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Environmental impact of trade liberalization and trade-linked measures in the fisheries sector

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1. Context

The ichtyofauna of the Mauritanian Exclusive Economic Zone is quite diversified. Of several thousand species, more than 300 are regularly found in catches. More than 170 species are suitable for marketing, including seven species of mollusc and eight species of crustacean.

The species provide exploitable potential of 1,500,000 tonnes (CNROP, 1998), of which 65% are pelagic fish, 20% are clams and 15% are demersal fish, tuna and crustaceans. In 1998, more than 450 vessels, 199 of them Mauritanian, were operating industrially, while there were about 2,500 boats with a workforce of 18,000 engaged in non-industrial fishing.

Fishing is of vital importance for the Mauritanian economy. It accounted for more than 54% of foreign-exchange inflows and more than 27% of the State budget in 1998. The sector's share of GNP is considerable. It varied between 5% and 6% between 1984 and 1995 and reached 7% in 1996 (THIAM *et al.*, 1998). The number of jobs created by the various branches in the fisheries sector was probably about 27,000 in 2000, 21,000 of them in non-industrial fishing and about 6,000 in industrial fishing. However, the supply of fish to the local market is inadequate because almost the entire catch is exported.

The largest branch by value is bottom fishing, especially for octopus and shrimp. Shrimp[1] and octopus catches accounted for 53.22% of total exports of Mauritanian fish by value in 1993, or 15 billion ouguiya. Of this, the share of octopus was 91 per cent (14.3 billion, including 2.9 billion for non-industrial fishing with pots) (CEAMP, 1995).

Mauritania has established strategies and political measures for the sector since 1984. The latest is the Strategy for Development of the Fisheries Sector and the Maritime Economy, of June 1998. It has two main focal points:

- Promotion of non-industrial fishing;
- Greater integration into the national economy.

The seven main segments of the Strategy are:

- Resource development and management;
- Revitalization of fishery research;
- Greater maritime surveillance and monitoring;
- Improved product marketing and export promotion;

[1] Coastal shrimp accounts for about 30% of the catch of shrimp boats, which fish for both coastal and deep-sea shrimp stocks. Licenses are granted for all stocks, hence the difficulty of assessing the financial share of the various species in access rights.

- Promotion of employment and vocational training;

- Reorganization of the Ministry of Fisheries and adaptation of legislative and statutory provisions;

- Coastal development and conservation of the environment and biodiversity.

It should be noted that, as part of the trade liberalization process, Mauritania has withdrawn from the production sector (inter alia, through privatization of the State Companies). For instance, 65% of the Mauritanian Fish Products Trading Company (SMCP) has been privatized and the Government has kept only 35% as a blocking minority.

This company was privatized in 1995 as part of the policy of structural adjustment in the fisheries sector and in accordance with the policy of economic liberalization advocated by international financial institutions (especially the World Bank).

These measures, adopted with a view to opening up the fisheries sector to private producers, have improved the sector's performance, but the private sector remains fragile (MAED, 2001).

This is because the results of the fishing industry still depend – and will doubtless do so for many years - on conditions in international seafood markets and Mauritania's ability to meet the demands of importing countries (Anonymous, 1999).

Although the Fisheries Agreements between Mauritania and other States have not fulfilled hopes, they are an important source for securing financial income. From 1986 to 1996, these Agreements constituted a proportion of the State Budget varying between 8% and 16%. This rose to about 27% in the period 1996-2001.

The major consequences flowing from the signature of the fisheries agreements include:

- Increased product flows to export markets, including those of Japan and Europe.
- Decrease in reserves of certain demersal species:
  - sharp decline in catches of certain species of *Sparidae* (for example, *Pagellus bellotti* or pandora);
  - over-fishing of octopus, with catches falling by more than 50% in less than four years;
  - general decrease in reserves of serranids (thiof, etc.), with stocks falling to less than half in 15 years;

- decrease in reserves of serranids (corb, otolith) and skate (species that are fragile because of their low fertility and very late sexual maturity, amounting in some cases to 15 years);
- disappearance of sawfish.

I. WORKING METHODOLOGY

Table 1: Logical framework for carrying out the study entitled "Trade liberalization and trade policies for fisheries in Mauritania"

	Action	Date	Carried out by
Bibliographical summary		31 December 2001	Mamoudou Aliou DIA (Fisheries biologist, scientific adviser)
	A. Research and provision of documents		
	B. Data analysis		
	C. Summary report		
Subject study		End December 2001	Inéjih C.A (Fisheries research officer, Head of the Exploitation and Development Department)
	A. Cooperation contracts with:		
	1. Ministry of Fisheries		
	2. Ministry of Trade		
	3. Ministry of Rural Development and the Environment		
	B. Preparation of questionnaires		
	C. Data processing and capture programme	7 January 2002	
	D. Analysis of results	25 January 2002	
Preparation of the summary report	A. Synthesis of the various reports	7 February 2002	Mika DIOP (Fisheries biologist, Deputy Director)
	B. Monitoring production of the final report		
General coordination	A. Monitoring implementation of the actions identified	During the implementation period	Mohamed M'Bareck O/SOUEILIM (Fisheries biologist, Director)

	B. Monitoring of the implementation of the financial provisions		

II. SUMMARY

Impact of changes in the international context

The studies we have carried out suggest the following:

Two important factors must be taken into account in assessing current trends in Mauritania's trade in fish products. The first relates to measures adopted under trade agreements or conventions such as the Lomé Convention and, more recently, the Cotonou Agreement. The second concerns the requirements of international institutions relating to financial support for national economies and the management of countries' foreign public debt.

The comparative advantages resulting from the Lomé convention are being substantially eroded by the new international foreign-exchange liberalization measures and the reduction of tariff barriers (quotas and tax level) which the European Union, the main importer of fish from developing countries, grants to its trade partners. In other words, in a few months' time the advantages enjoyed by the ACP countries will be merely memories to be replaced by fierce competition between African and Asian fish-producing countries. Seen from another perspective, this means that one of the chief trade interests of the ACP countries is in the process of disappearing. This type of procedural exchange as offered by the agreements – access to resources against access to the Community market – will have to give way to an expression of trade relations between third countries and the European Union.

In sum, the profound changes in international trade conditions are increasingly shaping the fisheries sectors of developing countries. There is now a real propensity to "extrovert" the production sector because of the more consistent income offered by the international market.

<u>Fishery policies and environmental conservation</u>

In general, Europeans consider that trade cannot be separated from the quality of life (environment, social life, etc.). For others, who wish to profit from their competitive advantages, the only concern is to open up markets and other problems are left to the international specialized agencies. This is not the case for Mauritania, which became aware very early (from 1987) of the need for conservation of the environment and biodiversity, and incorporated them into its fishery policies. The table below, which shows the aims of Mauritania's various fishery policies, demonstrates a continuing concern for environmental conservation in all development strategies in the fisheries sector.

Table 2. Mauritania's fishery policies since 1980

Date	Aims
1980	Declaration of catches; Declaration of sales; Currency repatriation; Payment of dues and taxes
1981	Monitoring of landings; Currency repatriation
1982	Creation of jobs on land; Creation of local added value; Making existing infrastructures viable; Monitoring of landings
1984	Currency repatriation; Tax collection
1985	Rational use of resources
1987	Resource conservation; Creation of jobs on land; Creation of local added value; Making existing infrastructures viable
1989	Conservation of juveniles
1991	Resource conservation; Creation of jobs and local added value
1995	Resource and environmental conservation; Reduction of the fishing effort
1995 - 1997	Reduction of the fishing effort; Resource conservation; Production development
1998	Product marketing; Resource conservation; Integration of the sector into the national economy; Promotion of export products; Integrated coastal development and conservation of the environment and the maritime ecosystem

Market outlets

There are two main trade routes. The first is in the hands of Mauritanian Fish Products Trading Company (SMCP), which has a monopoly over catches of cephalopods and demersal fish, in both industrial and non-industrial fishing. The second is for non-industrial catches in the coastal zone, usually routed through Nouakchott, exports of which have been practically liberalized in order to promote the product.

Markets

There are three kinds of market for Mauritanian products:

- the European market for demersal (European Union) and pelagic (Eastern Europe) species;
- the Japanese market for cephalopods (mainly octopus); and
- the African market for pelagic species, dried fermented fish (guédj) and dried salted fish, principally skate and shark.

Sales of demersal species (especially cephalopods) landed in Mauritania are handled by SMCP, which exports them to external markets in Japan and some European countries (Italy, Greece, Spain, etc.).

Japan is the main importer of octopus on the international market, absorbing about 70% of world octopus production.

Despite the domination of the Japanese market, another export market for octopus caught in Mauritania does exist - the European market (Italy, Spain, Germany and Greece), although it does not seek the same trade categories as Japan.

Exports

The volume of exports to the European market is increasing steadily. While it cannot be compared to the Japanese market, it now to some extent provides an alternative for Mauritanian exports of, especially, cephalopod products and octopus, although prices are less attractive. Since 1996, the volume of exports to this market has exceeded that of exports to the Japanese, totaling 22,457 tonnes as against 18,707 tonnes.

The value of total exports in the period 1986 to 1996 varied from 17 billion ouguya (1991) to more than 36 billion ouguya (1996). It amounted to only 26 billion ouguya in 1998.

Octopus exports predominate in the fishery products exported. The total value of exports in 1987 was $271,242,515, with octopus accounting for 43% of these exports. Its share even reached 56% in 1988 and 54% in 1989, after which there was a slight decline to 48% in 1990, which was certainly due to a drop in the catch for that year. From 1990 to 1996 its share in the value of total exports rose steadily, except for 1993 and 1996, when it accounted for 44% and 43% of exports respectively.

<u>International influences in the development of the fisheries sector</u>

Studies carried out by the National Oceanographic and Fisheries Research Centre, CNROP (Lena and Thiam, 2001), have shown that the Mauritanian fisheries sector has had many international links since the outset. The exploitation of fish resources was first carried out by foreign fleets. Policy was then directed towards the creation of a national fishing fleet, but licences have again been granted to foreign fleets since the 1990s. A special agreement with China was signed in 1991, allowing about 30 Chinese boats to fish for octopus in exchange for Chinese aid, and in 1996 an agreement was signed with the European Union for about 170 boats for various kinds of fishing. The agreement was renewed in 2001.

National fishing is also oriented towards other countries through its exports. A real channel for the export of maritime products to Europe has been created and developed, to the detriment of national supplies, and this has resulted in a significant shift in the fishing effort from species intended for local consumption to export species. This has the knock-on effect that the management of fishing in Mauritania is more and more geared towards managing conflicts arising from access to resources earmarked for export, rather than those of access to species consumed on the African continent. A progressive transfer of financial and human resources to areas that are increasingly extroverted is therefore taking place.

In this context, the European Union has affected trade in fish products by imposing its very strict rules regarding product quality and fitness for consumption. In 1994, the Mauritanian Government passed a decree on conditions for the health and hygiene inspection of products. CNROP was appointed the sole organization responsible for its implementation, and its veterinary department issues the health certificates needed for exports.

The development of the fisheries sector has also been influenced by international cooperation. The first fishermen's cooperatives (the TIMIRIS Cooperative at Nouadhibou and the Nouakchott Cooperative) were established in the late 1970s under a Japanese cooperation project. Other cooperatives were set up in the 1980s in order to take advantage of various aid projects. As some of them had not been established on solid foundations, the Government felt obliged to suspend registration of new cooperatives until 1996.

The Society for the Promotion of Non-Industrial Fishing in Mauritania (SPPAM) was set up by the Government in 1984 with the aim of meeting the needs of non-industrial fishing for loans and development assistance. However, it encountered problems relating, inter alia, to competition from private traders, and in 1992 it was privatized and its role changed. In order to bridge the gap in institutional financing, the Professional Association for the Promotion of Non-Industrial Fishing and Maritime Loans (A3PC3M) was established in 1993 with the help of French cooperation. This institution still exists as a savings and loan association, although its operations have not been totally satisfactory.

International trade liberalization: privatization of the Mauritanian Fish Products Trading Company (SMCP)

Generally speaking, the progressive liberalization of markets and prices has helped to encourage supplies in Mauritania and to enhance the competitiveness of the national economy, the role of the State being limited to indirect regulation of the economy and the provision of public services to help reduce the cost of inputs and increase overall productivity.
In accordance with this liberalization policy, SMCP was privatized in 1995 as part of the policy of structural adjustment in the fisheries sector and in conformity with the policy of economic liberalization advocated by the international financial institutions (especially the World Bank). Nevertheless, in view of its strategic role in SMCP, the Government decided to retain 35% of the capital of the company as a blocking minority. These measures, adopted with a view to opening up the fisheries sector to private producers, have improved the sector's performance, but the private sector remains fragile (MAED, 2001).

III. CONSEQUENCES OF TRADE LIBERALIZATION AND RESPONSIBILITIES OF THOSE INVOLVED

Increasing the fishing effort

International trade liberalization has had the following impact on fishing in Mauritania as a result of the strong and regular increase in the fishing effort:

- Increased product flows to export markets, including those of Japan and Europe.
- Decrease in reserves of certain demersal species:
  - sharp decline in catches of certain species of *Sparidae* (for example, *Pagellus bellotti* or pandora);
  - over-fishing of octopus, with catches falling by more than 50% in less than four years;
  - general decrease in reserves of serranids (thiof, etc.), with stocks falling to less than half in 15 years;
  - decrease in reserves of serranids (corb, otolith) and skate (species that are fragile because of their low fertility and very late sexual maturity, amounting in some cases to 15 years);
  - disappearance of sawfish.

All those involved bear responsibility for this:

- Principally the State, which set up SMCP to control fishing and, before the preparation of a fisheries strategy in 1998, pursued a policy, thereby encouraging intensive fishing by permitting a fishing effort that was excessive in relation to the potential resources. The entry in 1995 of European boats for cephalopod fishing, which had formerly been permitted only to national boats, is also a clear illustration of the Government's policy of trial and error in the development of demersal fisheries.

- Professionals (both Mauritanian ands foreign) have also been blinded by the immediate profits and have taken to anarchic operations (fishing in prohibited zones, non-compliance with primary control measures such as mesh size and size and weight of first capture, catching juveniles, acts of piracy, destruction of spawning grounds through coastal fishing using demersal trawls). They are now suffering the disastrous consequences, with over-fishing of octopus, which had generated a large amount of investment.

Fisheries agreements

Fisheries agreements have had the following negative effects:

<u>Greater fishing over-capacity</u>

The present provisions of the agreements with the EU increase fishing over-capacity, especially in relation to the already over-fished octopus stock.

This situation affects the creation of jobs in non-industrial octopus fishing, where there has been a drastic slump indirect employment numbers since 1997 (see table below).

Year	Cephalopod PA*
1991	1635
1992	1925
1993	2790
1994	3340
1995	4480
1996	4930
1997	4770
2000	2085
2001	1800

* Direct jobs (captains and sailors).

An analysis of this table shows that employment in non-industrial fishing with pots (for octopus) fell sharply in 2000 and 2001 back to its 1991-1992 level. This may be explained by lower octopus catches and, consequently, a large proportion of fishermen leaving this sector.

Failure of the inter-fisheries management system

Current regulations also permit EU shrimp boats to use a smaller mesh size (50mm) than the rest of the national demersal fleet. With this mesh size, very large additional catches may be made by shrimp boats in coastal areas, especially of demersal and cephalopod fish, amounting respectively to 58% and 10% of catches (DIOP, 1996). Moreover, until 2001, EU shrimp boats were the only ones permitted to fish in shallow waters rich in demersal species (mainly *Sparidae* and cephalopods), thereby competing for space with non-industrial fishing, which alone had been authorized to operate within six miles of the coast. These additional catches – which are not available to Mauritanian fishermen – are resold on the international market in competition with Mauritanian exports.

This situation has had the effect of reducing the numbers of some demersal species in landings from non-industrial fishing, which results in an increase in their landing price and hence a decline in their consumption by the Mauritanian population, which has little purchasing power.

The table below compares landing and international market prices:

Species	Price (UM)	
Fish	*Local market*	*Export*
Thiof	1500	3000
Black umber	700	1600
Sea bream	350-500	1600

Disorganized arrangements for marketing Mauritanian fish products

The granting of licences for cephalopod fishing to the EU from 1995 created competition for Mauritanian producers on the Japanese market. For example, in 1998 the price per tonne of octopus exported from Mauritania fell by US$ 1000, and Japan cancelled orders for more than 600 tonnes of octopus landed in Mauritania because of low Spanish prices for the same octopus, also caught in Mauritania but landed in Spain. This results in a large loss of earnings for national shipowners, who are put in an increasingly precarious position.

Loss of earnings

In granting European shrimp boats the right to fish in Mauritania, the Government is using economic arguments that take into account only what return that may bring the country, and not what it might cost it. According to the figures available to us, fishing licences for coastal shrimp fishing during the period 1996-2001, priority in the granting of which was given to foreigners with a view to obtaining foreign exchange, amounted to a total of about US$ 10 million per annum (Diop, *op.cit.*). A comparison of this figure with the value of the 8,000 tonnes of additional catches taken annually by the shrimp boats (US$ 7.1 million), which are so to speak “excluded” from national consumption, provides food for thought.