Spain

Fisheries management

Going by the book

A recent book on Catalunyan fisheries provides concrete proposals for a rational fisheries policy

June 1996 saw the publication in Barcelona of the book entitled *La pesca en el siglo XXI: Propuestas para unagestion pesquera racional en Catalunya* (Fishing in the 21st Century: Proposals for Rational Fisheries Management in Catalunya). Written at the initiative of the workers union, this investigative *work* adopts a multidisciplinary focus to tackle the problems of the fishing sector in this region. The authors belong to diverse fields, all closely related to fishing: Miguel Irazola is a fisherman; Antoni Luchetti, an economist and politician; Antonio Ocana, a journalist and sociologist; Juan Manual Tapia, a trade unionist; and Jordi Lleonart and Sergi Tudela, fisheries biologists.

Their combined effort, through many interviews and sessions with those who actually work in fisheries, allowed precise and realistic proposals to be formulated for a rational and sustainable management of the resources, based on the biological and ecological aspects of the exploited species. The objective was to increase the welfare of fishing-dependent people by improving working and marketing conditions.

Catalunya is an autonomous region in northwestern Spain, beside the Mediterranean. According to 1995 data, the Catalunyan fleet comprises around 1,400 vessels, of which 54 per cent are artisanal or small-scale, 28 per cent, trawlers, 11 per cent, purse-seiners and five per cent, longliners.

The entire fleet fishes in the coastal, waters and returns each day to the base ports. The volume of landings of the fleet in 1993 was 55,000 tonnes, around 40 per cent of the total landings for the Spanish Mediterranean coast. Although the fishing sector has just 5,500 workers and provides direct employment to only 0.3 per cent of Catalans, its social and traditional significance in certain places and regions is very high. At the same time, the high consumption of fish in Catalunya (25.4 kg per person per year), together with the preference for fresh, high-quality fish, generates a huge demand which can not be met by local production.

This would suggest a favourable situation for the Catalan fishing sector to grow. The reality, however, is quite different. In the first place, the resources are generally seriously overexploited and the fisheries are not managed rationally by the various administrations (European, Spanish and Catalan). In effect, there is no adaptive management system, that is, no routine follow-up is carried out of the state of the fisheries in order to find out how it responds to management measures and to then suggest changes.

At the same time, established management measures are not founded on the existing knowledge of the biology of various species. They are frequently ambiguous or legislatively inconsistent and, more importantly, most of the time they are not carried out. The process of marketing of the fish products does not favour the fishermen but the middlemen. Also, the existing labour system is biased against the crew in favour of the owner.

Working groups

In order to tackle this problem in the most optimum way, the authors formed two working groups. One looked into the biological and economic aspects, while the other considered the labour and social aspects. Both groups, however, worked closely together with the aim of coming up with harmonious and explicit proposals that would provide solutions. The first issue agreed to be tackled was the

conservation of exploited species, given that the continuity of the sector depended upon their survival.

This could be achieved only through an appropriate management oriented towards the sustainability of fishing in the long term. Although Catalan fisheries, with a few exceptions, are to a greater or lesser extent multi-species, the analysis of the fisheries biologists centred on two principal species landed in Catalunya—anchovies and hake—because it was felt that these adequately represented the larger problems facing fishing in the country.

Anchovies are the main catch of the Catalan purse-seiner fleet, made up of 160 vessels. In 1995 this was the species most caught. The anchovy is a short-lived, small pelagic. It reproduces the year it is born and is susceptible to strong annual population fluctuations. This natural tendency implies that overfishing could lead to the collapse of the fishery. Therefore, the studies concluded, the management of this species should take into account its biology, and a precautionary approach should be adopted as a matter of course.

The pressure on this resource grew strongly during the 1980s as a result of the migration to the Catalan coast of part of the south Spanish fleet, following the collapse of the, anchovy fishery in that area. This caused the Catalan fishery to change from being seasonal and targeting only adult species to operating nearly all year round and catching large amounts of juveniles, despite the fact that they are theoretically protected by law.

Given that the key to conservation of the stock is maximizing the possibility of reproduction to ensure the following year's recruitment to the fishery, the authors of the study recommend that the intensive capture of immature fish should be eliminated. To do so, they proposed that, in the first place, the administration should effectively enforce the technical measures stated in the current legislation, namely, that the minimum capture size be raised to that at sexual maturity (12 cm) and that a subsidized closed season be put into operation during the autumn and winter months in order to avoid the capture of juveniles.

Less selective

The study also points out that purse-seining should be favoured over bottom-trawling which is much less selective with respect to size. Finally, it advocates the continuation of the prohibition of pelagic trawling, used by the fishermen in the south of France, whose over efficiency threatens the conservation of the resource. The most recent data point to an alarming decrease

in recruitment to the stock so much so that the scientists fear a real collapse of the fishery.

If this happens, the fall in fishing income would generate serious social problems because the purse-seiners, with, on average, 10 crew members per boat, employ 55 per cent of the workers in the Catalan fisheries sector. The foreseeable rise in the catches of sardines, more abundant than the anchovy but in less demand in the market, would probably not solve the problem.

As far as hake is concerned, this is one of the main species—in value terms—caught by the Catalan trawl fleet of about 400 vessels. It is also caught by longline, particularly in the north of Catalunya (in the Golfo de Leon). In terms of income generated, hake ranked third among all the species caught in 1995. In contrast to the anchovy, hake is a long-living species that suffers from increasing overfishing. This means that, apart from the excess effort applied to the resource, the fish are being caught in sizes well below those that would allow for a much larger overall output. The trawl fleet is largely responsible for this situation. In effect, most of the fish caught thus are below the minimum legal size (20 cm) which itself is much smaller than the size at sexual maturity (more than 30 cm).

At this level, there is a serious inconsistency in the law because the minimum size of 20 cm, quite apart from not being founded on the biological characteristics of the species, is totally incompatible with the mesh size authorized for trawling (40 mm) with which smaller fish are always caught. Most of the fish caught by longlines are, however, bigger than the size at sexual maturity, since this method is more selective than trawling.

In order to evaluate the efficiency of variations in the means of exploiting the resource, computer simulations were carried out based on real data in the fishery. The results showed that, by combining different methods, such as a decrease in fishing effort of around 20 per cent (one fewer fishing day per week), the modification of the trawl-net to comply with legislation on minimum sizes, and a reduction of effort in trawling, together with an increase of effort in longlining, the biomass of the stock and the output of the fishery increased significantly in all cases.

However, in all the scenarios considered, the sector would have to pass through a crisis period of a number of years before the improvement became apparent. Thus, for example, the reduction in effort and the increase in the trawl mesh size provoke a medium-term increase in the biomass of the hake by around 140 per cent, and a rise in the output of the trawl and the longline by 50 per cent and 200 per cent respectively. Nonetheless, in general, the output during the first three years is significantly worse. As a result, during this period, government aid would be imperative.

Biological and economic studies show that it is possible to rationally manage the fishery that it is ecologically necessary and economically profitable, and that the only thing needed to achieve it is a political will on the part of the administration. Timely action in the short term should give way to a long-term management approach based on the continuous monitoring of the fisheries—an approach which foresees the elimination of excess fishing effort, the development of more selective gear and the subsidization of closed areas and periods of crisis. The incorporation, with full rights, of the Mediterranean fisheries into the Common Fisheries Policy of the European Union continues to be an important topic in Brussels. But, until that happens, local administrations should seriously assume their responsibilities and respond to the sector's problems.

Fishery management

As the conclusions that have emerged from the study have shown, together with the improvement in the bio-economic management of the fishery, other organizational and labour aspects need to be urgently revised. In Catalunya, fishermen and vessel owners are organized into 'brotherhoods'. These are civil law bodies that have their roots in the guilds of the Middle Ages and enjoy a territory with exclusive rights given to them. They act as consultative and collaborative administrative bodies, carrying out and controlling the application of their directives and

independently establishing regulations and technical measures on the different fisheries (fishing hours, gear, etc.), which their members are bound to honour.

Unfortunately, they are also known for their considerable intransigence and are frequently controlled by the most influential vessel owners (normally from the trawling sector). The result is that some fishermen get marginalized. Another very important aspect is that they are also involved in the marketing of fish products through auctions in a fish market managed by each brotherhood.

The role of the owners, however, is limited to fishing as much as possible, sending the catch to the market and accepting with resignation the prices set by the whims of the market. This means that the role of the producers is totally passive, as they play no part in the marketing function, thus allowing the numerous middlemen to obtain important benefits at their cost.

Even though the brotherhoods would be the ideal bodies to oversee the necessary change in the marketing practices of the sector, the rigidity of their structures and their manipulation by certain groups of fishermen, to the detriment of others, could present obstacles. Working relations between the skipper (who, in Catalunya, is often the vessel owner) and the crew is another important aspect that, in the opinion of the authors of the study, should be improved urgently. This system of working, called 'by the share', constitutes a notable exception in the context of current labour law in Spain.

Of the income received from the sale of fish, and after maintenance costs and social security contributions of the fishermen (among other things) have been deducted, the owner keeps 40 or 50 per cent and the rest is shared among the crew. This system is unfair to the workers, and the authors believe that it should be substituted by a mixed system that provides a minimum level of income security through a basic salary that can be complemented by a strong variable component directly related to the catch.

No unions

Also, the virtual absence of unions in fishing allows for harsh situations. This absence is explained by the existence in governing bodies of the brotherhoods of the so-called 'social section', made up of fishermen and workers, and the economic section' made up of skippers and owners. In this way, the hours worked are normally 40 to 55 per week, and, in some sectors (trawling and longlining), can exceed 60. These figures contrast with the average hours in other sectors in Spain—38.7 hours in construction, 36.3 in industry, and 36.2 in the service sector.

The study was largely based on interviews with more than 200 workers in the industry and was carried out in the ports. The process allowed for the expression of views of owners and crew on the problems put forward. It also served to highlight the needs of the sector in various areas, especially with regard to professional training.

The final report was presented at meetings during the summer of 1996 in Barcelona and in other fishing locations in Catalunya. Fishermen, scientists, members of the administration and the media, attended. Towards the end of September, the purse-seiners of Barcelona protested under the slogan 'Closed seasons-yes, juveniles-no' to urge the autonomous government to establish a subsidized closed season during the winter in order to avoid the inevitable capture of juvenile fish and thus conserve the resource. These protests were supported by the workers' unions and their claims were based on the conclusions reached in the study.

Although the authorities ignored these protests, the impact of the study reached the Catalan parliament and at the end of March 1997 the authors were required to appear before a parliamentary committee made up of deputies of the principal parties in Spain. Hopefully, the battle of all those fighting for a fisheries management that respects the environment and improves the living conditions of the workers will be won in the not-too-distant future.

This article, written by Sergi Tudela, marine biologist, Instituto de Ciencias del Mar de Barcelona and co-author of the book mentioned above, was translated by Elizabeth Bennett, MSC Fisheries Management student, University of Portsmouth, England