

# **The Changing Face of Fisheries in the Economies of OECS Member States**

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## **ABSTRACT**

Fisheries continue to play an important and sometimes underrated part in the economies of OECS Member States, providing both full-time, part-time and seasonal employment, contributing significantly both to domestic food security and national GDP. Offshore resources and larger pelagics are felt to have the best potential for increased exploitation and present an identifiable path for technical and economic diversification. At national levels there are indications of fishers becoming both more professional and more committed. The sub-regional fisheries sector is now managing to attract private investment from persons who, with few traditional links with fishing, are bringing a new level of professionalism to it. There has, in recent years, been a significant investment in fisheries infrastructure in the OECS sub-region, contributing to a transformation process in some Member State fisheries. In some areas moves have been made to manage existing resources, but the existing technologies are inadequate to take up the challenge of resource management and the exploitation of new resources. Additionally, national policy statements and objectives for fisheries need to be further developed and clarified to assist the implementation of national fisheries strategies.

**KEY WORDS:** Economic diversification, fisheries, OECS

## **FISHERY RESOURCES OF OECS MEMBER STATES**

The distribution of fishery resources in the Member States of the Organisation of Eastern Caribbean States (OECS) can be broadly divided up on a geographical basis (Wilson 1999). The northern (Leeward Islands) group have significant shallow water resources (coastal reef demersals and pelagics) and more distantly located offshore pelagic and deep slope resources. Amongst the southern (Windward Islands) group, shallow water resources are less significant. Deeper water pelagic and deep slope resources are relatively near and easily accessible. The inshore resources, particularly shallow water reef resources, shallow water lobster and conch are under some stress. These resources have historically been the easiest and cheapest to exploit due to their proximity and

the suitability of traditional fishing methods. In some States there is very little targeting of demersal deep slope (shelf edge) fishery resources. Ciguatera poisoning of fish poses a particular problem in specific areas of the Leeward Islands, making some coral reef resources unexploitable and creating a lack of consumer acceptance for some species. In general, offshore resources and larger pelagics are felt to have the best potential for increased exploitation, based upon some existing resource studies and, particularly in the Windward islands, the apparently high profitability of the fishery (Wilson 1999). Potential for expansion of effort on certain pelagic stocks, however, may be limited by decisions of the International Commission for the Conservation of Atlantic Tunas (ICCAT).

FADs are thought to have performed well in the sub-region, attracting fishers away from coastal resources and making the fishing of some pelagics less energy intensive. In some States artificial reefs continue to serve both the fisheries and the tourist industries. In others, initial results were good, followed by a gradual degradation in performance as the artificial reef disintegrated.

There is very limited production in the sub-region from culture based activities, although studies have indicated that there is some potential for cage grow-out of shallow water demersal species (Wilson 1999). The promotion of cage based culture may conflict with other coastal resource uses, particularly tourism. In St Lucia and St Vincent there is some small-scale aquaculture production of tilapia and freshwater shrimps (George 1999, Ryan 1999). The viability of culture activities is very dependent upon the availability of suitable feed, land and water resources.

#### FISHERIES IN THE ECONOMY

The importance of fisheries to individual economies shows significant variation across the member nations. Table 1 shows the most recent values of selected indicators relating to the contribution of fisheries to the economies of OECS Member States. Some concern has been expressed by fisheries officers, at various fora, about the correct evaluation of the contribution of fisheries to Gross Domestic Product (GDP), with export valuations based on the ex-vessel rather than Freight on Board (FOB) price, thus overlooking any incremental economic benefit of the external market.

**Table 1.** Selected indicators of the contribution of fisheries to the economies of OECS Member States (Barrett 1999, Conservation and Fisheries Department 1999, Finlay 1999, George 1999, Guislie 1999, Jeffery 1999, Murray 1999a, O'Garro 1999, Ryan 1999, Simmonds 1999) n/a = not available.

Country	Contribution to GCP (EC\$M)	% of Total GDP	Landings Quantity (tonnes)	Employment # of Persons	% Fishermen
Anguilla	4.71	2.6	333	400	n/a
Antigua and Barbuda	21.8	1.8	653	1,200	n/a
British Virgin Islands	10.87	0.9	1,000	387	97
Dominica	8.84	1.6	1,079	2,891	94
Grenada	11.41	1.7	1,260	1,949	90
Montserrat	0.52	0.6	46	60	n/a
St. Kitts and Nevis	8.35	1.4	339	458	88
Saint Lucia	8.76	0.8	1,523	1,957	91
St. Vincent and the Grenadines	13.08	2.0	809	657	n/a

### **Marketing and Trade**

The primary marketing and distribution of fish in the sub-region is characterised by:

- i) Direct sales to the consumer;
- ii) Sales to many small traders, who sell to the consumer with little further processing; and
- iii) Sales to State supported marketing organisations at a guaranteed price. The national markets are, in the main, strong enough to be able to absorb all of the current production. In addition, the position which fish has in the local diet is becoming more significant as countries develop and consumers become more health conscious. If a weakness exists, it is in the internal distribution of fish products, the failure of which has been known to lead to spoilage and dumping (cf. Guiste 1999). Domestic consumption in many of the OECS Member States is focussed upon inshore species, particularly small pelagics and shallow reef demersals.

In some States the tourist market for fish products is strong, consuming a large amount of fish compared to the domestic market (George 1999). The intra-regional trade in fish is product specific, and is often focussed on added value products such as flying fish fillets. In four OECS Member States, the government intervenes directly in the purchasing of fish products with the view to providing a guaranteed price and the capacity to purchase and store large quantities of fish, even during peak production periods. Some of the same State marketing ventures are also closely involved with the importing of fish products, particularly for the tourist industry.

The principle export markets for fish products have been the United States, Europe and their dependents, but these have become more inaccessible recently (particularly the EU) following more stringent application of health and sanitary regulations. These restrictions have also had severe implications on the regional export of fish products to the French Antilles and exporting is perceived as becoming more uncertain and risky. The export trade in conch has been suppressed in recent years due to restrictions imposed by CITES, reducing foreign exchange earnings, and encouraging fishers away from the conch fishery. However, it may have been to the benefit of the resource which was under severe pressure.

### **Technology and Infrastructure**

Most of the inshore and coastal fishing in the region is carried out in open or half-decked vessels, powered by conventional outboard motors. There is a transformation under way and the more traditional wooden vessels are being

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replaced by more seaworthy 7 - 10 m glass fibre vessels powered by outboard engines rarely smaller than 75hp and often over 115hp. Of particular concern is the level of safety, the range and carrying capacity of the present fleets. Typically fuel is the most significant (around 50%) of direct operating costs. In some areas moves have been made to manage existing resources through modification of existing gears (mesh size regulations). However, the existing technologies are inadequate for the challenge of resource management and the exploitation of new resources (Wilson 1999).

The distribution of fisheries infrastructure is very uneven across the sub-region. Grant funded projects have financed the establishment of landing sites, processing infrastructure and facilities for storage of both fish and equipment (Murray 1999b). OECS Member States are unified in the opinion that the development of physical infrastructure, particularly port and storage facilities is a vital part of modernisation of the fishery, encouraging private sector investment (Wilson 1999). It is thought that this has contributed to the use of more seaworthy vessels, more consistent operating patterns, and more diversified fisheries (*ibid.*).

### **Investment and Financing**

In each of the OECS Member States there already exists at least one development finance institution lending at subsidised rates (typically 3-5% lower than the commercial banks) and, in principle, these funds are available for investment in the fisheries sector. Grenada, Dominica and St Lucia have lines of credit specifically for fisheries sector investments (Finlay 1999, Guiste 1999, George 1999). Commercial banks are also lending into the fisheries sector, but under more stringent loan conditions. Overall, there is a high rate of delinquency and defaulting on repayments by fishers who borrow from the banks. Thus, the commercial banks will only invest with caution and require real guarantees. Although funds may be available, they are in reality difficult for fishers to access. Particular problems from the fishers' viewpoints include:

- i) High initial fees (commissions, inspection fees);
- ii) Cost or unavailability of insurance;
- iii) Difficulty in the provision of sufficient guarantees and collateral.

In some instances loan ceilings of the development finance institutions are too low (typically around EC\$ 45,000 per loan) to facilitate diversification, particularly the acquisition of higher technology investments. Recently, there are some signs that both the banks and the development finance institutions are improving their attitude towards the sector (George 1999, Ryan 1999, Wilson 1999). This is more closely associated with the appearance of a new generation of investors rather than a change in the behaviour of existing operators with the

sector.

### **Subsidies**

OECS governments have facilitated investment in the sector through subsidy schemes and tax holidays, which have given concessions including import duty reduction on capital equipment, rebates on the duty paid on fuel and tax exemptions. Across Member States, subsidies vary in their degree, the inputs that are covered, and the method of implementation (Wilson 1999). They may have long term cost implications and possibly negative effects on other sectors of the economy if investment capital is in short supply.

### **INSTITUTIONAL CAPACITY**

Through the CARICOM Fisheries Resources Assessment and Management Program (CFRAMP) and the OECS, there has recently been a significant improvement in the training of fisheries officers (Haughton 1999). In many cases, the core staff of the fisheries departments are now young, dynamic and well qualified. However, the institutional capacity of Fisheries Departments is still inadequate (Wilson 1999), for the objectives and activities identified in the national fisheries management plans. Many elements of the fishery are in transition. Thus, with the need for a more pro-active part in the guidance of the evolution of fisheries, the maintenance and development of institutional capacity is very important, particularly if current expertise is to be retained in the sector.

### **FISHER DEVELOPMENT**

In general, attempts at the organisation and association of fishers have not met with success, with the result that no active and truly representative bodies exist in the sub-region. There are examples of economic co-operatives (cf. George 1999) which allow members to qualify for fuel duty rebates, but they have limited involvement with other services for members and provide little political representation. The latter has proved an obstacle to facilitate fisher participation in decision making (Wilson 1999). Since fishers feel they have nothing to gain by associating, or little to lose by not associating, there is no appreciable motivation to make the effort. Key issues are recognition and empowerment, and if the *raison d'être* of an association is to spread beyond simply direct economic benefits then the association must be given power to influence the conditions which surround its members. This can present both political and strategic problems, because the view of the user group may not necessarily be in line with the government's overall objectives. On an

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individual level, there are indications of development amongst fishers who are becoming both more professional and more committed (Jeffery 1999). In addition, the sector is managing to attract private investment from persons who have few traditional links with fishing and they too are bringing a new level of professionalism to the sector.

### FISHERIES MANAGEMENT

Advances in the management of the sub-region's fisheries have been made in the recent years, and Member States have draft fisheries management plans, installed systems for data collection and analysis, better trained fisheries division staff, and have contributed to a harmonised draft high seas fishing bill. There is however still a widely felt lack of data and background fisheries information in fields including technology, biology, catch and effort, and marketing (cf. Murray and Nichols, in press). Specifically, a serious lack of conclusive biological and catch/effort information is felt throughout the Member States. While data may be collected, there is limited capability within fisheries departments to interpret and use the information practically to guide resource management and development.

There are some problems in finalisation of the recently developed Fisheries Management Plans (FMPs), the creation of an appropriate legal framework, and the execution of some identified activities. A consultative process with stakeholders, through the establishment of Fisheries Advisory Committees (FACs), is one of the final stages in the drafting of the FMPs. The need for stakeholder participation seems to be universally accepted, but the reality has proven difficult to implement. The FACs are seen as not being truly participatory as the stakeholders have become involved in the management process at an already advanced stage (cf. also Murray et al. this volume). In some cases fisheries departments have not yet been able to establish FACs, have difficulty in allocating sufficient human and financial resources to the execution of FMPs. This difficulty is compounded by the fact that resource use conflicts in the coastal zone continue, particularly between fisheries, tourism, agriculture (pollution and erosion) and urbanisation (domestic and industrial waste).

Surveillance and the policing of national resources are seen as necessary but difficult tasks. Many OECS Member States have indicated that foreign vessels poach in their national waters, but surveillance operations are limited by the absence of funding from the profits of licenses or other rents.

### DISCUSSION

#### **Supply and Demand**

The general situation of fisheries in the OECS sub-region bears many similarities to other emerging small scale fisheries around the world (Wilson

1999). The resources which are the most *accessible* to the fishers, considering their geographic location, capture technology, capital availability and markets are coming under increasing pressure and in some instances already showing signs of collapse. The inshore shallow reef resources fall into this category (Wilson 1999). On the other hand, the exploitation of offshore pelagic and deep slope resources has some important implications. Demersal deep slope species are slow maturing and stocks are easily depleted, as has already been manifested in Grenada (Finlay 1999). The exploitation of larger pelagics (tunas, wahoo, dolphin and sailfish) imply higher energy costs and the need for larger, more seaworthy vessels. In addition, the fishery for pelagic migratory stocks is by definition seasonal, with characteristic high and low periods, making financing more challenging both for the lending institution and the borrower. Politically and socially the issue is particularly poignant as such resources have traditionally supplied a large part of the domestic (non-tourist) market (Wilson 1999).

The demand for fish and fish products is growing in the OECS sub-region as a result of economic growth, population growth, and changes in diet and consumption habits. In light of the growing stress on inshore resources, States are increasingly challenged by the difficulty of answering to their own domestic fish demands, even without the additional demands of the tourist industry. The development of tourism in the sub-region has resulted in demand to which national fisheries have been unable to respond completely and, consequently, growing fish imports (Wilson 1999). In guaranteeing a minimum and permanent market, governments are effectively subsidising their fisheries and reducing the marketing risk (*ibid.*). It is questionable whether these State marketing ventures are viable in commercial terms. In fact, if completely privatised, they might be forced to adopt very different operational and pricing strategies.

Stressed traditional fishery resources, national market demands and growing imports result in increasing pressure for diversification of the fishery. This may have implications in the fields of technology, financing, processing, and resource management. This is against the backdrop of a lack of conclusive biological and catch/effort data on the resources in the sub-region, and limited capability of fisheries departments, making it difficult for resource managers to make confident decisions regarding the management and development of the fisheries.

### **Loans and Investments**

It is important to touch on the causes of the loan repayment delinquency problem mentioned earlier. The possible causes are that borrowers are either *unable* or *unwilling* to make repayments. The inability to make repayments can be the result of issues such as:

- i) The fact that loans require regular payments and yet the fishing activity is



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- highly seasonal or payments can only be made irregularly;
- ii) The inability of the investment to support the total cost of financing;
  - iii) Natural disasters.

On the other hand, unwillingness to pay will be influenced by:

- iv) Fisher education and training, particularly regarding small enterprise management;
- v) The reality of previous financing activities in the sector. A culture of defaulting is very easily created by the concession of loans without the implementation of agreed penalty measures in the event of non-payment; and,
- vi) Extended grace periods at the start of a loan induce unwillingness to pay.

### **Technology and Marketing**

Energy costs are a growing issue in OECS fisheries and would become more important with the exploitation of more distant resources, especially if trip lengths remain short. Technical solutions are available (Wilson in press), and promotion of the knowledge of the existence of these alternatives should form part of a strategy for offshore fisheries development. Operation costs could also be reduced through the implementation of subsidies, such as a rebate on fuel duties (Wilson 1999). Already implemented in some States, these could be implemented in others if the loss of duty was seen to be offset by other financial and non-financial gains (*ibid.*). As operating cost reduction will make a depleted resource economically more harvestable, there would need to be a concomitant implementation of suitable management and development measures. For example, more selective gears are needed as an appropriate substitute for traps, and known technologies for offshore fishing (such as surface long lines) are seen to require active promotion. Particular need has been highlighted (Ryan 1999) for the development of multipurpose vessels capable of using a variety of gears rather than specialised craft. In one or two instances the viability of larger fishing vessels has been questioned and a study on vessel viability may be needed before an appropriate technology can be indicated for a given fishery. Experience with FADs has been particularly positive, attracting fishers away from near-shore resources. Expansion of the FAD program and the development of low technology FADs can continue to build upon this experience. FAD maintenance and management becomes increasingly important as other resource users (such as sport fishermen) begin to show interest.

The promotion of added value processing, particularly orientated towards import substitution and export promotion, is an area with clear potential. The tourist market can be viewed as a small piece of the export market that is conveniently logistically and bureaucratically much more accessible. The tourist market will, however, continue to be equally as demanding as the export market

in terms of quality. HACCP based quality control programs will need to be implemented if the market is to be developed.

### **Management**

Fishery policy objectives and the search for improved returns from the fishery have led those States with suitable resources and fleets to focus upon export markets in the European Union and United States, particularly for lobster and snappers. However, under current EU health and sanitary requirements (c.f. Satney 1999), only Antigua & Barbuda and Saint Vincent & the Grenadines can easily make exports to the EU, and even then they are restricted just to fresh fish. The EU requirements have had a particularly negative effect on those other States trading with the French Antilles (c.f. Barrett 1999, Murray 1999a), which have now become inaccessible markets.

Fisheries Department budgets are limited, qualified staff are overloaded, and there are insufficient personnel available to cope with an ever-increasing portfolio of departmental responsibilities. In addition to this, consultative and participatory approaches in fisheries management call for the development of new skills as well as new attitudes, and appropriate training may not be seen as a priority. Problems with the establishment and use of FACs in the development and execution of FMPs have shown that specific interventions need to be considered to raise awareness in fisheries department staff of participatory issues and provide appropriate training. The need for stakeholder participation in resource management is increasingly necessary in fisheries where the State does not have the requisite means to effectively police the resource. In cases where co-management has been successful, the management targets and mechanisms have often been based upon the legalisation of stakeholder objectives i.e. the State supports the stakeholder.

The earlier development of the FMPs may not have involved stakeholders at a sufficiently basic level and thus the implementation of co-management, based upon what are primarily State objectives, may run into inherent contradictions. This may make the FMPs prove socially impossible to implement, and lead to a drastic reduction in catches and subsequent food security and financial risks. The reduction in fishing effort in small-scale fisheries is historically difficult to achieve. At best, immediate goals can be attained through the diversion of effort rather than absolute reduction, if fisher livelihoods are to be sustained. Additionally, national policy statements and objectives for fisheries need to be further developed and clarified to assist the implementation of national fisheries strategies.

A number of areas can be suggested for consideration as strategic for intervention in OECS fisheries. In some instances sub-regional co-operation may be possible, whereas in others interventions can only be considered on an

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individual national basis. The promotion of offshore fisheries presents for many States an identifiable path for technical and economic diversification. This would need to be accompanied by suitable investigation and monitoring activities. These could be considered in the framework of a program such as the proposed CARICOM regional fisheries mechanism. Coupled with this, the training of fishers and the identification and extension of appropriate technologies could be a focus for the development for national fisheries. This could make use of regional training institutions, and/or specific intra-regional co-operation with a country, which already has an established fishery or experimental experience.

### CONCLUSION

Fisheries continues to play an important and sometimes underrated part in the economies of OECS Member States, providing both full-time, part-time and seasonal employment, contributing significantly both to domestic food security and national GDP. The regional fisheries sector has made some significant advances in recent years: Member States are now equipped with fisheries management tools, better trained staff, improved fisheries infrastructure and, in some States, the beginning of a more technically advanced and diversified fleet. Both fisheries managers and fishers continue to face challenges such as the depletion of easily accessible fish resources, the need for further training (amongst both government staff and fishers), and the difficulty of the integration of stakeholders in to the management process. Exploitation of more distant resources, and the required fleet modernization, have brought particular challenges including increased capital intensity and the importance of credit, higher fuel costs and the requirement for improved vessels, gear and port facilities. In addition, developments in external markets have made many, such as those in the EU, less accessible as import regulations have tightened up. Some of these issues could be addressed through regional initiatives such as training, the development of resource materials and aspects of research, whilst others, including policy development require urgent national attention.

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