

## Viability of exploiting virgin trawlable fishing areas

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### Abstract

The main reason for the alarming depletion of stocks of prized demersal species, such as king prawns, prawns and other crustaceans, red mullet, hake and the common pandora, amongst others, is the intensive exploitation through trawling of known areas where there is a strong aggregation of these species. This situation is the result of the present marketing system, in which, only highly commercial species are presented for sale whilst less prized, though equally tasteful and satisfying, species are sidelined.

In the meantime, however, stocks of other edible fishes, such as skates and rays, dogfish, horse mackerel and bogue, are often returned to the sea, with negative results regarding their sustainability, which, owing to the inevitable eventual disappearance of the main targeted species, would have to be relied upon in future to supply the market.

It is a known fact that certain areas of the central Mediterranean, which up to some years ago used to yield commercial quantities of some of the above-mentioned species, are no longer being visited, the simple reason being that there are no more fish to be caught.

Unfortunately, owing to economic exigencies of boat owners, there may not be a short-term alternative to this situation, but a long-term alternative could be the exploitation of other trawlable unfished zones in the central Mediterranean. Another alternative would be the curtailment, by legislation, of trawling in particularly sensitive areas, but that may be too drastic. Ideally trawlers should conduct scouting operations to find new areas on their own, as indeed some of them actually do.

However, with regard to the exploitation of new areas, the main difficulty is that the initial yield would lack large quantities of higher-valued species, particularly crustaceans, since these will only be present in commercially viable quantities after the area has been cleared of other species, such as skates and rays, monkfish, dogfish etc., which tend to leave the area when trawling becomes regular; but this would take some time and, as a consequence, it might mean loss of earnings for the boats concerned.

For this reason it is suggested that an exploratory scientific and simulated commercial trawl survey of these virgin zones be undertaken along the lines of the Malta FAO-funded project in 1976–77 in the central Mediterranean, as a result of which, quite a few new trawlable areas were found.

One particular area which was surveyed and exploited by the survey vessel during the above-mentioned period, and later on by other Maltese-registered trawlers, is about 63 miles south of Malta, 72 miles east of Lampedusa Island and about 160 miles off the coast of Libya. The approximate surface area is about 500 square miles. All over this area, the composition of the bottom is sedimentary, with a predominance of yellow mud, which makes for excellent trawlability. Only one obstacle, which was recorded, was encountered, thus rendering

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operations trouble-free. The bottom is also flat, having a very slight gradient, and depths are constant. Trawling was undertaken in the 200–400 m depth interval, and landings, given the pristine state of the area, were substantial for prized species, whilst other less-valued species were quite abundant, as the following table of the general hourly catch shows:

Table 1. Hourly catches in the trawl surveys performed during the FAO–Malta field project in 1976–1977 in the central Mediterranean.

Species	Hourly catch (kg/h)
Commercial species :	
Horse mackerel	41.55
Mackerel	0.12
Red mullet	11.80
Hake	1.86
John Dory	0.52
Angler fish	1.00
Gurnard	2.55
Grouper	0.08
Angel fish	0.15
Dogfish	6.73
Ray/skate	17.41
Shark	0.03
Octopus	3.32
Squid	3.16
Shrimp	2.08
Norway lobster	2.84
Pistin (sparids)	0.09
Mixed comm. fishes	1.45
	<b>Total = 97.64</b>
Non-commercial: fish edible	26.94
Non commercial: fish inedible	13.13
	<b>Total = 40.07</b>

Also, trawling operations were undertaken both during day and night and although in certain areas there was a net decrease in catches at night, in other areas variations in catches were hardly noticeable. In fact, the prospect of being able to undertake trawling 24 h a day makes for lucrative operations in terms of savings in fuel consumption and more remunerative working hours, whilst the fact that 3 to 4-h trawls can normally be undertaken makes other work, such as selection of the catch and storing of fish, less stressful.

Within this zone there are areas that are deeper than 400 m, where trawlability is also excellent and the prospect of king prawns being present is quite real.

Results of such a survey would provide most experts dealing with demersal resources with, amongst other things, an opportunity to enhance their present studies; prospective captains and fishermen could be given training in navigational, trawling, and other relevant techniques

and also afford enough information to be useful when long-/short-term decisions on fishery management have to be taken.

In the meantime an educational/promotional drive through the media, which would highlight the nutritional value of the other “non-marketable” species, might create a market that could become lucrative, perhaps through quantity rather than quality, and in this regard also help the artisanal fishery, particularly for Malta, where species, such as skates, rays and dogfish, are still marketable to a certain degree.