CONCURRENT SESSION I: FISHERIES

POTENTIAL FOR COMMERCIAL OPPORTUNITIES IN FISHERIES

Ronald M. Gordon
(CARICOM Secretariat, Guyana)

ABSTRACT

The Paper provides a background to the regional fisheries industry, highlighting its strengths as well as its deficiencies. In addition, the current development thrust is outlined. Within this context, the potential for commercial opportunities in the fisheries sector is examined. Finally, current efforts at commercialisation in fisheries are briefly discussed.

Background on Regional Fisheries Industry

General

The fisheries subsector in the Region is serviced by both artisanal and industrial fishermen. Usually, the artisanal fisherman goes out to sea for short periods of time (generally day trips, seldom overnight) though in some countries he spends up to one week at sea. The artisanal fishermen also uses smaller boats/canoes (3 to 8 metres or 12 to 26 feet) in relatively unsophisticated gear. In Antigua and Barbuda, Barbados and partly Guyana, the artisanal fishermen use boats about 30 to 40 feet but no fishing aids.

In comparison, the boats used by the industrial fishermen are larger - over 14 metres or 45 feet; are equipped with mechanical and electronic aids, and are conducive to spending extensive periods (5 to 6 weeks) at sea.

The majority of fish landed in the Region is harvested by the artisanal fleets which exist in each Caricom Member State. Even in Guyana with its relatively large industrial fleet, the artisanal fishermen landed at least 80 per cent of the annual harvest over the 5-year period, 1975 to 1980.

Production and Processing

In relation to harvesting, most of the gear - despite its relative simplicity - is normally adequate. However, in some instances, the methods could be modified to achieve greater efficiency. The most serious constraint, though, is the boats. Besides being too small for overnight stay, they are not convenient for storing ice which could be used to preserve the catch. Further, the safety of the fishermen is endangered through the use of the smaller boats.

A wide range of fish-processing activities are conducted in the Region. In one state can be found a plant which produces canned and frozen, convenience fish products. The raw material for these is imported from extraregional sources. In a few other countries, primary and traditional products are produced from indigenous raw material. But in most Member Countries there are no fish processing establishments.

Marketing, Distribution and the Consumer

There are deficiencies in the marketing system, including inadequate storage and distribution facilities. These circumstances lessen the opportunity for making more protein available to nutritionally

deficient population groups. Any attempts to increase the quantities of fish landed must be programmed concurrently with an improvement in the local storage and distribution system. Of prime importance in this regard is the provision of short-term storage facilities (for 4 to 5 days) at or close to fish landing areas. This is, perhaps, best linked initially with the current distribution system and later, with an improved service.

Most consumers have a preference for particular species of fish, such as snapper, grouper and dolphin. In most instances, this preference is related to imagined rather than real differences. In several countries, the usual grading system is in order of priority - *quality*, *common*, *others* (or Grade 1, Grade 2, Grade 3) with a premium price being offered for the few species considered to be in the *quality* or *Grade 1* category. Any increase in fish landing will probably broaden the spectrum of fish harvested. In order to ensure increased consumption of unfamiliar species, it will be necessary to encourage consumer acceptability for the various species of fish and/or fish products through consumer education and promotional programmes.

The Region consumes vast quantities of traditional fish products, namely, dried salted, smoked and pickled fish. The majority of these are imported from extra-regional sources.* However, various research units within Caricom have demonstrated that these products can be produced in the Region from indigenous raw material at reasonable cost and of superior quality. This capability is of particular importance during the glut season since its establishment will ensure that the fisherman has an outlet for any catch in excess of the fish market demand. Conversely, the absence of this basic processing capability severely constraint the quantity of catch which may be landed especially during January to June. Simultaneously, and of greater consequence, the establishment of such a capability assists in the conservation of foreign exchange.

Support Services

A number of support services must be provided to ensure the normal functioning of the industry. These would include the supply of gear and other fishing materials, credit facilities, insurance coverage and the like. In some countries, these support services are met through cooperatives or agricultural banks or other similar institutions, while in other states, grave deficiencies exist in these areas. This latter situation adversely affects the well being of the industry.

Development Thrust

As part of the efforts to arrest the deterioration in the regional agricultural sector, and in keeping with the self-sufficiency goals of the Regional Food and Nutrition Strategy (RFNS), attention was focussed on the development of the fisheries subsector.

Careful consideration of the various alternatives led to the conclusion that the only rational strategy for regional fisheries development was one which sought to foster:

(i) a selective import substitution policy, through a consideration of the entire resource base and the determination as to its utilisation in relation to market demands;

(ii) a product replacement policy, influenced by the intrinsic characteristic of the fish products consumed. This must be preceded by the examination of all imports in relation to the resource base and subsequent investigation as to how the resource could be used to replace the imports.

*See Tables attached.

Most fish products regularly consumed in the Region may be classed into four groups, for ease of reference. These are primary products, low cost minimal storage products, convenience products and gourmet commodities.

Primary fish products would include whole or round fish, dressed fish, fish fillets, or other similar products. The desirable characteristics of these commodities are related almost entirely to the species of fish from which the products are prepared.

Dried salt fish, hard smoked fish and pickled fish would come within the low-cost minimal storage category. The process undergone by these products in the main determines the commodity characteristics. In some instances, the nature of the raw material contributes to a particular flavour.

Most convenience foods are canned or pre-prepared in some manner so as to minimise the need for extensive preparation by the user. The characteristics of the raw material used in the preparation of these products do influence somewhat the desirable properties of the final product, but generalisation is difficult. However, tuna, one of the species abundant in the Region, is used in the manufacture of these products.

Gourmet or luxury commodities are of a specialised nature which relates more to the intrinsic characteristics of these commodities than to any form of processing to which the foods may be subjected. Most shellfish would fall into this category as would some species of fin fish. These commodities are marketed with a minimal amount of processing and invariably command a high price in most markets.

A recent survey of consumer attitudes to fresh and processed fish indicated that consumers overwhelmingly preferred fresh fish.* Dried salted and similar products placed a distant second followed by canned fish products. In view of this, and the guidelines emanating from the strategy outlined earlier, the focus of the development thrust could be summarised thus:

(i) increased production of the preferred products - basic commodities;
(ii) production of low-cost minimal storage products;
(iii) production of convenience foods;
(iv) expanded production of gourmet commodities for local as well as export markets.

Vehicles for Implementation

An analysis of the fisheries subsector clearly demonstrated the importance of the contribution of artisanal fishermen to the production effort. Having recognised this fact, it was agreed that in order to increase regional fish production, the focus should be on artisanal fisheries. This approach was endorsed by Caricom's Standing Committee of Ministers responsible for Agriculture when they considered the development strategy in St. Kitts/Nevis in Janauary 1981. An examination of the status of this subsector would identify the glaring deficiencies which exist in areas such as handling, marketing and distribution, training and the like. Experience has shown that piecemeal attempts to rectify these deficiencies are generally far from successful. What is needed now is a comprehensive approach to satisfying the needs of the artisanal fisherman in the important areas of the industry, namely:

(i) resource assessment and management
(ii) harvesting
(iii) processing
(iv) marketing
(v) credit
(vi) insurance
(vii) training
(viii) materials and supplies; and
(ix) institutional development.

*See Study Report on Market Strategy for Fresh and Processed Fish - SYSTEMS Group of Companies, 1980.

The majority of activities encompassed by these areas would have direct impact on the artisanal fisherman. To this end, the Secretariat is seeking to develop a project which can provide the fishermen, at first hand, with the tools necessary to improve his trade. The project is best conceived of as an expansive extension service which would provide the fisherman with exposure to improved methods and techniques and services in those areas above, which are critical to his welfare.

In tandem with this *hands-on* approach, there is need for industry support covering areas which impact on the entire subsector. The areas within this purview are resource assessment, technology development, product development and aspects of fisheries management training.

In more developed economies, this support would usually be provided mainly by the research and development units of private enterprise with some government support. Such a pattern is, however, inconsistent with the status and nature of the regional economies where the involvement of private enterprise in the fishing industry is minimal.

The situation, therefore, lends itself to a long term programme in association with an institution such as The University of the West Indies which has a comprehensive scientific, technological and managerial base. Through such an institution, the industry requirements in these support areas could be fulfilled and the relevant information fed to the respective countries according to their specific needs. Such an approach would also provide a sound basis for guiding policy decisions in relation to the management of the resource.

Potential Commercial Opportunities

Within the scope of this comprehensive development programme, there exists possibilities for commercial ventures in areas such as boat building, processing - particularly of primary and low cost products - marketing and distribution, materials, supplies and services, credit and insurance. Of these, the most outstanding one is marketing and distribution.

In the light of the current situation, fishermen sometimes refrain from harvesting all that they can, for fear of the catch being left on their hands. However, in some districts, only those consumers who live close to landing sites are assured of a regular supply of fish. It follows then that through an efficient distribution system, more good quality fish can be distributed over a wider area.

The average consumer is gradually moving away from the pattern of cleaning and dressing fish at home. More and more *pan ready* fish is being purchased, that is to say, the consumer's sophistication is increasing. This provides the opportunity for small, commercially viable fish processing plants to supply this growing need. These plants can also cater to the market for low cost minimal storage products, using the indigenous technology already developed. They would also provide another outlet for catches during the peak periods.

Most fishermen currently purchase their materials and supplies from large department or hardware stores. Those who obtain these requisites through cooperatives or similar organisations receive significant discounts for goods of the same quality. In addition, the larger stores are usually unwilling to carry an adequate stock of spares or provide service facilities. The provision of such facilities together with purchase arrangements specifically for the fishing community seem to be another commercial opportunity.

Fishermen, like other entrepreneurs, seek credit from time to time to purchase a new craft or engine. However, in some instances,

the fisherman is not in a position to satisfy the normal requirements for collateral. Similarly, the fisherman's need for insurance coverage is perhaps as great as the degree of risk attached to his venture. The establishment of adequate arrangements to provide the fisherman with credit and insurance services acceptable to both vendor and purchaser is extremely challenging.

Current Developments

In several Caricom countries initiatives have been taken with respect to commercialisation of fisheries-related activities. These are in the areas of production, processing and to a limited extent, marketing. In Jamaica, a small but significant amount of its total fish production is by aquaculture - the farming of fish. Research on fish farming commenced in Jamaica in the early 1950's using *Tilapia mossambica*. Subsequently, the economic feasibility of commercial tilapia production was demonstrated using a commercial poultry feed.* In the development of this work, *Tilapia mossambica* was replaced by *Tilapia nilotica* and a specially prepared locally manufactured fish feed was used. In 1978, a government-owned farm produced more than 33,000 kg of fish. Complementing this are several private sector farms. Other Caricom countries are now examining the prospect of cultivating commercially this and other aquatic organisms.

In Guyana where development work commenced on the production of various fish products using local species (particularly the shrimp by-catch), it has been estimated that primary fish products emanating from the Guyana Fisheries Limited would be in excess of 70,000 kg for 1983. The plant also produced 47,730 kg of dried salted fish, 5,614 kg of hard smoked fish, 2,187 kg of pickled fish and 379 kg of fish sausages in 1982.**

*Cooke, S.M.E. and Moo Young, R.R. (1982): History and Status of Commercial Tilapia Farming in Jamaica.

CONCLUSION

This Conference will have the opportunity to receive more detail on some of these initiatives in subsequent sessions. It is evident that there is scope for expanding on these efforts. There is no doubt that such expansion would further the development of the Region's fisheries subsector and thus contribute to a brighter future for Caribbean agriculture.

REFERENCES

1. Study Report on Marketing Strategy for Fresh and Processed Fish, SYSTEMS, Barbados, 1980.

2. COOKE, S.M.E. and MOO YOUNG, R.R. (1982): History and Status of Commercial Tilapia Farming in Jamaica. Kingston, Jamaica.

3. Personal communication with Plant Manager, Guyana Fisheries Ltd., Georgetown, Guyana.

**Personal communication with Plant Manager, Guyana Fisheries Limited.

TABLE 1: Indicative Levels of Imports of Fish and Fish Products into the Caribbean Community[1]

Product/ Description	Quantity ('000 kg)	Value (EC$m)
Fresh fish, chilled or frozen[2] including fish fillets	5,714	14.8
Fish salted, dried or smoked	10,777	63.5
Crustacean and molluscs[3] (in shell or not, fresh, chilled or frozen)	407	5.3
Fish, prepared or preserved (not elsewhere stated, i.e. mainly canned) including caviar and caviar substitutes	10,144	51.9

Source: Extracted from Trade Reports.
Notes:

1 Data combined for years 1982, 1980, 1978, 1976 to provide indicative annual profile,

2 Data for Bahamas, excluded (not available).

3 Data for Bahamas, Montserrat, St. Christopher-Nevis excluded (not available).

TABLE 2: Indicative Levels of Imports of Fishing Gear and Equipment into the Caribbean Community[1]

Item	Quantity ('000 kg)	Value (EC$m)
Fishing nets, twine, rope[2]	107.5	1.9
Fishing hooks, tackle, rods[3]	37.4	1.4

Source: Extracted from Trade Reports.
Notes:

1 Data combined for years 1982, 1980, 1978, 1976 to provide indicative annual profile,

2 Data for Bahamas, Montserrat excluded (not available)

3 Data for Antigua, Bahamas, Montserrat excluded (not available).