



**Organisation of Eastern Caribbean States
Natural Resources Management Unit**

OECS Fisheries Management and Development Strategy and Implementation Plan



**Prepared by the
OECS Natural Resources Management Unit
October 1999**

This publication was funded by the Caribbean Development Bank. The views expressed in this document are those of the authors. The mention of specific companies or of their products or brand names does not imply any endorsement by, and the views expressed do not necessarily reflect the views of the Organisation of Eastern Caribbean States or the Caribbean Development Bank

Some support in the preparatory stages on the development of this document was provided by the Commonwealth Secretariat.

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Organisation of Eastern Caribbean States, the Caribbean Development Bank or the Commonwealth Secretariat concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Published by:
OECS Natural Resources Management Unit
Morne Fortuné
P.O. Box 1383
Castries
Saint Lucia, W.I.

Tel. : (758) 453 6208
(758) 452 1847
(758) 451 8930
Fax. : (758) 452 2194

E-mail : oecsnr@candw.lc
Web site: <http://www.oecsnrmu.org>

First Published October 1999

© OECS Natural Resources Management Unit

Table of Contents

Table of Contents	ii
OECS Fisheries	1
Why a Fisheries Strategy?	2
Linkages	4
Goal	5
Purpose	5
Aims, Objectives and Actions	5
Aim #1: Improved Management of the National Fisheries Industries	5
Aim #2: Market Diversification within the Fisheries Sector	6
Aim #3: Diversified and sustainable production base	7
Aim #4: Improved Regional capability for Fisheries Management	9
Implementation	10
Costs	10
Critical Assumptions	11
If the strategy works	11
Implementation Plan	12

OECS Fisheries Management and Development Strategy

OECS Fisheries

Fisheries 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 (table 1). Current methods of evaluating the contribution of fisheries to the economies of OECS Member States may overlook any incremental economic benefit of the export market, as well as support services to the industry.

In fact, it may even be argued that in addition to the value added as a consequence of export markets, expenditure on the sector such as investment in infrastructure, marketing, subsidies, and the like, could be seen as contributing to the overall value of the industry. From another point of view, employment in the fisheries sector must be considered to extend to, and include, persons other than those who catch the fish. These include “boat boys” (who clean fish for purchasers), vendors (who buy and resell the product), truckers who assist vendors with transportation, and the like.

In addition, the position which fish has in the local diet is becoming more significant as

Table 1. Selected indicators of the contribution of fisheries to the economies of OECS Member States (n/a: not available)

COUNTRY	Contribution to GDP (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	1200	n/a
British Virgin Islands	10.87	0.9	1000	387	97
Dominica	8.84	1.6	1079	2891	94
Grenada	11.41	1.7	1260	1949	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	1523	1957	91
St. Vincent and the Grenadines	13.08	2.0	809	657	n/a

countries develop and consumers become more health conscious. The improved good health of the population as a result of increased utilisation of fish and fisheries products can be seen as contributing to reduced expenditure on health services and this should be seen as increasing the true value of the fisheries sector to national economies. In some States the tourist market for fish products is strong, consuming a large amount of fish compared to the domestic market.

This support to the increasingly important tourism industry needs to be considered when determining the extent to which the fisheries sector contributes to the economies. The intra-regional trade in fish is product specific, and is often focused on added value products such as flying fish fillets.

Offshore resources and larger pelagics are thought to have the best potential for increased

exploitation and present an identifiable path for technical and economic diversification. At national levels fishers are 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. In recent years, there has been a significant investment in fisheries infrastructure in the OECS sub-region, contributing to a transformation process in some Member State fisheries. Grant funded projects have financed the establishment of landing sites, processing infrastructure and facilities for storage of both fish and equipment.

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. National policy statements and objectives for fisheries need to be further developed and clarified to assist the implementation of national fisheries strategies.

Why a Fisheries Strategy?

Against the above back-drop, the Second Meeting of the OECS Ministers of Environment Policy Committee (EPC II) mandated the OECS Secretariat, through its Natural Resources Management Unit (NRMU) to initiate the development of a Fisheries Strategy for Member States.

The Strategy was developed through the:

- conduct of a situational analysis by way of the preparation of a number of country papers serving as the main data gathering tool.
- synthesis of the national situational analyses into a white paper describing the status of the fisheries sector in the OECS sub-region.
- mounting of the OECS Regional Symposium on Fisheries Management and Development, attended by fishermen, fisheries officers and permanent secretaries of ministries responsible for fisheries.

The objectives of the symposium were to:

1. review the summary of the situational analysis;
2. discuss national, regional, and international issues which would impact on the development of a regional fisheries management and development strategy;
3. identify the factors which would restrict the strategy meeting policy objectives; and,
4. formulate elements of an action plan for the implementation of a regional fisheries management and development strategy.

The following issues were identified at the Symposium:

- Near-shore demersal fisheries resources (e.g. conch; reef and shallow shelf fishes) are coming under increasing pressure and in some instances already showing signs of collapse.
- Exports are constrained and regulated
- Strong internal markets exist in the sub-region
- There is an increased need to diversify the industry
- There is limited knowledge of potential resources
- Accessing financial resources is difficult
- Human and financial resources are limited

Related to the difficulty in accessing financial resources, two issues were identified as critical to regional fisheries development, and fundamental to the creation of a suitable social and investment environment:

- fisher future benefits, especially the incorporation of fishers into a pension scheme, and
- the absence of insurance or its high cost which in turn has resulted in the private sector investors' reluctance to invest in more advanced and more expensive vessels and equipment without the possibility of insurance coverage.

Following the symposium, the discussions and recommendations were consolidated into a strategy and implementation plan for fisheries management and development in the OECS sub-region. At the Eighth Meeting of OECS Ministers of Agriculture, a task force was appointed to refine and finalise the draft strategy. Ministers of Agriculture asked that the finalised strategy be presented to the Third Meeting of the Ministers of Environment Policy Committee (EPC III). This strategy and implementation plan was endorsed by EPC III.

Linkages

The input of Permanent Secretaries of Ministries responsible for Fisheries, Chief/Senior Fisheries Officers, and Fishermen's Representatives at the Symposium must be assumed to represent aspects of national Fisheries Management Plans (FMPs). The FMPs were developed by Fisheries Divisions/Departments taking cognisance of stakeholder considerations through various consultations and meetings, and in essence represents a form of stakeholder analysis of the needs of national industries. The further discussions and interventions at the Symposium

strengthen this input and thus ensure that the strategy relates to the national fisheries planning process.

OECS FISHERIES MANAGEMENT AND DEVELOPMENT STRATEGY: 2000-2005

GOAL

Optimal use of available resources to generate sustainable economic and social benefits is achieved.

PURPOSE

A well developed and diversified regional fisheries sector, reflecting stakeholders participation and fishers safety with increased investment in sustainable production and marketing, resulting in social and economic well being of fishers and the wider community is realised.

AIMS, OBJECTIVES AND ACTIONS (*details of activities are shown in the implementation plan: from page 12*)

<i>Aim #1: Improved Management of the National Fisheries Industries</i>
--

These objectives are geared towards improving the national fisheries management framework within Member States

Objectives:

1. Improvement of Institutional capacity of Fisheries Departments
2. Enhanced Stakeholder participation
3. Improved knowledge on resource status

Estimated cost to Member States, Regional and International Agencies : EC\$ 1.960 M

Actions:

1.1 Improve training of both fisheries officers and fishers

- 1.1.1 Increase number of fisheries officers
- 1.1.2 Train fisheries officers in areas where there is limited expertise
- 1.1.3 Vocational training of fishers

1.2 Improve accessibility of funding for fisheries departments

- 1.2.1 Increase the awareness of the contribution of the fisheries sector to economic development
- 1.2.2 Increase financing of Fisheries Divisions
- 1.2.3 Diplomatic initiatives to secure funding for capital projects

1.3 Improve fisheries management planning and compliance

- 1.3.1 Improve tools and techniques available for fisheries departments
- 1.3.2 Develop Fisheries Management Plans that are more easily implementable
- 1.3.3 Make management measures more practical to encourage compliance
- 1.3.4 Enhancement of government project planning and management
- 1.3.5 Increase awareness of the provisions of the FAO Code of conduct and related arrangements

1.4 Encourage stakeholder participation in fisheries management decision making

- 1.4.1 Facilitate dissemination of information to all stakeholders
- 1.4.2 Increase incentives for Co-Management of resources
- 1.4.3 Facilitate community level consultations for fisheries management

1.5 Ensure that fisheries conservation and management are increasingly based on improved scientific and technical knowledge

- 1.5.1 Establish data collection systems of fishery resources/identify indicators
- 1.5.2 Improve data collection, analysis and interpretation of all information to be used in management decisions
- 1.5.3 Continue and refine resource data collection
- 1.5.4 Analyze resource data.

<i>Aim #2: Market Diversification within the Fisheries Sector</i>
--

These objectives are geared towards increasing accessibility to varied markets by the diversification, and improved quality, of fishery products

Objectives:

1. Add value to fishery products through enhanced quality control
2. Add value to fishery products through increased use of by-catch
3. Add value to fishery products through improved Post Harvest Technology

Estimated cost to Member States, Regional and International Agencies : EC\$ 1.840 M

Actions:

2.1 Develop, disseminate and train in guidelines for quality assurance, including health and sanitary standards

- 2.1.1 Develop and disseminate guidelines for quality assurance
- 2.1.2 Train in guidelines for quality assurance
- 2.1.3 Develop and disseminate guidelines for health and sanitary standards
- 2.1.4 Train in guidelines for health and sanitary standards

2.2 Establish appropriate legislative framework in support of quality assurance

- 2.2.1 Develop appropriate model legislation in support of quality assurance
- 2.2.2 Establish national legislative framework

2.3 Facilitate increased added value of regional fishery products

- 2.3.1 Identify opportunities for increased use of by-catch / reduced discards
- 2.3.2 Identify opportunities for increased added value of regional fishery products
- 2.3.3 Increase Market Research
- 2.3.4 Develop product promotion programmes
- 2.3.5 Establish a cadre of professionals for advancing fisheries processing and marketing

2.4 Co-operate to achieve harmonisation of national sanitary measures and certification programmes

- 2.4.1 Evaluate existing laboratory facilities to determine appropriateness and to establish a network of laboratory facilities for testing of fishery products
- 2.4.2 Explore possibilities for the establishment of mutually recognised control and certification programmes and agencies
- 2.4.3 Increase fisheries sector involvement in the development of international instruments

2.5 Improve post harvest technology

- 2.5.1 Increase investment in post harvest technology
- 2.5.2 Increase research in post harvest technology

Aim #3: Diversified and sustainable production base

These objectives are geared towards addressing the need to increase overall production by the fisheries sector

Objectives:

1. Encourage Entrepreneurial approach among fishers
2. Encourage move from artisanal type fisheries
3. Increase investment in production
4. Reduce stress on near shore resources
5. Improve vessel and gear technology
6. Reduce discards
7. Improve enforcement of fishery legislation

Estimated cost to Member States, Regional and International Agencies : EC\$ 3.135 M

Actions:

3.1 Improve availability of capital for investment in the fishing industry

- 3.1.1 Encourage integration of fishers into existing pension schemes
- 3.1.2 Identify sources of financing and credit for private sector investment
- 3.1.3 Establish & maintain institutional framework for developing economic incentives & legal provisions
- 3.1.4 Disseminate information on financing sources and economic incentives

3.2 Identify mechanisms to reduce risk in the fishing industry

- 3.2.1 Identify alternative insurance schemes
- 3.2.2 Develop mechanisms for instituting alternative insurance schemes
- 3.2.3 Establish standing national stakeholder consultative/advisory group on insurance and risk
- 3.2.4 Identify mechanisms to reduce the impact of natural disasters on the fisheries sub-sector

3.3 Encourage expansion of pelagic fishery to reduce pressure on near-shore resources

- 3.3.1 Promote use of FADs and Artificial Reefs
- 3.3.2 Facilitate training in pelagic fishing methods

3.4 Conduct applied research to improve production from both capture and culture fisheries

- 3.4.1 Situational analysis of production from culture
- 3.4.2 Policy Development at OECS level with respect to production from culture
- 3.4.3 Conduct applied research in aquaculture, mariculture
- 3.4.4 Support/conduct research on ciguatera fish poisoning
- 3.4.5 Conduct exploratory fishing for pelagic species

3.5 Decrease resource use conflicts and destructive fishing practices

- 3.5.1 Increase use of Local Area Management Plans
- 3.5.2 Reduce destructive fishing practices
- 3.5.3 Reduce resource-use conflicts

3.6 Facilitate improvement in fishing vessel and gear technology

- 3.6.1 Determine suitability of vessels, gear and facilities for national fisheries
- 3.6.2 Increase opportunity for fishers to diversify with respect to vessel and gear technology

3.7 Encourage use of discards

- 3.7.1 Quantify Discards
- 3.7.2 Identify uses of discards

- 3.7.3 Facilitate increased use of discards

3.8 Improve fisheries monitoring, control, surveillance (MCS) and enforcement

- 3.8.1 Increased financing available for enforcement
- 3.8.2 Implement regional approaches to monitoring, control and surveillance (MCS)
- 3.8.3 Upgrade legislative provisions to facilitate MCS
- 3.8.4 Increase user participation in MCS

3.9 Improve ecological monitoring of coastal habitats

- 3.9.1 Develop protocols for ecological monitoring of coastal habitats
- 3.9.2 Implement ecological monitoring of coastal habitats
- 3.9.3 Incorporate results of monitoring into coastal planning process

3.10 Improve capacities for collection and dissemination of technology information

- 3.10.1 Train in collection and collation of technology information
- 3.10.2 Collect and disseminate technology information
- 3.10.3 Implement training and public awareness for fishers and consumers

Aim #4: Improved Regional capability for Fisheries Management

These objectives are geared towards dealing with issues which require regional action, or need to be facilitated by some regional agency

Objectives:

1. Harvesting of shared resources within OECS
2. Training at all levels
3. Define OECS relationships with other regional and international institutions
4. Improved access to insurance & disaster recovery mechanisms

Estimated cost to Member States, Regional and International Agencies : EC\$0.573 M

Actions:

4.1 Define mechanism for the exploitation and management of shared resources within the sub-region

- 4.1.1 Define mechanism for exploitation and management of shared resources
- 4.1.2 Implement management mechanism for shared sub-regional resources
- 4.1.3 Monitor effectiveness of management mechanism

4.2 Facilitate regional training for fishers and fisheries officers

- 4.2.1 Facilitate training utilising existing regional institutions
- 4.2.2 Develop centres of excellence in fisheries and facilitate training by way of TCMS

4.3 Define roles and responsibilities of various regional and international agencies with regard to international fisheries agreements

- 4.3.1 Define roles and responsibilities of regional and international agencies in the implementation of international fisheries agreements
- 4.3.2 Define roles and responsibilities of regional and international agencies in the monitoring of international fisheries agreements

4.4 Facilitate the provision of accessible insurance for the fisheries sector

- 4.4.1 Identify alternative regional insurance mechanisms
- 4.4.2 Institute regional insurance mechanism

IMPLEMENTATION

The Goal and Purpose will be achieved by collaboration between Member States and the OECS Secretariat, as well as with other regional and international agencies. Funds will be sourced by the OECS Secretariat, and other appropriate regional agencies for regional programmes and by Member States for national programmes as appropriate. The Secretariat will act as facilitator rather than as an implementer. Even for regional programmes, implementation will be carried out by national governments with facilitation by the OECS Secretariat. The OECS NRMU will be the lead agency, but will work in collaboration with other appropriate units of the OECS Secretariat, as and when necessary.

COSTS

Programme costs include those which would be expected to be provided by OECS governments through their national agencies, international and regional funding agencies, as well as regional and international inter-governmental organisations and non-governmental agencies. These costs anticipate that funds would be sourced as necessary to meet the requirements of the strategy, and also include estimates of the expected values of contributions to be made by governments.

•	Programme Costs
•	Administrative costs to OECS
TOTAL COST	EC\$ 7.973 M

CRITICAL ASSUMPTIONS

- There is a shared vision of key stakeholders in the fishing industry;
- the political directorate is cognisant of the importance of the fisheries sector to economic diversification and development;

- there is political will to carry out necessary management and development measures;
- development goals are viewed in the long term
- development benefits outweigh investment costs;
- stakeholders are receptive to training;
- stakeholders are willing to undertake more effective management practices;
- existence of a participatory framework to allow for increased stakeholder involvement in management
- donor agencies are willing to provide financial support for various aspects of the strategy;
- human, technological, and financial resources are available and accessible in a timely manner;
- regional agencies have capacity to provide required assistance/services

IF THE STRATEGY WORKS, THE OECS FISHERIES SECTOR WILL SHOW:

- Diversified and sustainable production base
- Widespread use of improved fishing technology
- Improved post harvest technology and quality assurance
- Improved market access
- Improved national and regional fishery resource management
- Enhanced stakeholder participation in fisheries resource management
- Improved role and capacity of fishers organisations
- Improved facilities and infrastructure
- Assured future benefits for fishers

IMPLEMENTATION PLAN

Action		Implementation	Agencies involved	Role	Estimated cost (EC\$)
W.B.S.	Activity				
1.1	IMPROVE TRAINING OF BOTH FISHERIES OFFICERS AND FISHERS				
<u>1.1.1</u>	<u>Increase number of Fisheries Officers</u>	Appoint more fisheries personnel as appropriate	MoAg/F, MoFin	resp.	0.00
<u>1.1.2</u>	<u>Train fisheries officers in areas where there is limited expertise</u>	Identify funding and regional and international training facilities and programmes for training of fisheries officers	OECS, FDs	co-ord	250,000.00
		Train existing fisheries officers at higher levels	UWI, CFTDI, Other	resp	
		Train new fisheries officers as necessary	UWI, CFTDI, Other	resp	
1.1.3	Vocational training of fishers	Identify funding and regional and international training facilities and programmes for training of fishers	OECS, FDs	co-ord	250,000.00
		Train fishers in areas related to improving their capability to take an enterprise approach to their craft	FDs, CFTDI, Other	resp	

Action		Implementation	Agencies involved	Role	Estimated cost (EC\$)
W.B.S.	Activity				
1.2	IMPROVE ACCESSIBILITY OF FUNDING FOR FISHERIES DIVISIONS				
1.2.1	<u>Increase the awareness of the contribution of the fisheries sector to economic development</u>	Undertake awareness programmes to sensitise publics to the contribution of the fisheries sub-sector to economic diversification and development	FDs, MoAg/F	co-ord, resp	90,000.00
1.2.2	<u>Increase financing of fisheries divisions</u>	Increase budgetary allocations of recurrent expenditure to fisheries divisions	MoAg/F, MoFin	co-ord, resp	0.00
		Source funds for capital expenditure for fisheries divisions	MoAg/F, MoFin	co-ord, resp	
1.2.3	Diplomatic initiatives to secure funding for capital projects	Utilise national diplomatic channels to acquire funding for capital projects in the fisheries sector	MoAg/F MoFA	co-ord resp	130,000.00

1.3	IMPROVE FISHERIES MANAGEMENT PLANNING AND COMPLIANCE				
1.3.1	Improve tools and techniques available for fisheries departments	Determine, in consultation with FDs, appropriate tools and techniques for fisheries management	OECS	co-ord, resp	50,000.00
		Develop/improve tools and techniques as necessary	OECS	resp	
1.3.2	Develop fisheries management plans (FMPs) that are more easily implementable	Develop awareness and sensitisation programmes to increase stakeholder interest in fisheries management	FDsOECS	respassi st	105,000.00
		Incorporate outputs of consultations into FMPs where feasible	FDs	resp	
		Hold national participatory consultations with fishers and other stakeholders to review and discuss national FMPs	FDs	resp	
1.3.3	Make management measures more practical to encourage compliance	Review existing fisheries management measures	FDs OECS	resp assist	60,000.00
		Modify existing fisheries management measures, as appropriate, to make them easier for stakeholders to comply with	FDs OECS	resp assist	
		Facilitate education and awareness among all stakeholders in fisheries management methods and techniques	FDs	resp	

1.3.4	Enhance government project planning and management	Formulate fisheries management and development plan (FMDP)	FDs	resp	100,000.00
		Integrate FMDP into Private Sector Investment Programme (PSIP)	MoAg/F		
		Identify sources of financing and credit for private sector investment	MoFin	co-ord	
			MoFin	resp	
			Dev Corps	co-ord	
				resp	
1.3.5	Increase awareness of the provisions of the FAO Code of Conduct and related arrangements	Circulate provisions of FAO Code to, and among, fishers	OECS		50,000.00
			FAO	co-ord	
			CARICOM	resp	
				assist	
		Determine appropriateness of adaptation of code to sub-regional needs	FAO		
			OECS	resp	
				assist	
		“Regionalise” FAO Code of Conduct for Responsible Fisheries	FAO		
				resp	
		Develop public awareness programmes on adapted FAO Code of Conduct	FAO		
				resp	
		Facilitate implementation of public awareness programmes on FAO Code of Conduct	FAO		
			OECS	resp	
				assist	

--	--	--	--	--	--

1.4	ENCOURAGE STAKEHOLDER PARTICIPATION IN FISHERIES MANAGEMENT DECISION MAKING				
1.4.1	Facilitate dissemination of information to all stakeholders	Develop materials and programme of training and awareness for fishers and consumers	OECS, Other	resp	10,000.00
		Facilitate training and awareness programmes for fishers, consumers and other stakeholders	FDsOECS/Other	respassist	
1.4.2	Increase incentives for co-management of resources	Clearly define “stakes” of all stakeholders			180,000.00
		Develop awareness and sensitisation programmes to increase stakeholder participation	FDs	resp	
		Develop mechanisms for sharing and feedback of information with/from stakeholders	FDs OECS	resp assist	
		Develop mechanisms for disseminating fisheries information to all stakeholders	FDs OECS	resp assist	
1.4.3	Facilitate community level consultations for fisheries management	Hold participatory consultations with all stakeholders	FDs OECS	co-ord resp	60,000.00
			FDs OECS	resp assist	

1.5	ENSURE THAT FISHERIES CONSERVATION AND MANAGEMENT ARE INCREASINGLY BASED ON IMPROVED SCIENTIFIC AND TECHNICAL KNOWLEDGE				
1.5.1	Establish data collection systems for fishery resources and to identify indicators	Determine data needs for national fisheries management	FDs OECS RFM	resp assist assist	270,000.00
		Design data collection system as appropriate	FDs OECS RFM	co-ord resp assist	
		Hire data collectors as necessary	FDs MoAg/F	co-ord assist	
		Implement data collection system	FDs	resp	
1.5.2	Improve data collection, analysis and interpretation of all information to be used in management decisions	Determine efficacy/efficiency of data collection system	OECS RFM	co-ord resp	135,000.00
		Determine necessary improvements	RFM OECS	resp assist	
		Facilitate improvement to data collection system	FDs	resp	

1.5.3	<u>Continue and refine resource data collection</u>	Determine quality/utility of analyses of fisheries resource data	MoAg/F	assist	135,000.00
			RFM	resp	
		Facilitate necessary refinements to analytical procedures	FDs	resp	
			RFM	assist	
		Carry out required improvements	RFM	resp	
		Develop guidelines and facilitate training in techniques for data analysis and interpretation	RFM	resp	
		Facilitate fisheries resource data collection	OECS	assist	
			FDs	resp	
		Refine design of data collection system as necessary	MoAg/F	assist	
			FDs	resp	
1.5.4	<i>Analyse resource data</i>	Compile/Collate accumulated resource data	RFM	assist	85,000.00
			FDs	resp	
		Carry out appropriate analyses and interpretation of data resource data	RFM	assist	
			FDs	resp	
		Utilise resource data in decision making	MoAg/F	assist	
			FDs	resp	

--	--	--	--	--	--

2.1	DEVELOP, DISSEMINATE AND TRAIN IN GUIDELINES FOR QUALITY ASSURANCE, INCLUDING HEALTH AND SANITARY METHODS				
2.1.1	Develop and disseminate guidelines for quality assurance	Review all existing guidelines for quality assurance	OECS MoH	resp assist	25,000.00
		Develop a manual of guidelines relevant to OECS Member States	OECS MoH	resp assist	
		Disseminate guidelines for quality assurance	OECS	resp	
2.1.2	Train in guidelines for quality assurance	Develop training modules for quality assurance guidelines	OECS MoH	resp assist	50,000.00
		Facilitate training	OECS	resp	
	Develop and disseminate guidelines for health and sanitary standards	Review all existing guidelines for health and sanitary standards	OECS MoH	resp assist	25,000.00
		Develop a manual of guidelines relevant to OECS Member States	OECS	resp	
		Disseminate guidelines for health and sanitary standards	MoH	assist	
		Develop training modules for health and sanitary standards guidelines	OECS	resp	
	Train in guidelines for health and sanitary standards	Facilitate training	OECS MoH	resp assist	50,000.00
			OECS	resp	

2.2	ESTABLISH APPROPRIATE LEGISLATIVE FRAMEWORK IN SUPPORT OF QUALITY ASSURANCE				
2.2.1	Develop appropriate model legislation in support of quality assurance	Review legislative requirements in support of quality assurance	OECS	co-ord	40,000.00
		Review existing legislation on quality assurance Draft model legislation and regulatory instruments in support of quality assurance	OECS OECS	co-ord resp	
2.2.2	Establish national legislative framework	Review model legislation in support of quality assurance	MoLA	resp	180,000.00
		Adapt model legislation to meet local needs	MoLA	resp	
		Promulgate adapted model legislation	MoAg/F MoLA	resp assist	
		Establish/enhance regulatory agency(s)	MoAg/F MoLA	co-ord assist	

2.3	FACILITATE INCREASED ADDED VALUE OF REGIONAL FISHERY PRODUCTS				
2.3.1	Identify opportunities for increased use of by-catch and/or for reduced discards	Quantify and qualify by-catch and/or discards	OECS FDs	co-ord resp	20,000.00
		Investigate possible uses for by-catch/discards			
		Disseminate information to Member States	OECS	co-ord	
		Conduct study on post harvest losses	OECS	resp	
2.3.2	Identify opportunities for increased added value of regional fishery products	Determine methodologies for minimising post harvest losses	OECS FDs FDs OECS RFM	co-ord resp resp assist assist	20,000.00
		Disseminate to Member States			
		Increase research regarding regional and international markets for fishery products	OECS FDs	resp assist	
2.3.3	Increase Market Research	Design and implement strategy for collecting market information	FDs OECS	resp assist	100,000.00
		Identify preferred or alternative products	OECS	co-ord	
	<u>Develop product promotion</u>				

2.3.4	<u>programmes</u>	Design product promotion programmes for preferred or alternative fishery products	FDs OECS	resp assist	180,000.00
		Participate in national and regional food fairs	MoTrad OECS	resp assist	
		Establish Web site for promoting OECS sea foods	MoTrad FDs Fishers	co-ord assist resp	
		Identify training needs for fisheries processing and marketing	OECS MoTrad	co-ord resp	
	2.3.5	Identify suitable training institution(s)			200,000.00
		Identify candidates for training	FDs OECS OECS UWI CFTDI Other	resp assist co-ord assist assist assist	
		Facilitate training	FDs MoTrain	resp resp	
		Facilitate exchange of trained personnel among Member States	MoTrain OECS	resp assist	
			FDs OECS	resp assist	

2.4	CO-OPERATE TO ACHIEVE HARMONISATION OF NATIONAL SANITARY MEASURES AND CERTIFICATION PROGRAMMES				
2.4.1	Evaluate existing laboratory facilities to determine appropriateness, and to establish a network of laboratory facilities for testing of fishery products	Survey existing food testing laboratory facilities in/among Member States	OECS	co-ord	20,000.00
		Evaluate appropriateness of existing national laboratories for testing fishery products for international standards	OECS	co-ord	
		Determine needs for achieving required standards Determine acceptability/feasibility of networking regional laboratories to provide testing to international standards	OECS MoAg/F MoH OECS	co-ord resp assist assist	
2.4.2	Explore possibilities for the establishment of mutually recognised control and certification programmes and agencies	Review existing food certification programmes and agencies in/among Member States to determine appropriateness for international standards	OECS	co-ord	20,000.00
		Determine needs for achieving required standards	OECS	co-ord	
		Determine acceptability/feasibility of establishing mutually recognised control and certification programmes and agencies	MoAg/F MoH OECS	resp assist assist	

2.4.3	Increase fisheries sector involvement in the development of international instruments	Establish consultative mechanism among stakeholders	FDs	resp	210,000.00
		Facilitate dissemination of information among stakeholders	FDs	resp	
		Facilitate feedback from stakeholders	FDs	resp	
		Facilitate incorporation of stakeholder views in national position on international instrument	FDs MoFA	assist resp	

2.5	IMPROVE POST HARVEST TECHNOLOGY				
2.5.1	<i>Increase investment in post harvest technology</i>	Provide financing for investment in post harvest technology	Dev Corps CDB	resp assist	500,000.00
2.5.2	Increase research in post harvest technology	Determine research needs in post harvest technology	FDs MoAg/F Proc	co-ord assist resp	200,000.00
		Carry out post harvest technology research	FDs MoAg/F Proc	co-ord assist resp	

3.1	IMPROVE AVAILABILITY OF CAPITAL FOR INVESTMENT IN THE FISHING INDUSTRY				
3.1.1	Encourage integration of fishers into existing pension schemes	Review participation of fishers in national social security and other future benefit schemes	MoFin NIS	co-ord resp	90,000.00
		Determine feasibility of increased participation of fishers in national future benefit schemes	MoFin NIS	co-ord resp	
		Make recommendations for integration of fishers into existing future benefit schemes	FDs	assist	
		Facilitate awareness of fishers of advantages of, and mechanisms for, participation in national future benefit schemes	MoFin NIS FDs	co-ord resp assist	
		Review current availability of financing for private sector investment in the fishing industry	NISFDs	respassi st	
3.1.2	Identify sources of financing and credit for private sector investment	Determine new or more accessible sources of financing and credit	OECS MoFin MoAg/F	co-ord resp assist	20,000.00
		Establish standing stakeholder consultative advisory group	OECS MoFin	co-ord resp	
3.1.3	<u>Establish and maintain institutional framework for developing economic incentives and legal</u>	Facilitate meetings of advisory group	MoFin Other FDs	co-ord assist assist	180,000.00

3.1.4	<u>provisions</u> <i>Disseminate information on financing sources and economic incentives</i>	Ensure on-going legal reform	FDs MoAg/F	resp assist	10,000.00
		Collate information on financing sources and economic incentives	MoLA MoAg/F	resp assist	
		Disseminate information to stakeholders	MoFin Other FDs	co-ord assist assist	
			FDs	resp	

3.2	IDENTIFY MECHANISMS TO REDUCE RISK IN THE FISHING INDUSTRY				
3.2.1	Identify alternative insurance schemes	Review existing insurance schemes	OECS MoFin Other	co-ord resp assist	10,000.00
		Review existing alternative schemes which could be utilised as forms of insurance	OECS MoFin	co-ord resp	

3.2.2	Develop mechanisms for instituting alternative insurance schemes	Determine options for use of existing alternative schemes which could be utilised as forms of insurance	Other	assist	90,000.00
			OECS	co-ord	
			MoFin	resp	
			Other	assist	
3.2.3	Establish standing national stakeholder consultative /advisory group on insurance and risk	Facilitate consultation with stakeholders to investigate possibility of use of existing alternative schemes as forms of insurance	MoFin	resp	160,000.00
			Other	assist	
		Determine preferred mechanisms for instituting alternative insurance schemes	MoFin	resp	
			Other	assist	
3.2.4	Identify mechanisms to reduce the impact of natural disasters on the fisheries sub-sector	Institute preferred mechanisms for instituting alternative insurance schemes	MoFin	resp	30,000.00
			Other	assist	
		Establish standing stakeholder consultative advisory group on insurance and risk (c.f. 3.1.3)Facilitate meetings of advisory group (c.f. 3.1.3)	MoFin	co-ord	
			Other	assist	
		Determine impact of natural disasters on the fisheries sub-sector	FDs	assistres	
			FDs	p	
		Develop vulnerability assessment risk maps	MoAg/F	assist	
		Determine impact of natural disasters on the fisheries sub-sector	FAO	co-ord	30,000.00
			MoAg/F	assist	
		Develop vulnerability assessment risk maps	FAO	co-ord	
			MoAg/F	assist	
		Develop disaster preparedness and impact mitigation action plans	FAO	co-ord	
			MoAg/F	resp	

		Develop training manuals on preparing for natural disasters in the fisheries sub-sector	FAO MoAg/F	co-ord assist	
		Disseminate training manuals	MoAg/F	resp	

3.3	ENCOURAGE EXPANSION OF THE PELAGIC FISHERY TO REDUCE PRESSURE ON NEAR-SHORE RESOURCES				
3.3.1	Promote use of Fish Aggregating Devices (FADs) and Artificial Reefs (ARs)	Plan programme for FAD and AR establishment	RFM FDs	co-ord assist	35,000.00
		Develop and disseminate guidelines	RFM FDs	resp assist	
3.3.2	Facilitate training in pelagic fishing methods	Secure funding Identify training facilities	MoAg/F MoFinOECS FDs	resp assistco -ord assist	25,000.00
		Identify funding	OECS FDs	assist resp	

3.4	CONDUCT APPLIED RESEARCH TO IMPROVE PRODUCTION FROM BOTH CAPTURE AND CULTURE FISHERIES				
3.4.1	<u>Situational analysis of production from fish culture</u>	Conduct situational analysis on status of production from aqua/mariculture in the sub-region	RFM OECS FDs	resp assist assist	40,000.00
3.4.2	<i>Policy development at sub-regional level with respect to production from fish culture</i>	Conduct regional workshops geared to developing policy on aqua/mariculture	RFM OECS FDs	resp assist assist	30,000.00
3.4.3	Conduct applied research on aquaculture/mariculture	Develop applied research programmes on aquaculture/mariculture	RFM OECS FDs	resp assist assist	200,000.00
		Carry out applied research on aquaculture/mariculture	RFM FDs	resp assist	
3.4.4	Support/conduct research on ciguatera fish poisoning	Disseminate research results to stakeholders Develop applied research programmes on ciguatera fish poisoning	RFM FDsRFM OECS FDs	resp assistres p assist assist	200,000.00
		Support/conduct applied research on ciguatera fish poisoning	RFM FDs	resp assist	
		Disseminate research results to stakeholders	RFM FDs	resp	

3.4.5	Conduct exploratory fishing for pelagic species	Develop exploratory fishing programmes	FDs	assist	500,000.00
		Support/conduct exploratory	FDs	resp	
		Disseminate results to stakeholders	FDs	resp	
			OECS RFM	resp assist assist	

3.5	DECREASE RESOURCE USE CONFLICTS AND DESTRUCTIVE FISHING PRACTICES				
3.5.1	Increase use of local management area plans	Identify areas for local management	FDs MoAg/F	resp assist	180,000.00
		Develop local management area plans	FDs MoAg/F OECS	resp assist assist	
		Designate local management authorities	FDs MoAg/F	resp assist	
		Implement local management area plans	FDs MoAg/F	resp assist	
3.5.2	Reduce destructive fishing	Review use of destructive fishing practices	FDs	resp	70,000.00

3.5.3	practices	Determine alternative/preferred practices	FDs	resp	85,000.00
		Prohibit destructive fishing practices	FDs	resp	
		Improve enforcement of relevant fisheries legislation	FDs CGs/PMUs	assist resp	
	Reduce resource use conflicts	Determine extent of resource use conflicts	FDs OECS	resp assist	
		Facilitate user consultations	FDs OECS	resp assist	
		Determine conflict mitigation measures	FDs Fishers Others	co-ord assist assist	
		Monitor conflict mitigation measures	FDs Others	resp assist	

3.6	FACILITATE IMPROVEMENT IN FISHING VESSEL AND GEAR TECHNOLOGY				
3.6.1	Determine suitability of vessels, gear, and facilities for national fisheries	Carry out diagnostic study on suitability of vessels, gear and facilities	FAO OECS RFM FDs	resp assist assist assist	50,000.00

3.6.2	Increase opportunity for fishers to diversify with respect to vessel and gear technology	Disseminate results of study to stakeholders	FAO OECS RFM FDs	resp assist assist assist	180,000.00
		Determine appropriate technology	FAO FDs OECS RFM	co-ord resp assist assist	
		Provide opportunities for acquisition of capital to obtain appropriate technology	Dev Corps MoFin FDs	resp assist assist	

3.7	ENCOURAGE USE OF DISCARDS				
<u>3.7.1</u>	<u>Quantify discards</u>	Carry out diagnostic study to determine extent of discarding in regional fisheries	RFM FAO OECS	resp assist assist	30,000.00
		Disseminate results of study to stakeholders	RFM FAO OECS	resp assist assist	
3.7.2	Identify uses for discards	Carry out diagnostic study to identify uses for discard	RFM FAO OECS	resp assist	30,000.00

3.7.3	Facilitate increased use of discards	<p>Disseminate results of study to stakeholders</p> <p>Encourage availability of funding to allow for increased use of discards</p> <p>Improve availability of capital to facilitate increased use of discards</p>	<p>RFM FAO OECS</p> <p>MoAg/F MoFin</p> <p>Dev Corp</p>	<p>assist</p> <p>resp assist assist</p> <p>co-ord assist</p> <p>resp</p>	10,000.00
-------	--------------------------------------	--	---	--	-----------

3.8	IMPROVE FISHERIES MONITORING, CONTROL, SURVEILLANCE (MCS) AND ENFORCEMENT				
3.8.1	Increase financing available for enforcement	Determine necessary increase in financing necessary to improve national fisheries MCS and Enforcement	MoFin FDs Cgs/PMUs	resp assist assist	30,000.00+
3.8.2	Implement regional approaches to monitoring, control and surveillance	<p>Provide increased financing to FDs and Cgs/PMUs for MCS and Enforcement</p> <p>Facilitate fisher participation in MCS consultationsReview existing MCS systems</p>	<p>MoAg/F MoFin</p> <p>FDs FDs Cgs/PMUs OECS RSS</p>	<p>co-ord resp</p> <p>resp resp resp co-ord assist</p>	75,000.00

3.8.3	<u>Upgrade legislative provisions to facilitate MCS</u>	Integrate MCS SOPs into training programme of RSS	OECS RSS FDs	co-ord resp assist	45,000.00
		Develop appropriate modalities for regional surveillance, in collaboration with relevant agencies for	Cgs/PMUs RSS Others	resp resp assist	
3.8.4	<i>Increase user participation in MCS</i>	Review and assess existing legislation to facilitate improved MCS	MoLA Cgs/PMUs FDs OECS	resp resp resp assist	100,000.00
		Update existing legislation to facilitate improved MCS	MoLA	resp	
		Implement a coastal watch programme in collaboration with coastal communities	FDs CGs/PMUs	resp assist	

3.9	IMPROVE ECOLOGICAL MONITORING OF COASTAL HABITATS				
<u>3.9.1</u>	<u>Develop protocols for ecological monitoring of coastal habitats</u>	Identify priority habitats for monitoring	FDs OECSRFM	resp assist	45,000.00
		Design monitoring system	FDs		

3.9.2	<i>Implement ecological monitoring of coastal habitats</i>	Identify guidelines for monitoring	OECS RFM	resp assist assist	430,000.00
		Provide funding for implementing monitoring of priority coastal habitats	FDs OECS RFM	resp assist assist	
		Initiate monitoring	MoAg/F MoFin	resp assist	
3.9.3	Incorporate results of monitoring into coastal planning processes	Collate and analyse results of coastal monitoring programme	FDs MoAg/F	resp assist	20,000.00
		Utilise results in coastal planning and development control	FDs	resp	
			MoPl DCA	resp resp	

3.10	IMPROVE CAPACITIES FOR COLLECTION AND DISSEMINATION OF TECHNOLOGY INFORMATION				
3.10.1	Train in collection and collation of technology information	Determine training needs with regard to collection and collation of technology	FDs OECS	resp assist	35,000.00

3.10.2	Collect and disseminate technology information	information			
		Acquire funding for training in collection and collation of technology information	MoAg/F MoTrain	co-ord resp	
		Facilitate training collection and collation of technology information	FDs MoAg/F	co-ord assist	
		Design protocols for information acquisition	FDs MoAg/F Others	resp assist assist	30,000.00
3.10.3	Implement training and public awareness for fishers and consumers	Collect technology information and disseminate to users	FDs Fishers	resp resp	
		Design public awareness programme to disseminate technology information to stakeholders	FDs OECS Fishers	resp assist assist	70,000.00
		Facilitate public awareness programme to disseminate technology information to stakeholders	FDs	resp	

4.1	DEFINE MECHANISM FOR THE EXPLOITATION AND MANAGEMENT OF SHARED RESOURCES				
4.1.1	<u>Define mechanism for</u>	Conduct situational analysis on the exploitation	RFM	resp	50,000.00

	<u>exploitation and management of shared resources</u>	of shared resourcesDefine options for sub-regional management of shared resources	OECSOECS RFM FDs	co-ordco-ord assist resp resp assist	
		Conduct review of existing OECS Common Fisheries Zones concept within the framework of existing international agreements	OECS FDs		
		Present findings of review to OECS Authority	OECS		
		Determine preferred option for sub-regional management of shared resources	OECS RFM FDs	resp co-ord assist resp	
4.1.2	<i>Implement management mechanism for shared sub-regional resources</i>	Establish arrangement utilising preferred option for management of shared resources	FDs OECS RFM		40,000.00
		Maintain sub-regional arrangement	FDs	resp co-ord assist	
4.1.3	Monitor effectiveness of management mechanism	Provide feedback on effectiveness of mechanism	FDs OECS RFM	resp resp co-ord assist	10,000.00
		Suggest adaptations to mechanism as necessary	FDs OECS RFM	resp co-ord assist	

4.2	FACILITATE REGIONAL TRAINING				
4.2.1	Facilitate training utilising existing regional institutions	Source funding for training	OECS FDs	co-ord resp	350,000.00
		Develop an inventory of research/training vessels and facilities and their conditions for use by OECS Member States	OECS RFM FDs	assist resp assist	
		Facilitate training of fishers and fisheries officers	FDs OECS Others	resp assist assist	
4.2.2	Develop regional centres of excellence in various aspects of fisheries training	Identify skills requiring excellence	FDs OECS	resp co-ord	50,000.00
		Identify appropriate training institutions	OECS MoEd	assist resp	
		Provide requirements to create centre of excellence	MoEd UWI Other	resp assist assist	

4.3	DEFINE ROLES AND RESPONSIBILITIES OF VARIOUS REGIONAL AND INTERNATIONAL AGENCIES				
-----	--	--	--	--	--

4.3.1	WITH REGARD TO INTERNATIONAL FISHERIES AGREEMENTS Define roles and responsibilities agencies in the implementation and monitoring of international fisheries agreements	Conduct a review to consider roles and responsibilities Present recommendations to OECS Authority for endorsement Implement recommendations of review	OECS FDs OECS OECS FDs	resp assist resp resp resp	40,000.00
4.4	FACILITATE PROVISION OF ACCESSIBLE INSURANCE FOR THE FISHERIES SECTOR				
4.4.1	Identify alternative regional insurance mechanisms	Conduct review of insurance availability for fisheries sector Conduct review of insurance requirements Identify possible alternative insurance mechanisms Determine most feasible option	OECS OECS OECS MoFin OECS MoFin	resp resp co-ord resp co-ord resp	15,000.00
4.4.2	Institute regional insurance mechanism	Implement preferred option for alternative regional fishing vessel insurance mechanism(s)	MoFin OECS	resp assist	18,000.00

KEY:

OECS
MoAg/F

Organisation of Eastern Caribbean States
Ministries of Agriculture and Fisheries

MoEd
MoFin

Ministries of Education
Ministries of Finance

MoFA	Ministries of Foreign Affairs
MoLA	Ministries of Legal Affairs
MoTrad	Ministries of Trade
MoTrain	Ministries responsible for Training
MoH	Ministries of Health
MoPl	Ministries of Planning
FDs	Fisheries Divisions/Departments
CARICOM	Caribbean Community Secretariat
CFTDI	Caribbean Fisheries Training and Development Institute
UWI	University of the West Indies
Other	Other agencies
Proc	Fish processing facilities
IFI	International Financing Institutions
FAO	United Nations Food and Agriculture Organization
Dev Corps	national Development Corporations/Banks
ECCB	Eastern Caribbean Central Bank
CDB	Caribbean Development Bank
RFM	CARICOM Regional Fisheries Advisory Mechanism
CGs	Coast Guards
PMUs	Police Marine Units

PRIORITIES:

First	Bold
Second	<u>Underline</u>
Third	<i>Italics</i>
Other	normal

ROLES

co-ord	co-ordinate activities among various agencies
resp	major responsibility for delivery of output(s)
assist	provide assistance to facilitate delivery of output

ESTIMATED COSTS

0.00	Estimate cost cannot be given at present, needs to be determined by national government
+	Cost only includes regional component, national input needs to be determined by national government