Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Organización de las Naciones Unidas para la Agricultura y la Alimentación

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STATUS AND TRENDS OF FISHERIES AND AQUACULTURE IN THE WECAFC REGION

SUMMARY

This document examines recent and longer-term trends in fishery production and in fishery-product use and trade in the WECAFC region. It also considers a number of issues whose appropriate treatment would have a positive impact in maintaining and improving the sector's contribution to the wider economy. A brief discussion of selected topics of regional and international importance is also included.

Introduction

1. The fisheries sector makes an important economic contribution to the countries of the Western Central Atlantic region.[1] An examination of its status and prevailing trends is a useful way of identifying policy tools and measures that can help to ensure the sustainability of the benefits that this sector provides to the economy and to society. Various levels of analysis, ranging from the global scale to a more disaggregated level, must be used in conducting such a review, however, because a number of important features of the fisheries sector must be considered in conjunction with one another within the context of the WECAFC member countries. On the one hand, the Caribbean Sea and its adjacent maritime areas can be regarded as a marine ecosystem that objectively reflects the interests of the coastal countries in terms of the conservation and sustainable use of those fisheries resources and their environment. On the other, the countries of this region exhibit an extraordinary diversity of histories, cultures, languages, races and stages of economic and social development. Yet another consideration is the fact that the impact of the WEFAFC fisheries sector's contribution reaches beyond the boundaries of the national economy and society.

2. This characteristic of unity in diversity is also clearly expressed in the fisheries activities pursued in the WECAFC region. As is well known, these activities form a complex production system for the commercial development (capture, processing and marketing) of fish stocks, many of which are straddling or highly migratory stocks. Small-scale fisheries activities often coexist with production on a semi-industrial or

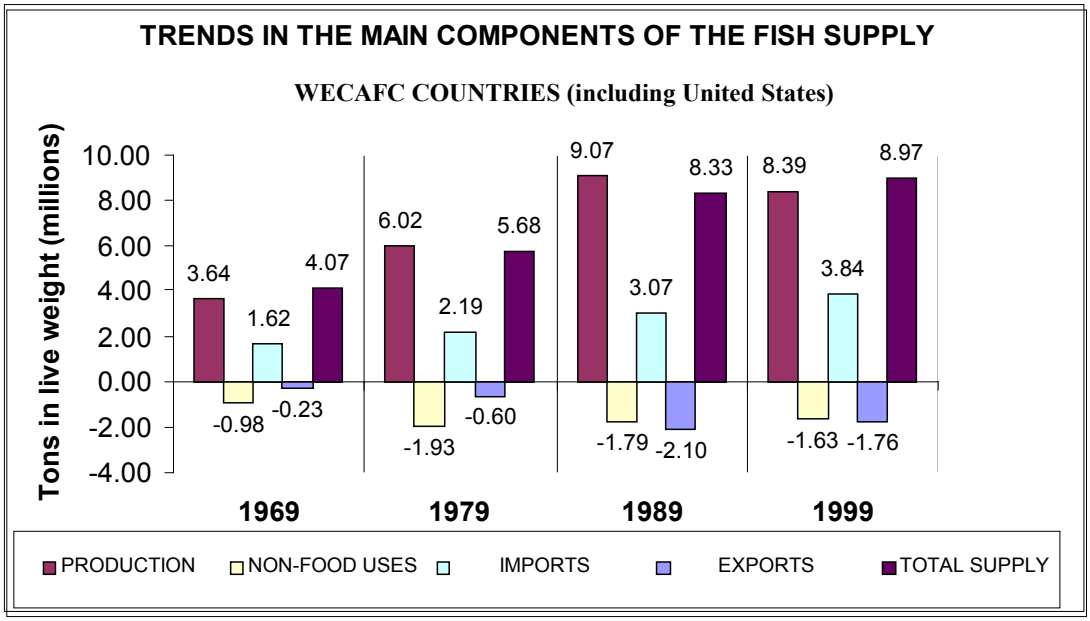
[1] The term " country" , as used in this document, includes territories and provinces. Its use does not reflect any decision or opinion on the part of FAO regarding the legal or institutional status of any country or territory or its borders. This also applies to the country groupings used in this analysis.

industrial scale in the same country. These fisheries activities are heavily dependent in terms of support service infrastructure and sell their output on local, regional, national and international markets.

Long-term trends in the supply of fish for human consumption

3. A recent study[2] on long-term trends in the supply of fish for human consumption in the WECAFC region, which measured supply by comparing selected years at 10-year intervals, found that the supply grew during the 1960s and 1970s, with the result that the available supply in 1989 was almost twice as large as it had been in 1969 (Figure 1). Since 1989, however, the total annual fish supply has, as will be discussed in greater detail below, tended to level off at around 8 million–9 million metric tons.

Figure 1

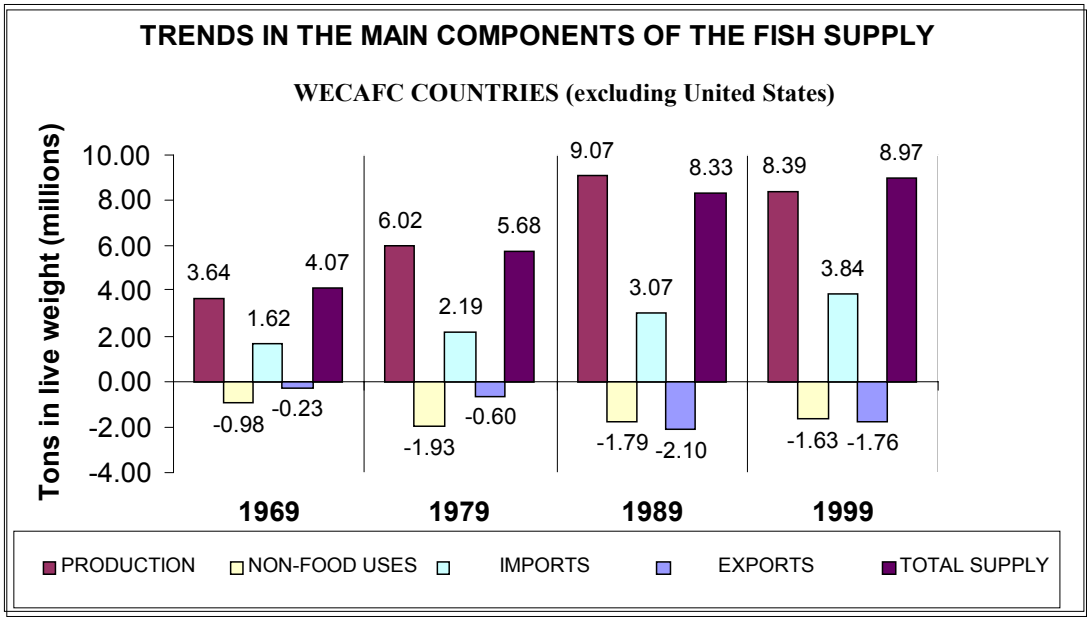


Source: Fishery Data Group, Fisheries Department, FAO.

4. Interestingly enough, when the estimated supplies of the United States are factored out of the calculations at a more disaggregated level of analysis, the annual supply of fish for the rest of the countries in the region follows the same growth patterns as those observed at the regional level, although, as is to be expected, at a quantitatively lower level (Figure 2). The estimates for 1989 are twice as high as the figures for 1969. Since 1989, the supply has levelled off at annual values of between 2.2 million and 2.9 million metric tons.

[2] Analysis prepared by Adriana Seijo, a FAO volunteer, at the request of the Fishery Planning and Development Services of the FAO Fisheries Department, July 2003. The graphs included in this report have been taken from this same source.

Figure 2



Source: Fishery Data Group, Fisheries Department, FAO.

5. A brief review of Figures 1 and 2 shows up the existence of two different stages in terms of supply trends in the sector, with a stage of rapid growth that lasted until the late 1980s being followed by a level trend that has lasted throughout the 1990s and up to the present time. It is interesting to note that this levelling-off of total supplies has coincided with the stagnation of fisheries production during the same period. At the regional level, the explanation may lie in the fact that, over the last decade, an increasing percentage of the fish supply is being accounted for by imports. This is presumably one of the factors contributing to the sustainability of supply. Be this as it may, it will prove useful to explore this phenomenon in greater detail at a more geographically disaggregated level at a later stage in order to determine the shifts in the various components involved in determining supply levels (production, utilization and international trade) over the last decade.

Fisheries production

6. Total fisheries production (capture fishing plus aquaculture)[3] in the WECAFC region in 2001 amounted to 9.2 million metric tons. This is the highest level to be recorded in the period 1992-2001 (Table 1). The low point for production volumes in the decade came in 1999, when output totalled 8.4 million metric tons. The fairly stable trend in total fishery production registered throughout the last two decades has thus continued. The previous peak, reached in 1989, was at a volume similar to the level recorded in 2001.

7. The structure of the total catch of many countries with coastlines on the Western Central Atlantic is not determined solely by the catch in this maritime area. The total catches reported for countries in the WECAFC region also include catches in other fisheries and in inland bodies of water. The total catch for these countries (including catches in fisheries other than those of the Western Central Atlantic) amounted to 8.5 million metric tons in 2001; this represented 92 percent of total fishery production and was slightly

[3] As is customary, a brief descriptive paragraph on trends in aquaculture production is included as part of the analysis on fishery output.

higher than the annual average catch for the period 1992-2001. Inland catches have continued to follow a slight declining trend since 1995. In 2001, the inland catch amounted to 386,000 tons and represented 4.5 percent of the total catch.

8. The catches of the member countries in the maritime area under WECAFC jurisdiction totalled 1.6 million tons. This represented the continuation of a stable trend that began in the mid-1980s and has remained in evidence throughout the period 1992-2001. This stability is also reflected in the fact that the share of the total world marine catch that is accounted for by the WECAFC catch has held steady. Its 1.9 percent share of the world total for 2001 is very close to the levels posted for the preceding years in the decade under review. In 2001, these catches were equivalent to 19 percent of the total catch recorded by the countries of the region and 17 percent of the member countries' total fishery output. The United States has traditionally accounted for a sizeable share of WECAFC catches; in 2001, its share amounted to 53 percent.

9. Aquaculture production in 2001 totalled 0.6 million tons, or 7 percent of fishery output for that year. Production activity has exhibited an upward trend during the period under review, and output for 2001 was almost twice the level posted in 1992. Aquaculture production in the WECAFC marine environment in 2003 amounted to 82,000 metric tons (13 percent of total aquaculture output). Output originating in this environment has displayed a downward trend during the period under review, although it has fluctuated both upward and downward from year to year. This trend is closely associated with production trends in the United States, which accounts for over 60 percent of the total.

Fish consumption and use

10. The extent to which fish are used for non-food purposes in the member countries of the WECAFC region is well below the world average, which was estimated at 29.4 percent in 2001. The available data for 1997/1999 indicate that the countries of the region used 19 percent of their fisheries output for such purposes (Table 2). This points to a slight upward trend, since in 1991/1993, 16 percent was used for non-food purposes and in 1994/1996, the figure was 17 percent. It is interesting to note that, in the early 1970s, the use of fish for non-food purposes was estimated at 28 percent.

11. Average annual consumption per capita in the countries of the WECAFC region was 13.4 kg in 1997/1999, or slightly less than the 14 kg estimate for the immediately preceding three-year period and virtually the same as the figure for 1991/1993. These levels are somewhat below the estimated worldwide average of 16.2 kg. If the United States is factored out of the calculations, the annual consumption per capita for 1997/1999 comes to 8 kg. This is lower than the 8.4 kg level estimated for 1994/1996, but slightly higher than the 7.9 kg figure recorded for 1991/1993. Thus, the region as a whole has succeeded in maintaining a growth rate for the supply of food fish in 1991-1999 that is very close to the population growth rate. For the purposes of this analysis, however, it should be noted that a more detailed examination of the data, broken down by countries and groups of countries (Table 2), reveals a marked degree of disparity reflecting a wide range of different situations in terms of fish supply and demand in the WECAFC region. Although detailed information on the subject is lacking, the possibility exists that, in countries where tourism generates a large part of the demand for fish, the indicator of per capita consumption may be overestimated. If this turns out to be the case, then consumption per capita may actually be declining in some countries.

International trade in fishery products

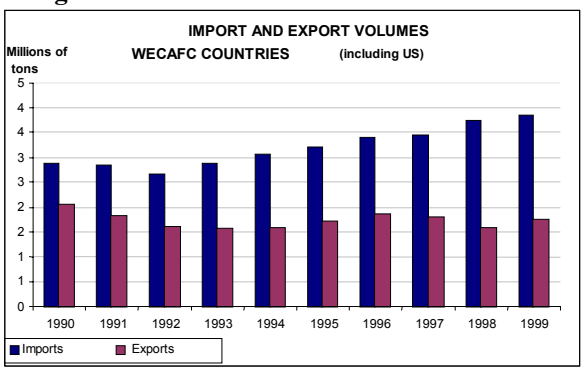
Imports and exports (by volume)

12. The share of the total supply of food fish (live weight) that was imported by the WECAFC countries in 1997/1999 was 41 percent. This was significantly higher than the approximately 35 percent share registered in 1994/1996 and 1991/1994. Interestingly enough, the size of this share and its trend both differ somewhat when the United States is not included in the estimates. The share of supply accounted for by imports in the rest of the WECAFC countries (live weight) for 1997/1999 was 25 percent, which was quite similar to the estimate for 1994/1996 although clearly higher than the 17 percent share recorded for 1991/1993.

13. Some 20 percent of the region's total fisheries output (in live weight) was exported (measured by volume) in 1997/1999. This share has remained constant since the start of the 1990s. If the United States is factored out of the calculations, it turns out that the rest of the countries in the region exported 16 percent of their total output during that three-year period. It should be noted that the volumes exported by this group of countries, measured as a percentage of their total fisheries output, increased steadily between 1990 (11 percent) and 1999, when it peaked at 16.9 percent.

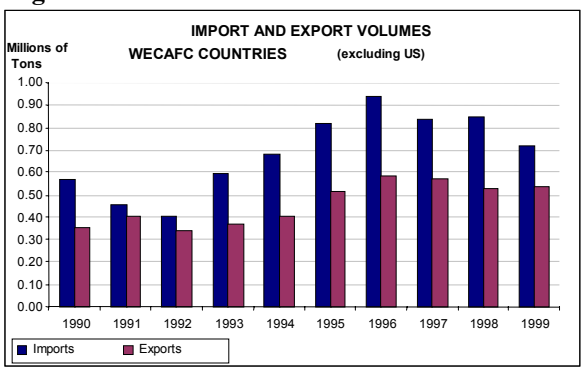
14. Annual trends in the net trade balance (calculated by comparing import and export volumes of the countries of the region, including and excluding the United States) for the period 1990-1999 are shown in Figure 3 and Figure 4.

Figure 3



Source: Fishery Information, Data and Statistics Unit (FIDI), Fisheries Department, FAO.

Figure 4



Source: Fishery Information, Data and Statistics Unit (FIDI), Fisheries Department, FAO.

Imports and exports (by value)

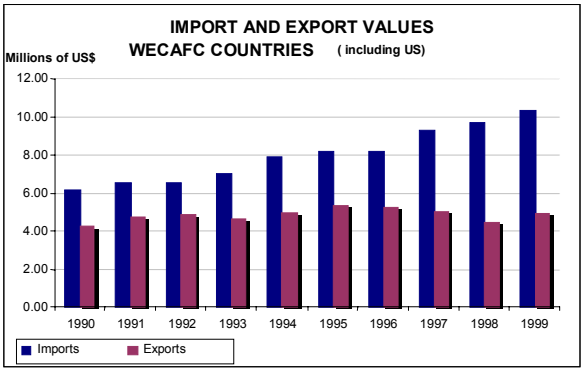
15. The imports of the countries of the region in 2000 peaked at US$ 11.341 billion, following a moderate but steady growth trend in the value of imports over the preceding five years. During 2000, the United States accounted for 92 percent of total imports, measured by value. This country's share has been expanding over the past five years, whereas the total value of the rest of the countries' imports has been declining.

16. As regards the breakdown of regional imports (measured by value) in terms of the different types of fishery products, the items at the top of the list are frozen crustaceans and molluscs and fresh, chilled and frozen fish, in that order. If the United States' imports are not included in the statistics, however, the order changes. In that case, fresh, chilled and frozen fish head up the list, followed by dried, salted and smoked fish, frozen crustaceans and molluscs, and tinned fish. Brazil is the main importer of dried, salted and smoked fish. Fairly sizeable amounts of these products are also imported by Haiti, Jamaica and the Dominican Republic, in the Lesser Antilles, and the countries of the Greater Antilles. Lately, frozen fisheries products are increasingly being sought in order to meet the growing demand generated by tourism in many of these countries.

17. The value of the region's exports in 2000 totalled US$ 5.227 billion. This was a moderate increase over the figures for 1999 and 1998, with the latter of these years marking the turning point in the slight downward trend that had begun in 1995. On average, the value of the region's exports (excluding the United States) for the last five years has accounted for around 41 percent of the total. Fresh, chilled and frozen fish and frozen crustaceans and molluscs are by far the most important product categories.

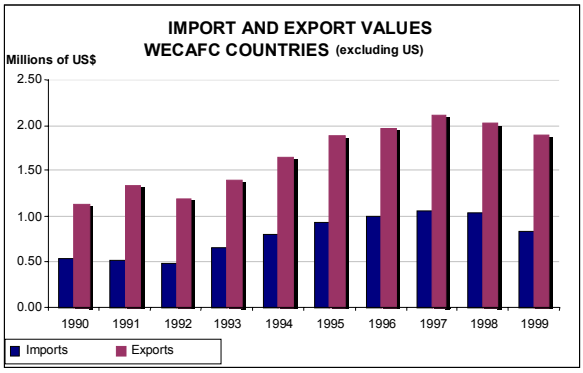
18. Annual trends in the net trade balance (calculated by comparing the value of the imports and exports of the countries of the region, including and excluding the United States) for the period 1990-1999 are shown in Figure 5 and Figure 6.

Figure 5



Source: Fishery Information, Data and Statistics Unit (FIDI), Fisheries Department, FAO.

Figure 6



Source: Fishery Information, Data and Statistics Unit (FIDI), Fisheries Department, FAO.

19. At the most aggregated level, the region's trade balance for fishery products (measured both by live weight and by value) indicates that imports exceed exports (Figures 3 and 5). At a more disaggregated level (not considering the United States), the rest of the countries still import more than they export in terms of volume (Figure 4), but in value terms they post a net surplus, and this surplus is trending upward (Figure 6). This group of countries is therefore exporting less fish protein than it imports yet is earning more foreign exchange than it is paying out for such products. Thus, the countries have an advantageous balance in terms of both fish protein and foreign exchange. The high purchasing power of these countries' exports is reflected in the following table, which is presented here simply as a means of illustrating this point. The figures shown in this table are unit values for the fish imports and exports of the WECAFC countries (excluding the United States), which were arrived at by dividing the value of this group of countries' annual exports (of finished goods) by the volume of exports, measured in live weight.

Unit values of imports and exports of finished fishery products, measured in live weight

WECAFC countries (other than the United States)

YEAR	Imports US$ p/kg	Exports US$ p/kg
1990	1.12	3.29
1991	1.23	3.37
1992	1.37	3.39
1993	1.13	3.69
1994	1.26	4.01
1995	1.41	3.68
1996	1.47	3.61
1997	1.71	3.86
1998	1.86	4.13
1999	1.46	3.50

Source: Based on data furnished by the Fishery Information, Data and Statistics Unit (FIDI), Fisheries Department, FAO.

20. The conclusions reached on the basis of the analysis presented in paragraphs 18 and 19 should not cause the reader to lose sight of the wide range of situations that exist with respect to the countries' foreign trade in fishery products at a more disaggregated level of analysis. An examination of the data indicates that the WECAFC countries' situations in terms of their balance of trade in fishery products are quite

heterogeneous (Table 3). Some countries in the Greater Antilles, the nations of the Lesser Antilles, Brazil and the United States traditionally run trade deficits. The fisheries sectors in the countries in Central America, most of those in South America, Cuba and Mexico have been posting trade surpluses for several years now. The latter countries export high-value products such as shrimp, lobster, tuna and species of fish that are highly prized in the market.

Intraregional trade

21. Intraregional trade in fishery products within the WECAFC region is not a new phenomenon in either the formal or informal sector. What *is* new is the increasing scale of these trade flows, although there is a serious lack of the type of information that would be needed to measure their scale and the speed of their development in greater detail. The available information has, however, been sufficient to permit a very preliminary identification of some of the main intraregional trade flows. For information and indicative purposes only, the main such findings are as follows:

- Some 16 percent of WECAFC island States' trade in fishery products takes place with other island States; 3 percent of this trade is with South and Central American countries.
- Some 80 percent of Central America's fish exports go to the United States, and another 10 percent go to the European Union. Intraregional trade flows originating in the Central American countries are very limited: 3 percent of such flows involve other countries of the region and 3 percent are with South American countries or island States in the Caribbean. A substantial portion of Central America's intraregional trade takes place among the countries of the Central American isthmus.

22. Some of the structural aspects of international trade in fishery products in the region are as follows:

- For the most part, the WECAFC region is heavily dependent on a single market (United States) and/or a single export product (shrimp).
- A sizeable portion of intraregional trade between, for example, Caribbean islands, takes place within the informal sector. This type of trade is not included in official statistics and is very difficult to estimate.
- Many of the exports of the countries of the region are made up of raw materials or have very little value added (e.g., frozen shrimp blocks).
- The prices of the items of most interest to producers in the region continue to trend downward and are at unprofitable levels.
- Many countries in the region, and especially most island States, are not in a position to create and maintain an authority of the type called for by the European Union's regulations.

The supply and demand for fish and fishery products

23. Although the demand for fish and fishery products in the region has a quite varied profile at the level of countries and/or groups of countries, in most cases it is influenced to some degree by one common, highly dynamic component: the strength of international demand for fish and fishery products. Much of this demand is met by exports to the United States, on the one hand, and, on the other, by meeting the growing tourism market's need for such products. The international component of demand is likely to continue to be a factor of major importance. This is why activity in the fishery sector remains buoyant in many countries of the region when their economies stagnate or enter into recession. Although this intrinsically positive phenomenon benefits economic activity as a whole, it is nonetheless necessary to analyse its implications for fishery policy as it relates to the following issues under certain types of conditions:

- *Sustainable fishery development*. In the absence of appropriate fishery management systems, the sustainability of intensively harvested or over-harvested fishery resources could be jeopardized, as could the income levels and employment rates of fishing communities.
- *The supply of fish and food security*. In countries of the region with high per capita consumption levels and little capacity for expanding supply or substituting other foods for these products in the short run, food security could be undermined.

24. The supply of fish and fishery products in the region has been stable in recent years when measured in terms of per capita consumption, although in many countries this has been accomplished with the help of imports. The possibility of maintaining supply at its current levels or increasing it based on catches in the Western Central Atlantic is limited by the already high use rates for these resources. (This subject is dealt with in depth in Document No. WECAFC/XI/03/2, "The Status of Fisheries Resources in the WECAFC Region".) As has been exhaustively analysed and concluded in past sessions, further increases in production volumes could only be obtained if the following steps were to be taken:

- Improved management of fully or over-exploited fishery resources;
- Sustainable use of the few types of resources that are currently being exploited very little or not at all;
- Reduction of discards;
- Improved utilization of catches, to be accomplished by upgrading on-board handling and preservation methods;
- Increased aquaculture production.

25. In order to implement a sustainable development strategy that includes the elements mentioned in the preceding paragraph, the governance of the fisheries sector in many of the WECAFC countries will have to be improved. The effort to achieve this improvement should incorporate the following components:

- The formulation of suitable, proactive public policies for the fisheries sector and their close integration with economic and social policies;

- The refinement of the sector's legal and institutional structure, including the adoption of effective approaches to the fisheries sector's management, in partnership with the relevant parties, and a suitable level of interdisciplinary research;

- Regional and international technical and economic cooperation.

26. The ongoing development of the international regulatory framework for fisheries has raised significant issues of interest at the international level. These issues often have regional and national implications that must be taken into account by policy makers and decision makers when dealing with the three elements mentioned above. With a view to providing useful data and promoting an exchange of information among the member countries, two subjects have been selected for further discussion: (i) fishery subsidies; and (ii) illegal, unreported and unregulated (IUU) fishing.

Subsidies in fisheries

27. As is well known, the value of subsidies and their effects on the sustainability of fishery resources, on trade in fish and fish products and on other economic and social aspects of sustainable development are a matter of priority concern to the international fisheries community. This issue is currently a subject of debate in various international forums. A brief overview of recent discussions on this subject that have taken place within WTO and FAO is presented below.

Discussions at WTO

28. The relevant negotiations mandated at Doha for the clarification and improvement of WTO disciplines on fisheries subsidies are taking place in the Negotiating Group on Rules and the Negotiating Group on Market Access. During the past several years, however, the WTO Committee on Trade and Environment (CTE) has been intensively studying the issue of fisheries subsidies. The state of the debate on fishery subsidies at CTE is reflected in its report to the Fifth Session of the WTO Ministerial Conference in Cancún, which was adopted by the Committee on Trade and Environment at its regular session on 7 July

2003. Selected paragraphs of that report are quoted in Box 1 in order to provide fuller, more detailed information on the status of the current discussions. During the Ministerial Conference in Cancún, WTO members reviewed the progress of these negotiations.

Conclusions and recommendations of the Twenty-fifth Session of the FAO Committee on Fisheries (COFI)

29. With regard to the role of FAO, at its Twenty-fifth Session the Committee on Fisheries (COFI) reaffirmed the importance of the subsidies issue, especially in the light of the World Food Summit on Sustainable Development (a side event held at the Summit in Johannesburg in 2002) and the Fourth Session of the WTO Ministerial Conference, held in Doha. The Committee urged FAO to expedite its work in relation to the impact of subsidies on the sustainability of fisheries resources and sustainable fishery development. The Committee also encouraged FAO to continue its leading role in promoting cooperation and coordination with other relevant intergovernmental organizations such as WTO, the Organisation for Economic Co-operation and Development (OECD), the United Nations Environment Programme (UNEP) and others working in the field of fisheries.

30. During the meeting, developing countries *"agreed on the need to work effectively towards reducing subsidies that affect the sustainability of fishery resources and expressed their concern over the impact that subsidies that were harmful to the international trade of their fishery products could have on their economic development. A large number of developing countries emphasized that, when appraising the role of subsidies in their fishery sectors, careful attention also needed to be given to their impact on the economic and social dimensions of sustainable development and, in particular, on their use as an instrument of economic policy aimed, among other objectives, at stimulating the sustainable growth of their national fishery sectors, at reducing and alleviating the poverty of fishing communities and households and at enhancing food security*" (paragraph 75 of the COFI report).

BOX 1

Discussions on subsidies in fisheries at the WTO Committee on Trade and Environment

There was a general recognition of the importance of achieving the objective of sustainable development in the fisheries sector. It was recalled by a number of Members that the very fact that negotiations on the subject of fish had been launched at the Doha Ministerial Conference was largely based on the preceding CTE analysis. Subsequently, the WSSD Plan of Implementation had reaffirmed the call to clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries.

A few Members maintained that poor fisheries management – taking place under open-access fisheries – coupled with increasing world demand for fishery products was at the root of declining world fisheries resources resulting from over-exploitation and illegal, unreported and unregulated fishing. In this regard, subsidies could be an effective instrument to reduce capacity, for example through vessel buy-back programmes. One Member stressed that the possible effects of subsidies on resources changed depending on resource status and fishery management regimes. The cases of skipjack tuna and purse seine fishery in the Eastern Pacific Ocean were referred to in this regard. It was argued that there was a need for flexibility among products when determining tariff levels, taking into account the level of fishery resources and the status of fishery management.

Other Members argued that over-capacity, and, consequently, a significant part of over-exploitation of fisheries, was caused by subsidies. Even when apparently sound management regimes were in place, subsidies could destabilize fisheries management and impede the objective of reducing over-capacity. A high value tuna species was given as an example of a particular fishery which was under a multinational management regime and where stocks had collapsed. It was emphasized that it was the trade measure (the subsidy) that generated over-capacity and needed to be disciplined. Trade liberalization, in concert with sustainable resource management, could stimulate more efficient production with more long-term environmental benefits. Trade barriers in the form of tariffs, or other non-tariff measures, were no substitute for effective resource management.

All agreed that more could be done to provide technical assistance in natural resource conservation and management through the various international environmental organizations in the fisheries sector. Some Members reiterated the importance of further studies on the effects of fisheries subsidies and referred, in particular, to the work of the Food and Agriculture Organization of the United Nations (FAO), UNEP and OECD in this regard. One delegation in particular called for case studies with respect to the impact of subsidies on fishery resources.

Source: Selected paragraphs extracted from the **"Report to the 5th Session of the WTO Ministerial Conference in Cancún -** Paragraphs 32 and 33 of the Doha Ministerial Declaration", Document WT/CTE/8, *Fisheries section (iii)*, pages 5 and 6, July 2003.

Recent and future work of FAO

31. The following activities have been undertaken:

- *Technical activities*. Two expert consultations on fisheries subsidies were organized in 2000 and 2002. In mid-2004, FAO will hold a consultation at the intergovernmental level to consider the issue of fisheries subsidies. The Fisheries Department also continues to monitor the economic performance of capture fisheries and to review the question of financial transfers to fisheries.

- *Promotion of cooperation with other relevant organizations such us WTO, OECD, UNEP and others working in the field of subsidies in fisheries*. Two ad hoc intergovernmental meetings on work programmes related to subsidies in fisheries were organized by the Department in 2001 and 2002 and a third one was just held. This third meeting was attended by representatives of the OECD, WTO, UNEP, FAO, APEC, CARICOM and CPPS secretariats.

- *Technical reports*. In the course of 2003, FAO is publishing two Fisheries Technical Papers: *Guide for Identifying, Assessing and Reporting on Subsidies in the Fisheries Sector*, FAO Fisheries Technical Paper 438 (in press); and *Introducing Fisheries Subsidies,* FAO Fisheries Technical Paper No. 437 (already available).

32. In terms of future work, COFI agreed that FAO should convene a technical intergovernmental consultation on this issue, to be held immediately after the meeting on IUU fishing and fleet over-capacity (tentatively to be held in June 2004). In this consultation, attention should be devoted to a practical mandate to consider the effects of subsidies on fisheries resources, including the effects in relation to IUU fishing and over-capacity. Many Members recommended that the technical consultation should take into account the impacts of subsidies on sustainable development, trade in fish and fishery products, food security, social security and poverty alleviation, especially in the context of recognizing the special needs of developing countries and small island developing States as acknowledged in international instruments. The COFI representative stated that the technical consultation should also consider the ways in which FAO can support the work being done by WTO on fisheries subsidies and took note of the independence of the WTO timetable.

33. As a next step in investigating the impact of fisheries subsidies and as part of the preparatory work for the technical consultation, the FAO Fisheries Department is now planning a series of case studies. The intention is to carry out between six and eight case studies in countries in different parts of the world. The overall objective of the case studies is to improve the current knowledge regarding the types of environmental, economic and social impacts that subsidies may have and the mechanisms through which these effects are generated. More specifically, the intention is for the case studies to provide information on the mechanisms on which subsidies are based. The findings of these case studies should also furnish some indications in relation to the following questions:

- What role do subsidies play with regard to IUU fishing and over-capacity?
- What issues are of particular concern to developing countries?
- How can the trade-offs between positive (good) impacts and negative (bad) impacts on the different aspects of sustainable development (economic, environmental and social effects) be understood and measured?

34. It is expected that the case studies and the analysis of their results will provide insight into the above issues. However, this research effort cannot realistically be expected to yield conclusive answers. Accordingly, an additional objective of this undertaking is to clearly identify further empirical and theoretical research needs.

Illegal, unreported and unregulated (IUU) fishing

35. Illegal, unreported and unregulated (IUU) fishing is found in all capture fisheries, regardless of the location, species targeted, fishing gear employed or level and intensity of exploitation. IUU fishing occurs in small-scale and industrial fisheries, inland and marine fisheries, and fisheries in zones of national jurisdiction as well as those on the high seas. Thus, IUU fishing is not confined to high seas fisheries, to particular groups of fishers or to specific fisheries. Regional fisheries management organizations see cases of IUU fishing by both contracting and non-contracting parties and by vessels from countries with open registers.

36. The international community has identified IUU fishing as a major fisheries management issue because of its far-reaching consequences for the long-term sustainable management of fisheries resources; when IUU fishing is unchecked, the system on which fisheries management decisions are based becomes fundamentally flawed. This situation leads to a failure to achieve fisheries management goals and the loss of both short- and long-term social and economic opportunities. In extreme cases, IUU fishing can lead to the collapse of a fishery or seriously affect efforts to rebuild fish stocks that have been depleted. The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) is a key instrument in the effort to combat IUU fishing.[4]

[4] The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) was developed as a voluntary instrument, within the framework of the Code of Conduct for Responsible

37. The principal IUU fishing issues that need to be addressed if efforts to combat such fishing are to be successful include:

- All States must exercise effective flag State control over vessels flying their flags, in accordance with international law. States should also extend similar control over their nationals who work on fishing vessels, irrespective of the flag or fishing area. States should also maintain proper records of their fishing vessels and ensure that all vessels are appropriately authorized to fish;
- States should accept and effectively implement post-UNCED international fishery instruments, including the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), adjusting national legislation as required;
- As required in the IPOA-IUU, States should elaborate and put in place their national plans of action to prevent, deter and eliminate IUU fishing (NPOAs-IUU);
- Port State measures should be implemented, in accordance with international law and the IPOA-IUU, to prevent ports from being used to handle fish that have been taken by IUU fishers;
- Monitoring, control and surveillance (MCS) should be enhanced, especially in areas that will permit cost-effective operations, and international cooperation should be promoted in order to facilitate the exchange of real-time information about the activities of IUU fishers;
- States should implement internationally agreed market-related measures, as provided for in the IPOA-IUU, in an effort to prevent IUU-harvested fish from entering the world fish trade;
- States, whether members or not, should comply with and enforce policies and measures adopted by regional fishery management organizations (RFMOs) so as to ensure that their efforts to manage fish stocks sustainably are not undermined; and
- States should seek to ensure that, through capacity building and institutional strengthening, developing States are in a position to meet their requirements under the IPOA-IUU and their obligations under international law.

What is FAO doing to address the problem?

38. The IPOA-IUU specifies activities to be undertaken by FAO to facilitate the implementation of the Plan. These include:

- Gather information and data for further analysis aimed at identifying contributing factors and causes of IUU fishing;
- Support the development of national and regional plans to combat IUU fishing;
- Collaborate with international agencies and, in particular, the International Maritime Organization, to further investigate the issue of IUU fishing;
- Convene a consultation on the implementation of catch certification and documentation requirements; and
- Investigate the benefits of establishing and maintaining global databases, including but not limited to information provided for in Article VI (Exchange of Information) of the 1993 FAO Compliance Agreement.

39. Since the endorsement of the IPOA-IUU in 2001, FAO has undertaken a range of activities designed to heighten international awareness of the impact of IUU fishing on fisheries conservation and management and to support initiatives to combat such fishing. Other on-going work being pursued by FAO which is directly relevant to combating IUU fishing includes:

- Organizing workshops to assist developing countries to draw up their NPOAs (2003 – 2005); a WECAFC regional workshop to develop national plans of action to prevent, deter and eliminate IUU fishing is tentatively scheduled for November 2004 (WECAFC/XI/03/10);

Fisheries; the Plan was adopted by consensus at the Twenty-fourth Session of the FAO Committee on Fisheries on 2 March 2001 and endorsed by the Hundred and Twentieth Session of the FAO Council on 23 June 2001.

- Cooperating with the United States in organizing a meeting for countries that operate open registries for fishing vessels (September 2003);
- Organizing a technical consultation on IUU fishing (June 2004);
- Assessing the linkage between industry subsidies, fishing capacity and IUU fishing; and
- Strengthening regional and international monitoring, control and surveillance (MCS) networks with a view to the real-time reporting and dissemination of information on the operations of IUU fishers.

Suggested action by the Commission

40. The Commission is invited to take note of this document, to contribute relevant information at the national and/or regional levels, to examine the issues raised herein and to comment upon them.

Table 1. FISHERY OUTPUT IN THE WECAFC REGION, 1992-2001

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
CAPTURE FISHERIES										
WECAFC area	1473200	1642172	2058744	1681055	1596220	1704739	1669247	1669482	1715901	1597272
Other marine areas	6315033	6207593	6038841	6453922	6537191	6371529	5781540	5759331	6080916	6533428
Inland fisheries	413055	428937	434957	446069	438143	407228	392386	389061	393762	385549
Total – Capture Fisheries	8201288	8278702	8532542	8581046	8571554	8483496	7843173	7817874	8190579	8516249
AQUACULTURE										
WECAFC area:										
In saltwater	8074	11031	13249	12923	16255	16963	16899	17106	22078	25044
Mariculture	94202	84463	70571	82068	62274	66145	60547	64174	25030	57120
Total – WECAFC Area	102276	95494	83820	94991	78529	83108	77446	81280	47108	82164
Other areas	250749	262879	271704	290468	360153	416750	446088	508756	561292	571671
Total – Aquaculture	353025	358373	355524	385459	438682	499858	523534	590036	608400	653835
TOTAL FISHERIES OUTPUT	**8554313**	**8637075**	**8888066**	**8966505**	**9010236**	**8983354**	**8366707**	**8407910**	**8798979**	**9170084**

Source: FAOSTAT

Table 2. COUNTRIES OF THE WESTERN CENTRAL ATLANTIC REGION
Apparent Consumption of Fish and Fishery Products

Average for 1997-1999 (mt in live weight)

	Output	Non-food uses	Imports	Exports	Food supply	Population (thousands)	Per capita supply (kg)
North America	**6599688**	**1377524**	**2923930**	**1377046**	**6769048**	**373351**	**18.1**
United States	5268074	1113010	2878328	1180359	5853033	277534	21.2
Mexico	1331614	264514	45602	196687	916015	95817	9.6
Central America	**281595**	**137392**	**63722**	**113583**	**94342**	**28536**	**3.3**
Belize	24583	20533	493	1835	2708	217	12.5
Costa Rica	31972	1500	33497	44527	19441	3841	5.4
Guatemala	13717	8	5831	4083	15457	10803	1.4
Honduras	18141	3	7529	12938	12729	6099	2.1
Nicaragua	23025	5	5060	13674	14405	4809	3.0
Panama	170156	115342	11313	36525	29602	2767	10.8
Greater Antilles	**150164**	**452**	**144780**	**19616**	**274876**	**29639**	**9.3**
Cuba	121740	445	37449	14114	144629	11114	13.0
Haiti	5187	0	17860	410	22637	7891	2.9
Jamaica	11425	7	31520	3250	39688	2534	15.7
Dominican Republic	11812	0	57951	1841	67921	8101	8.4
Lesser Antilles and other	**57473**	**18148**	**33230**	**16748**	**55808**	**2930**	**19.0**
Anguilla	250	0	0	0	250	11	23.4
Antigua and Barbuda	3145	1167	1262	136	3104	64	48.3
Netherlands Antilles	905	0	3234	508	3632	212	17.2
Aruba	187	0	3975	39	4123	94	44.1
Bahamas	10346	17	2883	6743	6470	296	21.9
Barbados	3184	2	5197	333	8047	266	30.3
Bermuda	461	0	1808	0	2269	62	36.4
Dominica	1169	0	1183	0	2351	71	33.1
Grenada	1584	6	1687	1243	2023	93	21.8
Guadaloupe*	9319	1	10443	18	19473	424	46.5
Cayman Islands	125	0	140	119	146	36	6.2
British Virgin Islands	112	0	0	0	112	22	5.0
US Virgin Islands	800	0	0	0	800	118	6.8
Martinique*	4869	2	12927	47.0	17747	379	46.9
Montserrat	47	0	0	0	47	6	7.4
St. Kitts and Nevis	329	0	564	9	885	39	22.7
Saint Lucia	1450	0	2509	5	3953	144	27.4
Saint Vincent and the Grenadines	18519	16933	872	249	2208	112	19.7
Trinidad and Tobago	14860	23	7917	7365	15389	1283	12.0
South America	**1525695**	**80493**	**497932**	**197232**	**1745903**	**231171**	**7.6**
Brazil	805904	75015	375476	42016	1064349	166073	6.5
Colombia	180440	0	91798	91833	180404	40689	4.4
Guyana	53953	0	575	8209	46319	754	62.0
Suriname	13044	0	2337	5963	9419	414	22.8
Venezuela	472355	5478	27746	49210	445412	23242	19.2
TOTAL	**8614615**	**1614008**	**3663594**	**1724224**	**8939977**	**665627**	**13.4**

0 = More than zero but less than one half of the relevant unit; …= no data. *Latest figures available are the 1994/97 average due to changes in the country's record-keeping methodology.

Source: FAO Yearbook of Fishery Statistics: Commodities, vol. 87, 2000.

Table 3. IMPORTS AND EXPORTS OF THE WECAFC COUNTRIES (1997- 2000) (in millions of dollars)

	Imports				Exports			
	97	98	99	00	97	98	99	00
North America	**8252436**	**8676234**	**9533003**	**10594643**	**3675444**	**3118817**	**3594801**	**3761808**
United States	8138840	8578766	9407307	10453251	2850311	2400338	2945014	3055261
Mexico	113596	97468	125696	141392	825133	718479	649787	706547
Central America	**79519**	**80199**	**72919**	**67905**	**582307**	**675053**	**518140**	**612732**
Belize	789	1729	2999	2546f	17933	20168	32028	30930f
Costa Rica	47868	36929	25359	19672	259064	262472	148321	117750
Guatemala	6212	7819	6788	8022	16213	26407	28148	35061
Honduras	9313	13728	14805	15091	50350	71983	36149	44683
Nicaragua	2278	4386	7843	7220	76250	54936	78596	127787
Panama	13059	15608	15125	15354	162497	239087	194898	256521
Greater Antilles	**122502**	**140568**	**142864**	**144851**	**119805**	**116679**	**112340**	**92838**
Cuba	16692	23985	22484	34302f	97643	98012	93296	78350f
Haiti	6709f	8323f	7990f	5949f	4078	3084f	3657f	3568f
Jamaica	51408	57130	59288	51608	15465	14459	14687	10001
Dominican Republic	47693f	51130f	53102f	52992f	2619	1124f	700f	919f
Lesser Antilles and other	**107080**	**100209**	**71637**	**70973**	**90332**	**86446**	**97125**	**117501**
Antigua and Barbuda	2378f	1786f	2373f	2099f	1014	606	644f	1562f
Netherlands Antilles	5728f	10004	6380f	8785f	833f	205	1198f	1675f
Aruba	16757	17561	17753f	18349f	599f	…	...	264f
Bahamas	8757	4471	4391f	3759f	60660	59635	69591f	89915f
Barbados	9505	6023	11044	10886	1536	1260	951	1309
Bermuda	7213f	6369f	7569f	7020f	…	…	…	254f
Dominica	1371	2102f	1539	1580	-	-	-	-
Grenada	2195	2394	2534	1500f	4293	3704	3530	2635f
Guadaloupe								
Cayman Islands	463f	665f	641f	954f	6769f	4676f	4693f	4180f
Martinique	38200f	33700f	...	...	...	...	...	...
St. Kitts and Nevis	2305	795f	2199	2807	69	13f	206	245
Saint Lucia	4205	4830	5186	4386	0	13	...	10
Saint Vincent and the Grenadines	1223	1204	1537	1149	710	470	927	961
Trinidad and Tobago	6725	8021	8009	7066	10183	12442	12315	10612
Turks and Caicos	55f	284f	482f	633f	3666f	3422f	3070f	3879f
South America	**623538**	**609335**	**405320**	**462635**	**493880**	**453597**	**504584**	**642476**
Brazil	483598	455250	289808	324249	126477	122831	138232	239110
Colombia	110782	111243	71028	74794	217843	209699	183668	190954
Guyana	407f	718f	475f	828f	23841	24126	36924	54604
French Guiana								
Suriname	5075	2579	3600f	6211	11199	4251	11640f	4827
Venezuela	23676	39545	40409	56553	114520	92690	134120	152981
TOTAL	**9185075**	**9606545**	**10225743**	**11341007**	**4961768**	**4450592**	**4826990**	**5227355**

f: FAO estimate based on the information available;…: data unavailable at a disaggregated level, but included under another heading; - : specified in the original source as ¨none¨ or ¨negligible¨, with no other indication of quantity. Source: *FAO Yearbook of Fishery Statistics: Commodities,* vol. 89, 1999.