

Establishing the 25-mile Fisheries Conservation Zone around the Maltese Islands

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1. Background and scientific criteria

Malta's negotiations with the European Union prior to its accession as a member state included two years of highly technical discussions related to the establishment of a 25 nautical mile Fisheries Conservation Zone around the Maltese Islands – the first of its kind in the Mediterranean. In fact, five technical documents¹ were produced to back these negotiations and a non-discriminatory management regime was finally agreed upon on the basis of the scientific information presented.

Malta has managed an extended fisheries management zone, beyond its territorial waters, since 1971 and has maintained a strict licensing scheme, keeping large-scale industrial fishing such as trawling at a minimum. From the start of the negotiations, Malta stated that as a member of the EU, its fisheries should be safeguarded and resources within the current 25-mile Exclusive Fishing Zone should continue to be kept at sustainable levels. Concern was expressed about the inevitably large increase in fishing intensity that would occur in the Zone if it were to deregulate the band between 12 and 25 nautical miles which would become Community Waters. Malta had proposed that in line with the “Code of Conduct for Responsible Fisheries” of the Food and Agriculture Organisation of the United Nations, a Precautionary Approach had to be adopted and a tight control on the increase in the fishing effort should continue to be kept especially with regard to demersal trawl fisheries. It was demonstrated that there were criteria for defining the area as a distinct Conservation Zone – there was evidence that adult populations of shallow (less than 200m depth) shelf resources within the zone were isolated from adjacent areas and that the Maltese shelf constitutes the main offshore area where spawning could take place for a significant proportion of the zone's demersal resources and other deep-water species. Moreover it was argued that as a consequence of the oceanographic features in the region, larval contribution from outside the Zone was an unlikely source of major recruitment of juvenile fish to demersal fisheries. In addition, satellite imagery offered clear evidence that Malta was surrounded by water masses which are limited in productivity (oligotrophic), making the ecosystem within the Zone more prone to negative effects caused by high exploitation rates.

The opinion of the General Fisheries Commission for the Mediterranean is that effort control should be the main management tool in the Mediterranean through a limitation on the number of boats, their horsepower and fishing capacity. The EU was informed that Malta had taken such effort control measures on a routine basis and from the best available scientific information, the demersal fisheries resources within the 25-mile zone appeared to be close to

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- MAF (2000) Maintaining the Maltese Fisheries Management Zone
- MAF (2001) Malta's fishery management system for demersal resources
- Camilleri M. (2001) The Medits 2000 trawl survey reviewed
- Fiorentino F., Norrito G., Ragonese S., Camilleri M. and Bianchini M.L. (2002) An attempt to compare the status of the groundfish resources within the Maltese Exclusive Fishing Zone and the surrounding bottoms of the Strait of Sicily
- Camilleri M., Cordina G. and Franquesa R. (2002) An analysis of the impact of purse seining and industrial longlining in Malta's 25-mile Conservation Zone

Maximum Sustainable Yield (MSY) conditions and that they would be placed in a seriously overfished condition, if the fishing effort would be increased even by just adding a few large trawlers.

Amongst the sources of evidence to establish the Conservation Zone, recent scientific trawl survey data were used. Trawl surveys estimate abundance (as biomass and density per km²) of important commercial species in different depth strata. Comparing abundance data obtained for Maltese waters with those of Sicilian waters revealed that, in general, the abundance or catch rate at depths between 50 and 500 meters was double in the former. With this information in hand and considering that in a published document the Sicilian fleet was shown to be operating at bioeconomic equilibrium point (a situation of no net profit), Malta was able to fairly state that its demersal fisheries were operating at Maximum Economic Yield (using the Gordon-Schaefer model - Figure 1) which is close to MSY conditions.

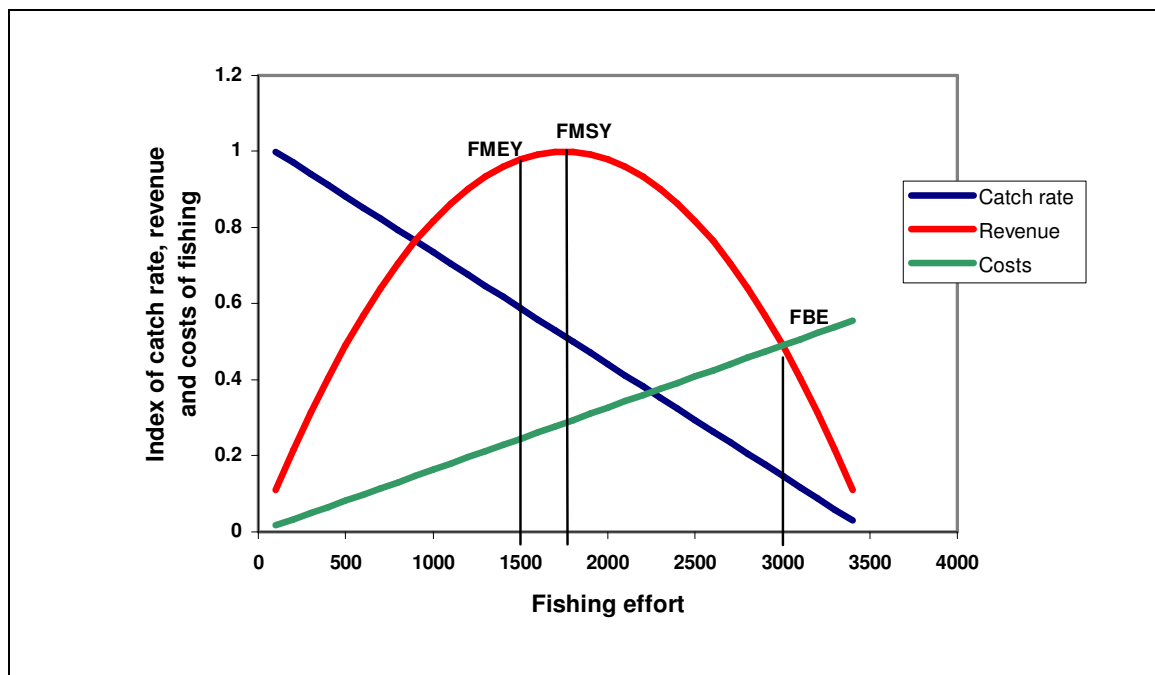


Figure 1. Gordon-Schaefer model of a fishery with MSY normalised to unity (FMEY= fishing effort at Maximum Economic Yield; FMSY = fishing effort at Maximum Sustainable Yield; FBE= fishing effort at Bioeconomic Equilibrium point). Adapted from Seijo et al. 1998².

Malta's backing documents also demonstrated that the current fisheries management regime allows escapement of demersal species into non-exploited or slightly exploited areas creating important refugia for spawners and juvenile fish from which the latter eventually recruit themselves into fishing areas both within and outside the Zone. In this respect, it was therefore stressed that areas where trawling is currently absent should continue to remain free from this type of fishing operation, both to maintain these vital sources of recruitment and also to protect fragile benthic ecosystems which are likely to be present in these particular areas.

² - Seijo, J.C., Defeo, O. and Salas, S. (1998) Fisheries bioeconomics. *FAO Fisheries Technical Paper*, No. 368: 108 p.

Besides, focusing on demersal resources, negotiations dealt with highly migratory fish species such as *lampuki*, tuna and swordfish, which make up more than 70 percent of the value of Maltese total annual landings. In this context, it was stressed that the sustainability of fisheries for these species in ecological, biological, economical and social terms should be safeguarded. Backing documents highlighted the fact that the Maltese population involved in the fishing industry is economically, geographically and culturally dependent on artisanal fisheries, and that the introduction of large-scale industrial practices would completely disrupt artisanal fishing operations. With particular reference to the vulnerable blue-fin tuna Mediterranean stock, Malta proposed that the Principal of Relative Stability should be applied whereby the fishing effort on this stock in recent years would not change both in intensity and spatial distribution. It was also explained that increasing the fishing effort, especially by using large-scale industrial fishing gear, would not only contribute to a reduction in the abundance of tuna stocks but could also affect other species such as mammals and birds.

2. Drawing up the Management Regime

The measures adopted for the management of resources within the Fisheries Conservation Zone essentially limit fishing effort and capacity by restricting size and engine power (Figure 2). In order to maintain current sustainable conditions of demersal resources, trawling fishing effort will not be increased within the Zone and will be shared by non-industrial vessels (under 24 meters in length) which do not use heavy gear and have short fishing trips. In addition, for the purpose of conserving the distinct fish populations of the Maltese shelf, a restriction on engine power has also been included as a measure for trawlers operating in waters shallower than 200m. Moreover, trawling will be limited to specified areas within the Zone so as to conserve existing “refuges” and fragile benthic ecosystems.

With the exception of particular categories of fishing vessels such as those involved in *lampara* (targets pelagic species using light sources) and *lampuki* fisheries, it was agreed that only small-scale fishing vessels (under 12 meters in length) will be authorised to fish within the Zone and that the current fishing effort of this category of vessels will not increase. This size restriction would have a direct effect on the limitation of fishing capacity and fishing effort, since, generally, the size of a fishing vessel is directly proportional to the size and number of elementary units of the fishing gear and the effective fishing time. On the basis of the best scientific information available, all the measures described so far will ensure that the state of demersal resources with the Zone would be kept between MEY and MSY conditions.

The management regime also addresses the *lampuki* fishery since fishing operations start within 25-miles from the coastline (usually starting at 7 miles). It ensures that the traditional management scheme will continue to be applied, with the number of courses along which fishermen would lay Fish Aggregating Devices (*kannizzati*) being limited to a maximum of 130, and that this fishery would be protected from interference by other types of fishing operations. The management regime also commits itself to ensuring the sustainability of fisheries for other highly migratory species such as tuna and swordfish, which also take place both within and outside the Zone.

Efficient monitoring and control of the activities of vessels within the Zone will be supported by an electronic Vessel Monitoring System. Vessels over 24 meters in length along with those vessels over 12 meters in length which are authorised to carry out fishing operations within

the Zone would be obliged to carry the required tracking electronic equipment on board at all times.

3. Is the Management Regime in conformity with Ecosystem Based Fisheries Management?

The Management Regime for this unique Mediterranean Fisheries Conservation Zone is in some ways a response to the international call to adopt an ecosystem approach to fisheries. In fact, the foundation criteria for defining the Zone include aspects of productivity, oceanography and physical characteristics in the region. It also covers the conservation of various levels of the fisheries resources in the food chain together with fragile benthic ecosystems, and protects species such as mammals and birds by restricting the type of gear used in the Zone. Ultimately, the ecological, biological, economical and social environments which, to a certain extent, make up the fisheries ecosystem have been safeguarded and the sustainability of fisheries within the 25-mile Fisheries Conservation Zone has been guaranteed.

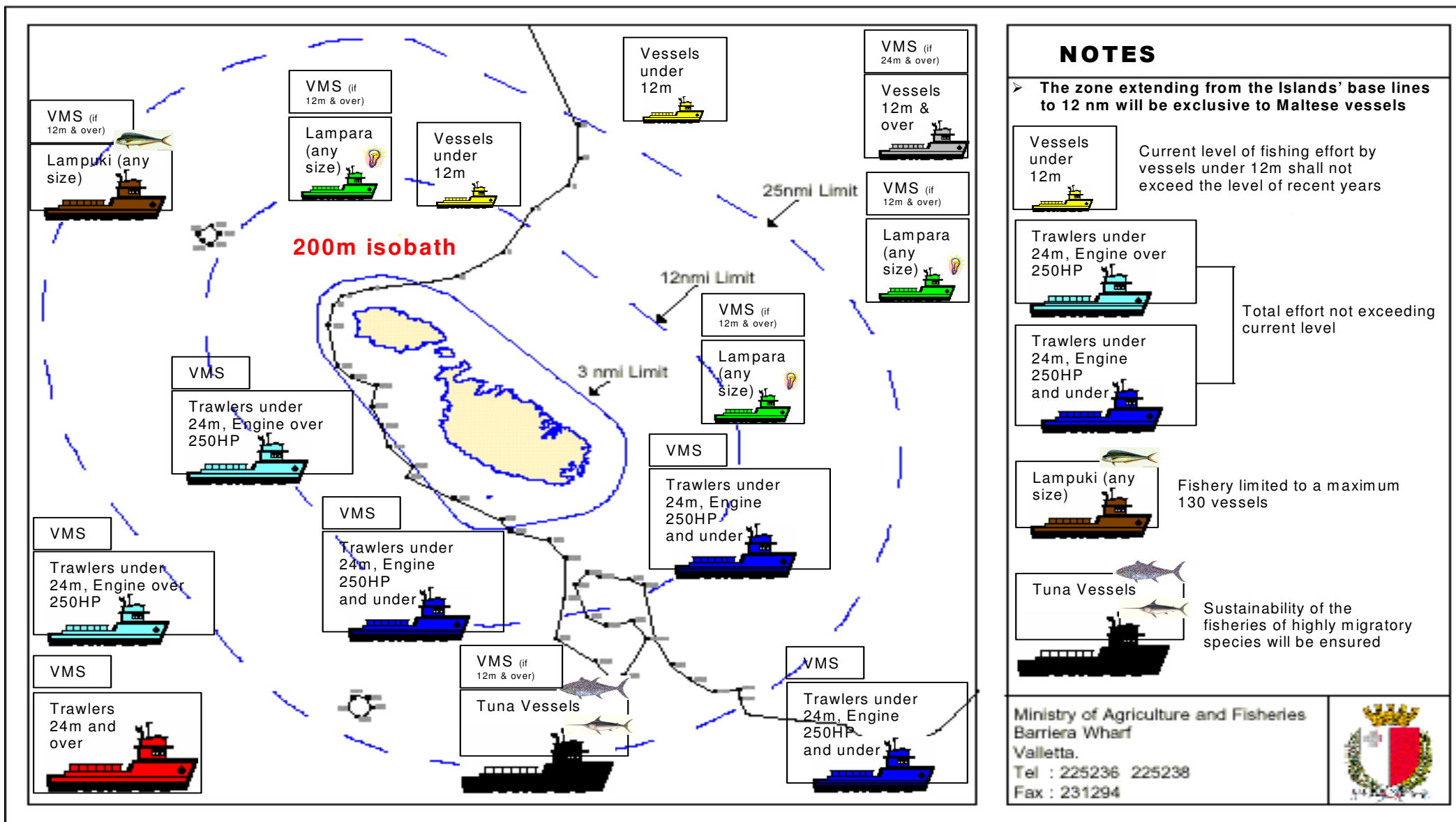


Figure 2. A summary of the Management Regime

