999) Spanish driftnet fishing and incidental catches in the western Mediterranean. Biological Conservation 90: 79-85.

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The full report on this research containing more detailed information can be downloaded from:

www.panda.org/mediterranean

Currently, fully operational large-scale driftnet fleets in the Mediterranean can be found in -at least- Morocco, Italy, Turkey and France. These fishing activities are in contravention of binding regional legislation and should be labelled as IUU ("illegal, unreported and unregulated fishing"), according to FAO definition.

In this context, in 2002 WWF launched -together with the local NGO AZIR- an ambitious field study to ascertain the effects inflicted by the Moroccan driftnet fleet operating in the Alboran Sea and neighbouring Atlantic waters on marine biodiversity. This fleet -targeting swordfish- is reported to carry out *large-scale* driftnet activities by the International Convention for the Conservation of Atlantic Tuna² (ICCAT) and, being the larger current driftnet fleet in the whole of the Mediterranean basin, it was presumed to have a dramatic impact on protected and vulnerable species.

Results of the scientific study coordinated by WWF

Surveys made in the ports of Al Hoceima and Nador, on the Alboran Sea Southern coast, and Tangiers, in the Gibraltar Straits area, to ascertain the magnitude of the fishing effort deployed and the main features defining the driftnet fishing pattern in the area showed a total active driftnet fleet conservatively estimated at 177 units, less than half the size reported by official sources. Estimated average net length ranges from 6.5-7.1 km, depending on the port, though actual figures are suspected to be much higher (perhaps 12-14 km) according to field evidences. Most boats of this fleet are able to use driftnets all year round (about 10-15 fishing operations per month), what results in very high annual fishing effort levels that translate into high by-catch figures of unwanted species.



A total 369 fishing operations (worth 4140 km of driftnets set) by a subset of 4-5 boats from the driftnet fleet targeting swordfish based in Al Hoceima (Mediterranean coast of Morocco) were monitored between December 2002 and September 2003, focusing on the captures of the target species and the major by-catch groups.

It arose from our monitoring work that dolphins (both species: short-beaked common dolphin, *Delphinus delphis*, and striped dolphin, *Stenella coeruleoalba*), together with pelagic sharks (blue shark, *Prionace glauca*, shortfin mako, *Isurus oxyrinchus*, and thresher shark, *Alopias vulpinus*) are the most impacted groups. Loggerhead turtle (*Caretta caretta*) was caught moderately from December to April, being much less frequent in the captures during summer.

As much as 237 dolphins (approx. 50% of *D. delphis* and *S. coeruleoalba*), 498 blue sharks, 542 shortfin makos and 464 thresher sharks were killed by the boats monitored during the sampling period -that encompassed the peak of the swordfish fishery- along with 2990 swordfish.

² document SCRS/2003/015

By-catch estimates for a 12-month period by the whole Moroccan driftnet fleet, using standard statistical procedures, yielded a figure of approx. 1500-2000 striped dolphins and 1500-2000 short-beaked common dolphins in the Alboran Sea alone; according to our estimates a further 13000 individuals (50% corresponding to each species) would be killed annually by the fleet based in Tangiers around the Straits of Gibraltar and neighboring areas, mostly outside the Mediterranean Basin. As for sharks, about 23000 individuals are captured annually by the fleet from Al Hoceima and Nador and a further 77500 would be caught by the fleet of Tangiers, distributed in roughly equal proportions for *P. glauca*, *I. oxyrinchus* and *A. vulpinus*.



These results point to an unsustainable impact, especially for dolphins, which could be suffering from annual take rates higher than 10% of their respective population sizes in the Alboran Sea. This is specially worrying in the case of *D. delphis*, that has in the Alboran Sea its last remnant healthy population in the whole of the Mediterranean.

Based on the mortality inflicted on sharks and cetaceans the current Moroccan driftnet fleet ranks as the most impacting Mediterranean driftnet fleet ever monitored as far as its impact on biodiversity is concerned.

No future for driftnet fishing in the Mediterranean

From this study it is clear that the current activities of the Moroccan driftnet fleet should be put to an end in the shortest possible time frame. This is so because of the inherent IUU (illegal) nature of this fishery and its incompatibility with international obligations derived from the presence of Morocco in ICCAT and GFCM. The massive mortality on protected species inflicted by these fleets is also in contravention of international obligations under the International Whaling Commission (IWC), Bern Convention and ACCOBAMS, to which Morocco is also a contracting party.

On a broader perspective it must be stressed that this study suggests once more the inherent lack of economic profitability of swordfish fishing using driftnets that comply with international legislation on maximum net length (the 2.5 km limit). Indeed, this study points to average catch rates for swordfish (the target species of the fishery) of only 0.8 individuals per km of net set.

Furthermore, it can be argued that legally allowing the practice of small-scale driftnet activities in the Mediterranean means in fact opening the door to large-scale driftnet fishing, compliance with international legislation being undermined by economic considerations. This, linked to the dramatic and unsustainable impact on biological diversity of this harmful fishing practice confirmed by this study, leads to conclude that the only valid way to prevent the massive damage to protected and vulnerable species inflicted by current driftnet fleets in the Mediterranean Sea is ***the complete banning of all driftnet fisheries in the Region***, independently of the length of the gear, followed by its effective enforcement.