

On the verge of collapse

The Peruvian fishing industry is in serious financial crisis, as corporate earnings dwindle

Industrial fishing in Peru, which is primarily export-oriented, is undermining the sustainability of fish stocks, mainly due to uncontrolled fishing to supply the fishmeal industry. Since virtually all species are used indiscriminately in fishmeal production, industrial fishing adversely affects marine biodiversity.

It also disadvantages artisanal fishers, an important social sector that suffers from significant levels of poverty. The vast majority of fishers in Peru are artisanal and the sector produces greater spin-off through employment opportunities than industrial fishing.

The Peruvian fishing industry is in serious financial crisis, with its economic sustainability undermined as corporate earnings dwindle, leading to reductions in tax revenues. The unsustainability of industrial fishing is illustrated by the fact that while ports in the northern Piura region have traditionally provided the greatest quantity of fresh fish in Peru, catches have dwindled.

Statistics show that landings from “other ports” have now replaced them. The fish from “other ports” is, in fact, of Chilean origin. Its inclusion in the official data has tended to hide the depletion of Peruvian stocks by industrial fishing and the consequent effects on artisanal fisheries and fish consumption, which would otherwise have been very evident.

In 2004, fish ranked as Peru’s second most important source of export earnings, bringing in US\$1,382 mn, an increase of 35 per cent on the previous year’s earnings. The earnings come mainly from fishmeal and oil. The collapse of the industrial fisheries in Peru would severely affect the economies of coastal cities. It would also

have negative impacts on the national economy, given that fishing is such a key element of the economy.

In extractive activities where resource ownership is determined at the moment of extraction (fishing, forestry and livestock grazing, among others), the market fails to recognize the true value of collective resources and, as a consequence, inefficiently allocates such resources. For example, the market does not consider the economic and social value of intact forests for local communities. It focuses, instead, on the value of commercial forestry activity. This bias results in excessive capital investment in the extractive sector, increasing the risk of overexploitation.

This is precisely what has happened in the Peruvian fishing industry. Following the El Niño of 1998, the overcapitalized fish industry crashed and banks were forced to intervene and bail out the industry. Evidently, the regulation of fishing activity is essential. Without controls, fish extraction would depend solely on population size and fishing efficiency.

There are two basic types of fisheries regulations:

- biological regulations, whose objective is to avoid the destruction of the fish population that is subject to exploitation; and
- economic regulations, whose objective is to dampen the race to fish existing stocks and to avoid excessive investment in the sector —two factors that place fish stock stability at risk.

Diverse instruments

Biological regulations make use of diverse instruments. The use of such instruments

is described below, providing an overview of fisheries management in Peru in recent years.

Jorge Csirke, Director of the Marine Resource Service at the Food and Agriculture Organization of the United Nations (FAO), has published a study on anchovy fishing that includes an economic model for profit generation in the long term, according to the quality of fisheries regulations. The study reveals that economic returns are directly proportionate to the effectiveness of fisheries regulations.

Many actors involved in Peruvian fisheries describe it as poorly controlled. Most fishers indiscriminately harvest fish, regardless of the species, to service the fishmeal industry. Just recently, a law was adopted that requires the suspension of fishing activity when coastal resources are present in industrial catches. It is hoped that the law will be enforced.

Also of concern is the capture of hake for freezing. This demersal species is primarily found in the north, off the coast of Piura. It was predominantly hake catches that fuelled the expansion of frozen-fish production in recent years. The species is once again in crisis due to overfishing.

Access to a particular fishery is regulated through licences. In 1991, Peru adopted the *bodega* licence system, under which a global catch limit for each species was imposed on the fishing fleet. A new licence cannot be issued to a particular boat until an existing licence, with the same capture volume, is cancelled, thereby maintaining the global limit. Multiple strategies have been adopted to circumvent this system, including the use of licences for horse mackerel (and other 'underexploited' species) to fish anchovy or sardines, which are found closer to the shore. In the case of sardines, this practice continued until the species went into decline.

Shortly before the El Niño of 1998, a fishing census was undertaken. It revealed the presence of a significant number of vessels without licences or that possessed a greater fishing capacity than that declared to the authorities under the

bodega system. Despite the importance of these findings, nothing has been done to address the problem to date, more than six years after it was recognized.

The installation of refrigerated holds in fishing vessels represents an opportunity to reduce the catch capacity of vessels as it limits the space available for fish storage. Refrigeration also facilitates the delivery of better-quality fish and leads to less unemployment than would have occurred with a reduction in the fish fleet.

Recent debate in Peru has centred around the Viking fleet. This fleet of small purse-seiners has been increasing its fishing activity, which often takes place within the 5-mile artisanal fishing zone. The fleet fishes species used for fishmeal production, which has adverse impacts on coastal resources.

Since the adoption in 1992 of the 5-mile zone reserved for artisanal fishing, a number of conflicts have occurred in Peru. The situation was exacerbated in 1998 when the impacts of El Niño adversely affected the coastal species that are fished by artisanal fishers. A good example is Peruvian silverside (*pejerrey*), a small smelt-like fish widely eaten locally, which is now captured off the central coast for fishmeal production.

A bitter debate has been raging on the effectiveness of the satellite control system for fisheries management, and a programme for the monitoring, control and surveillance (MCS) of fishing and landings was recently approved. It is hoped that the programme will be effectively implemented. In the case of hake, a system is used that restricts access to certain fishing areas (north or south of particular lines of latitude), according to vessel type.

Minimum catch size

Ministerial Resolution No. 209-2001-PE, adopted in June 2001, establishes minimum catch sizes for individual fish and minimum mesh size for nets. Net mesh size is used to influence which fish are captured. The smaller the openings, the greater the chances of catching increasingly smaller fish. The most widely used net is the 'anchovy' net. It has the smallest openings, at half an inch. During

the 1980s, sardines were frequently caught using the anchovy net, whose openings are an inch smaller than those of the sardine net.

Since the 1990s, licences for horse mackerel include the use of a net with a 1.5-inch mesh (the 'sardine' net). For the capture of horse mackerel and mackerel by trawlers, the minimum net opening size is 3 inches, which is much larger than that used to capture these species with purse-seine nets.

With respect to minimum fish size, the abovementioned Ministerial Resolution establishes a limit of 12 cm (4.7 inches) for sardine and 26 cm (10.2 inches) for anchovy. Only 10 per cent of the catch volume can be composed of fish that are smaller than these limits. For horse mackerel and mackerel, the minimum size requirements are 31 cm (12.2 inches) and 32 cm (12.6 inches), respectively. As much as 30 per cent of the catch volume can be composed of fish that fail to conform with these minimum limits (that is, are smaller), representing one of the highest levels of tolerance to non-compliance.

In October 2001, Ministerial Resolution 349-2001-PE, which concerns anchovies, lifted minimum size requirements and net opening regulations for horse mackerel and mackerel. The rationale for such a move was that marine biological conditions permitted the capture of

juveniles. It was explained that the annulment would be maintained until such time as conditions no longer supported it. However, the conditions were never identified or qualified.

In January 2004, complaints were made that as much as 80 per cent of the horse mackerel catch in Chimbote comprised juveniles. The government response was that such catches are inevitable when fishing for mackerel.

However, mackerel fishing is not undertaken in Peru with purse-seine boats. The Peruvian government further claims that juvenile capture will not adversely affect the stock.

There is a serious problem in Peru regarding access to fisheries information. Reports from the Production Ministry (formerly the Fisheries Ministry) are incomplete and out-of-date.

Data about fresh fish catches have practically ceased to be divulged. Despite the paucity of data, fishermen confirm that catches of mackerel and, in particular, horse mackerel, contain juvenile fractions that exceed permissible levels.

Small specimens

The same thing has happened with hake. A minimum-size requirement exists but, in practice, catches include higher percentages of small specimens than they

should. Various legal provisions that govern fishing activity are not put into practice.

Horse mackerel is a highly migratory species that has a significant area of distribution in the Pacific. This means that it is difficult to estimate the biomass of this species and to quantify and control catches. The Peruvian government has categorized this species as underexploited, and a North Korean vessel has received a three-month licence to fish horse mackerel. The vessel has the capacity to process 15 tonnes of horse mackerel per hour and has a 2,000-tonne storage capacity. The Peruvian government receives a paltry sum in compensation: US\$10 per tonne of fish registered with the vessel.

Bans or closed seasons (usually for three days) are established during the reproduction stages of the fish (spring and summer), when the fraction of juveniles in the catch exceeds the percentage permitted or if the global capture quota has been reached. During a ban in 2002, exploratory fishing and provisional fishing programmes of short duration were permitted, resulting in the capture of 3 mn tonnes of fish.

The efficiency of existing MCS activities, including a satellite monitoring system and catch-landing inspections, has been

questioned at different times. While it is true that a fisheries administration system cannot be based exclusively on controls and sanctions, it is also evident that a system that grants impunity for multiple breaches of rules is not effective. It is the perception of the vast majority of actors involved in Peru's fisheries that the latter is the principal characteristic of MCS mechanisms in the sector.

In Peru, as in other marine ecosystems, the long-term marine biological cycles include alternating periods of predominance between the anchovy and sardine species. There are also long-term patterns that include alternating, decade-long periods of cold climate (La Vieja) and warm climate (El Viejo). During these periods, both El Niño and La Niña, which are of shorter duration, can occur. Cold conditions favour anchovy (and other pelagic species), facilitating both larger catches and catches that contain juveniles. Finally, it is necessary to evaluate claims made in recent years regarding the behaviour of hake and decisions to regulate its capture, as well as the dimension of the recent crisis in this fishery.

Financial crisis

The El Niño of 1998 generated a major financial crisis in the overextended (and indebted) fishing industry in Peru. The situation was also influenced by the Asian financial crisis, which caused fishmeal

prices to crash. As a consequence, industry creditors (mainly, banks) seized administrative and financial control of many fishing corporations.

According to the Biomass Protection Fund (the commission formed by the Minister of Fisheries), fisheries debt rose on 31 May 1999 to US\$1.885 billion. According to Asbanc registries, the debt was at US\$1.3 bn in March 2001. In March 2003, the former president of the National Fishing Society announced that the debt had fallen to less than US\$1 bn.

Although precise information is not available, it is believed that this debt reduction has been accomplished not by paying back, but rather, through the sale of equipment, and that some debt has been converted into equity for the creditor banks.


An important issue concerns the adverse impacts of the fishing industry on artisanal fishing activity. Given the scarcity of information available, it is difficult to quantify these phenomena. Our understanding is primarily based on empirical evidence regarding reduced catches from fishermen along the entire coast.

Fish imports (fresh and frozen) from Chile have been present in Peru for various years and have grown significantly in recent years. The demand for inexpensive fish (Chilean, relative to others) has been growing. The influx of Chilean fish makes the reductions in Peruvian catches less visible in fish markets.

The species that has most increased in terms of fresh landings is horse mackerel, the principal Chilean import (although other species also enter which are widely seen in Lima supermarkets and neighbourhood markets). The increase in horse mackerel is largely responsible for the important rise in catches.

Other empirical evidence involves the Peruvian silverside. Prior to the El Niño of 1998, the species was prominent along the central coast of the country. Peruvian silverside was widely eaten in coastal communities and its processing (gutting) generated many jobs. Since the El Niño,

Peruvian silverside landings have supposedly more than doubled. However, its scarcity along the central coast is all too apparent. Despite local scarcity, the silverside is used to prepare the most abundant, inexpensive *cebiche* in Lima. Clearly, the Peruvian catch is being augmented with fish caught in Chile.

Tightening control over extractive fisheries would imply the exclusive use of anchovy for fishmeal production, and would require a restructuring of the MCS systems. Clearly, political will is also required for the effective governance of the resource and to ensure that short-term benefits are not determinative. If industrial fishing activity were better controlled (through enforcement of species and geographical limits, among other measures), the artisanal fishing conditions would improve. 

This article is by Juan Carlos Sueiro (jcsueiro@cooperaccion.org.pe) of the Coastal Consortium for Sustainable Development