Worn-out Policies

Environmental injustice associated with fishing in Uruguay is reflected in the policies implemented by successive governments that have mainly benefited an oligopoly

Over a four-month period, from April to July 2007, the Uruguayan industrial fishing industry was paralyzed by a labour dispute. This followed the breakdown, on 30 April 2007, of the agreement between the National Syndicate of Seafarers (SUNTMA) and the Organization of Uruguayan Vessel Owners (CAPU).

The sector concerned includes 33 industrial coastal vessels, whose main target species is croaker (*corvina*, *Micropogonias furnieri*), and 12 high-seas vessels that target hake (*Merluccius hubbsi*), of which six are ice vessels and six, freezer vessels. The seven high-seas vessels that target tuna were also laid up, but for different reasons.

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The hiatus developed out of a conflict between two opposing areas of interest.

On the one hand, the workers have historically taken the position that the fishery is—and continues to be— badly managed. There is scant research, fishing practices use highly destructive gear, control is poor, and the fishing fleet is obsolete, they say. They say they are now suffering the consequences: problems of overfishing; lack of criteria for allocating fishing permits; increasing unemployment in the sector in recent years; and neglect of the commercial significance of the internal market, despite fish consumption showing an increase in recent years.

On the other hand, the vessel owners, for their part, take the line of industrial fisheries the world over: obtain the maximum benefit in the least possible time. In this context, the greatest concern of the public authorities that regulate activities under the Ministry of Livestock, Agriculture and Fisheries seems to be meeting their international commitments in fisheries commissions, and losing face abroad. They have shown little interest in trying to resolve once and for all the structural problems that have plagued the fishing industry since its beginnings.

This has led to contradictions arising between the implementation of free-market economic policies (including for the development of fisheries activities) and issues of sustainability, environmental justice and food sovereignty.

Uruguay has not been the exception to the rule. It has promoted and driven policies based on export incentives in the fisheries sector, given the expanding international demand for fisheries products. This has led to increasing incompatibility between the Uruguayan fleet's mode of operation—profit-driven and targeting few species—and the rich diversity and abundance of multispecies resources. These could be commercialized for the internal market, for the consumption of the large majority of the population who need seafood.

Basic conflict

This then is the conflict at the heart of the fishing industry and in what sustains it: the fisheries for hake and croaker. Together, they represented 52 per cent by volume and 57 per cent by value of the country's annual fishery exports for 2006.

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Industrial fishing vessels in Montevideo, Uruguay. The Uruguayan fleet has access to highly dynamic fishery resources

Uruguay is a coastal State that possesses both maritime and riverine areas. These include the River Plate (Rio de la Plata) and its seaboard, which incorporates the Argentine-Uruguayan Common Fishing Zone (arising from the signing of the Treaty of the River Plate and its Maritime Seaboard in 1973), together with the coastal strips that fall under the exclusive jurisdiction of Argentina and Uruguay, which include the adjacent territorial seas. These marine and riverine ecosystems contain a large diversity of marine fishes, crustaceans, bivalves and cephalopods, which, in their turn, sustain various fisheries, both artisanal and industrial.

In Uruguay, the fishing industry became established in the last century more or less midway through the decade of the 1970s, following the 1969 Fisheries Law and the execution of the Fisheries Development Plan. Prior to this, fishing was of little economic importance. The main objective of the Fisheries Development Plan was to promote exports based on raw material obtained from the industrial fleet, with no account taken of the artisanal fisheries. Yet the balance between biomass, catching capacity and industrialization was a cardinal principle in the Fisheries Development Plan.

The hake and croaker fisheries experienced a boom following the 1969 Fisheries Law, when the fishing industry was set up. Fisheries for non-traditional species have a more recent history, starting from the decade of the 1990s, a period when catches landed from the hake and croaker fisheries showed declines.

The main fisheries resources targeted by both the Uruguayan industrial and artisanal fishing sectors have a wide geographic range. In most cases, they have to be shared with other countries. This is why the administration of these resources falls under the responsibility of international commissions, such as the Joint Technical Committee of the Maritime Seaboard (CTMFM), the Administrative Committee of the River Plate (CARP), the Administrative Committee of the Uruguay River (CARU), or the International Commission for the Conservation of Atlantic Tuna (ICCAT). It is in these commissions that the annual catch quotas are discussed for each country, and where the final decisions are fundamentally of a political nature, based on available scientific knowledge of the resources exploited by the various fleets.

The availability and accessibility of resources, which may vary due to changes in environmental conditions, are two of the key issues governing their exploitation. The fishery resources to which the Uruguayan fleet has access are highly dynamic, given to seasonal migrations for feeding and reproduction. Furthermore, they occur in areas where there is a convergence of marine currents and oceanic fronts of a highly changeable oceanographic nature.

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Population dynamics

Fish population dynamics in marine ecosystems are governed by various factors. These are biological, inherent to given species, and over which humans have little influence. Such factors include growth, natural mortality, the biomass required to support the activity, the virgin biomass, and recruitment. In contrast, the other factors depend on

human activities and, in the main, can be regulated. These basically relate to fishing effort and fishing gear selectivity. In Uruguay the (management) tools in use under the current fisheries law (No. 13833/969, Decree 149/997) regulates effort, selectivity and protected areas for juveniles.

Over its 30-year history, the management and administration of the main fisheries in Uruguay have not been based on a precautionary approach. That is to say, there are no criteria established for exploitation based on specific studies of the stock under consideration, whereas the following precautions should be taken:

- Spawning stock biomass should be maintained at a prudent level (above 50 per cent of the virgin stock biomass);
- Fishing mortality should be maintained at relatively low levels (below the rate of natural mortality);
- Intensive fishing of immature individuals should be avoided; and
- Habitats and ecosystems should be protected.

In general, management measures are determined through establishing the total allowable catch (TAC) of the main species exploited by the Uruguayan industrial fleet. While this has been an objective point of reference for the fisheries administration, it has had nothing to do with any precautionary criteria, given that it has clearly failed in its objective of preserving the main resources (hake and croaker). The basic reason for this is simple: setting TACs requires a calculation of maximum sustainable yield (MSY). But MSY can only be established once it has already been exceeded, and, above all, when the resource is already being overexploited.

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To the above must be added the great uncertainty that surrounds our understanding of fisheries, which, together with the lack of monitoring and control, has meant that there is a tendency to err on the side of overexploitation.

From the start, the challenge for Uruguay's major industrial fisheries has been not only the management of fish populations, but of the entire marine ecosystem, due to the fact that these depend directly on the structure of the ecosystem for maintaining their productivity. In this sense, the fisheries management policies elaborated over a 30-year period should have acknowledged the fact that, depending on conservation efforts, fishery activities may or may not be sustainable over time.

In achieving this aim of long-term sustainability, it is fundamental to take account of multiplier effects in multispecies fisheries. In order to minimize the impact of fishing on associated and dependent species, management measures must give priority to selective fishing gear, to reducing the impact of specific gears on the seabed and to protecting associated ecosystems.

There are three main factors that contribute to the overexploitation of Uruguay's main fishery resources: (i) the issue of discards; (ii) granting licences for freezer vessels; and (iii) concentration of ownership.

The problem of discards in fishing is of fundamental importance, highlighting the fact that fishery activities not only affect targeted species of commercial interest, but also the marine ecosystem in its entirety.

The impact on marine habitats by trawl nets with otter boards, and the pressure they exert on the various species targeted by the industry, have wider implications that go beyond the individual populations. They affect the functioning of the marine ecosystem in its totality.

Economic cause

Discards, in general, are produced as a direct result of using fishing gears that do not catch fish of the desired species and size in a selective way; and the cause of discards is mainly economic. According to SUNTMA, discards are a major problem for Uruguay. SUNTMA estimates that for every tonne of fish landed by the industrial fleet, one

Table: Catches and Exports of Hake and Croaker
(in tonnes, with percentage of total annual catch exported)

Species	Hake			Croaker		
Year	Catch	Exports	% exported	Catch	Exports	% exported
2002	32074	15385	48	25550	27944	>100
2003	35023	23230	66	27555	31390	>100
2004	41945	31984	76	28239	30756	>100
2005	41453	28743	69	26886	28512	>100
2006	30639	24864	81	24285	33261	>100

tonne is discarded into the sea. These discards consist of species that are not commercially valuable, and species caught below the minimum landing size.

The provision of fishing licences to on-board freezer vessels has reduced the number of jobs in the sector, due to lower labour requirements in the fish-processing plants. This has had negative impacts on the country's economy, as shown by two main indicators: rising unemployment, and the loss of value addition to the raw material.

There is no logic to the continued provision of freezer vessel licences in an overexploited fishery like hake; it is difficult both to control the size of the fish landed and to check whether minimum-size restrictions are being complied with. Added to this, the fact that vessels are allowed to unload frozen products known as "*tronco*" (headed and gutted—H&G—blocks) means that smaller sizes can be processed, and this has effectively increased hold capacities and fishing intensity. Much larger quantities of smaller-size fish (below permitted size levels) are required for the same hold size. This has increased fishing pressure on juvenile stocks, not allowing them to reproduce at least once.

Finally, vessels with a hold capacity of 5,000 boxes (average box size: 24 kg) are being replaced by vessels with a hold capacity of 7,000 boxes, thus raising both fishing capacity and effort indirectly. One of the most significant outcomes of promoting fishery product exports over the past 30 years or so has been the concentration of fishing activity and the control of international markets by a few companies. Below are details of the main business oligopolies linked to the two main fisheries: Category A (hake), and Category B (croaker and weakfish, *Cynoscion guatucupa*).

Main groupings

Category A industrial vessels target hake. Out of a total of 25 vessels belonging to 13 companies, 54 per cent are owned by only two economic groupings (FRIPUR and SETTIN). There are six vessels with licences for onboard freezing, and they belong to two groups of companies, BELNOVA (belonging to the transnational PESCANOVA) and the SETTIN group. There are four factory

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Artisanal fishing boats near the entrance of the Rio de la Plata, El arroyo Pando, Uruguay, which are used to catch grunters or croakers

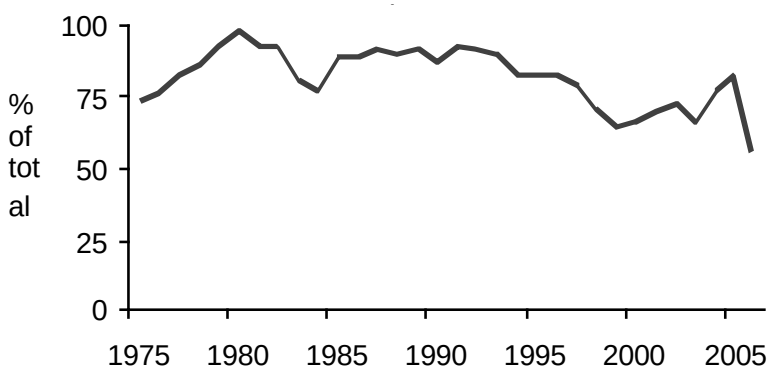

Figure 3: Four Main Species Landed by the Uruguayan Industrial Fleet (1975-2005)

vessels, of which three belong to the SETTIN group and one to BELNOVA.

Category B industrial vessels operate fisheries where the main target species are croaker and *pescadilla* (weakfish). Out of a total of 33 vessels, 88 per cent of the licences are concentrated into only four groups of companies (SETTIN, PIÑEIRO, NOVABARCA and INDUSTRIAL SERRANA).

This infamous fishing licence oligopoly over the three main species landed annually also affects the main industrial plants. As well as influencing the species composition and the volume of the fish catch, these companies also control the capacities of the processing plants, and thus the value added to all the raw material landed.

As a result, today the main fishery resources are overexploited and the ecosystems are degraded; the fishing fleet and the shore-side processing factories are oversize; the workforce is drastically reduced, and workers are paid miserable salaries, with many of them working as casual labour. Finally, the National Directorate for Aquatic Resources (DINARA), the regulatory organization for the sector, has not fulfilled its role of providing an adequate management for the fishery resources, which, being the patrimony of the population, should be used for the benefit of all. Since the beginning of the Fisheries Development Plan some 30 years back, the main species landed by the Uruguayan industrial fleet have been hake, croaker, weakfish and squid (*Illex argentinus*). Over this period, these species have represented, on average, 80 per cent of the total annual landed catches, with figures for 2005 being the lowest, at 56 per cent (see Figure 1).

It is from the decade of the 1990s that decreases in the landings of the four species became evident, with hake being mainly responsible for this fall. The fishery agreement signed at the end of the decade between Argentina and the European Union contributed decisively to reducing the biomass of hake to critical levels. This, in turn, produced a drastic reduction in catches of hake in the Uruguay-Argentina Common Fishing Zone (see Figure 2)

In the 30-year history of industrial fisheries in Uruguay, landings of the main species, hake, has determined the overall trend in the total landings. From 1998 onwards, this (downward) trend has not only been sustained in hake landings, but it also has begun to affect other species. In previous years they may have been caught, but were not landed, being instead discarded at sea as there were no markets for them (see Figure 2).

Meanwhile, croaker landings, the resource of second importance to Uruguay's industrial fisheries, have not shown the same trend as hake, with slight fluctuations of around 25,000 tonnes per year (see Figure 2). This fact does not reflect the increase in fishing intensity of the industrial fleet on this resource. As a result, over the last three years, more than 25 per cent of the fleet's landings are of croakers below the minimum permissible size. This has also forced the fishery's closure three months early in order to comply with the quota allocated to Uruguay in the Common Fishing Zone.

Resource destruction

The current model of fishery development continues to recompense those mainly responsible for resource destruction, that is, the large companies in the sector that are tied to finance capital. The two main species are evidently fully exploited, and show signs of overexploitation, as reflected in decreasing annual catches. By contrast, exports over the last five years have shown a positive trend.In the case of hake, of the total catch landed by the

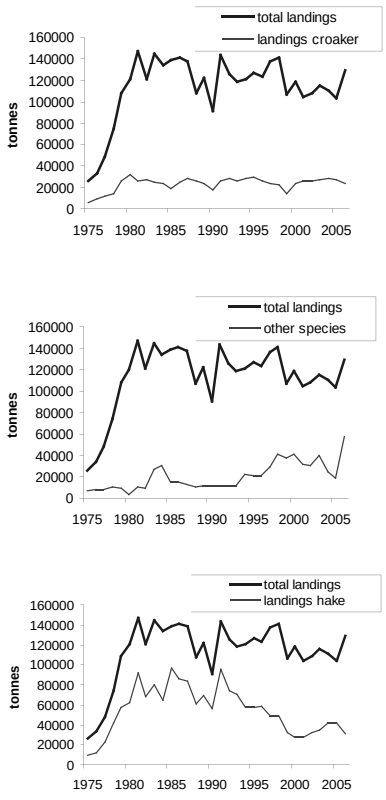

Figure 2: Total Landings (1975-2005)

Uruguayan industrial fishing sector in 2002, 48 per cent was exported, while in 2006, the level reached 81 per cent (see Table on page 11). What has happened with croaker is paradoxical. According to official customs records, over the same period, croaker exports were greater than the annually recorded landings (see Table). The need to keep catches within the quota limits set by the Joint Committee with Argentina favours under-reporting, but this has no influence on customs records, which may reflect catch levels more accurately (that is, an increasing trend).

It is worth pausing to analyze the way that fisheries have evolved over the last 10 years. To start with, catches over the period show decreasing trends, going from 141,000 tonnes in 1998 to 103,315 tonnes in 2005, with an increase in 2006 (up to 129,500 tonnes), as shown in Figure 2.

A further issue to consider is the raw material exported over the same period, which shows an increasing trend, going from 71,000 tonnes in 1997 to 111,700 tonnes in 2006. This means that in 1998, it represented 51 per cent and in 2006, nearly 90 per cent (see Figure 2).

Finally, a clear indicator showing which part of the sector has benefited the most is the dollar value of the exports. These values have shown a growing trend over the last 10 years, reaching a record level in 2006 of US$173,156,000 (see Figure 3), with FRIPUR the main exporting company, representing around 50 per cent of the total value over the period. In 2006, hake and croaker represented 57 per cent of the value of fish exports in dollars.

This clearly highlights the issue of 'environmental injustice', defined as the unequal distribution of environmental impacts of human activities. There is inequity in the way costs and benefits of activities and their outputs are distributed, with no attempt made to address the contradictions between economic development and the protection of ecosystems. Thus a model of 'sustained degradation' has been established, with the guiding principle being the cost (and returns) of capital, which must be offset by the cost to the environment.

In Uruguay, between 80 per cent and 90 per cent of the total catch landed by the industrial fleet is exported. But these exports consist of only four species out of the 100 commercially exploitable species. From this, it is clearly evident that the trend towards overexploitation of the main fishery resources has not been generated by the domestic consumption patterns of Uruguay's population (average annual per capita consumption: 8 kg).

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Environmental injustice

Environmental injustice associated with fishing in Uruguay is reflected in the policies implemented by successive governments. The main beneficiary is the commercial sector, which shows a marked concentration of ownership, with FRIPUR being the main actor. The negative impacts have been:

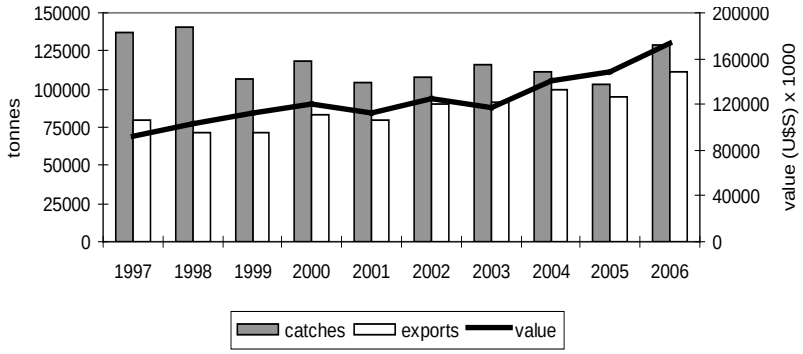

Figure 3: Evolution of Annual Landed Catches, Exports and Value in US$

- overexploitation of fishery resources and the consequent environmental degradation;
- lesser processing of products, which results in lower value addition;
- reduced employment on boats and in fish plants; and
- limited consumption of fish by the domestic population.

Uruguay's artisanal fishery provides a clear example of environmental injustice. Despite demonstrating environmental sustainability, using gears that are selective for the particular species targeted, with hardly any discards from their catches, and with most of the raw material destined for the internal market, the country's artisanal fishermen suffer serious socioeconomic setbacks due to the lack of State orientation towards, and support for, the sector.

An alternative management model is needed, geared towards maintaining the balance between the availability of fisheries resources, equity of access to resources, fishing capacity, food sovereignty, employment and environmental justice. Such a model should take, as its first principle, the re-valuation of fishery resources as a source of food, work, health and knowledge at both local and regional levels. It should favour less intensive use, with a diversification of production geared towards the incorporation of greater value addition, supplying the internal market, and prioritizing direct human consumption.

In this sense, the alternative model that SUNTMA has for long demanded, and which they still advocate, embraces these principles, which could provide the basis of a new Fisheries Law.

The following proposals are suggested in order to promote food sovereignty as a central principle:

- the creation of a centralized market —with sale by auction—to take low-

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volume species (taken as bycatch) with the potential to diversify into species that are currently discarded due to a lack of markets; and
- given that artisanal fisheries could provide fresh products of excellent quality, it is essential that fishing communities are integrated into the distribution chain, by providing the means for their catches to reach centralized markets;

At the same time, the following proposals are made within the framework of an ecosystem approach to management:
- halt the granting of new fishing licences in all Categories (A,B,C and D) and review the current ones, principally Categories C (where the target species are not hake, croaker or weakfish) and D (vessels operating in international waters);
- reduce discards, regulate the 'race to fish', including by setting limits for discards for each fishing licence;
- develop five-year plans that embrace:
- phased elimination and systematization of bottom trawling. As an intermediate measure, pair trawling should be substituted with single-boat trawling with otter boards, with eventual use of multipurpose vessels, and support the elimination of licences for freezer vessels; and
- restructuring the fishing fleet to halt damage, address overexploitation of the main resources, and introduce selective and non-destructive fishing gears.

The options are clear. We can either continue with what is worn out, where the main beneficiary has been a commercial sector characterized by a clear oligopoly, and where the costs have been: resource overexploitation; increasing unemployment; social inequity; and low consumption amongst Uruguayans of a highly nutritious food. Or, by extreme contrast, we can develop a model, founded on social justice and economic equity, where the main thrust would be food sovereignty, with the State exercising genuine sovereignty over fishery resources.

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For more

http://www.fao.org/fishery/countrysector/FI-CP_UY/en
FAO Country Profile: Uruguay (in Spanish)

http://www.fao.org/fishery/countrysector/FI-CP_UY/3
FAO Fishery and Aquaculture Country Profile - Uruguay