



Fisheries Division



BARBADOS - OCEAN ECONOMY TRADE STRATEGY



PRESENTATION SUMMARY

OETS – A NEW APPROACH - PURPOSE

SITUATION ANALYSIS FOR BARBADOS

THE LONGLINE INDUSTRY

OETS REPORT – MAIN FINDINGS

FUTURE ACTION PLAN



OCEANS ECONOMY AND TRADE STRATEGY (OETS) PROJECT

AIM

To support coastal developing countries including small island developing states (SIDs), in realizing economic benefits from trade in sustainable products and/or services in key ocean economy based sectors within the UN Law of the Sea framework

A synopsis of the preliminary findings on the potential of the large pelagic longline fishery in Barbados

OCEAN ECONOMY AND TRADE STRATEGY PROJECT

THE PROCESS

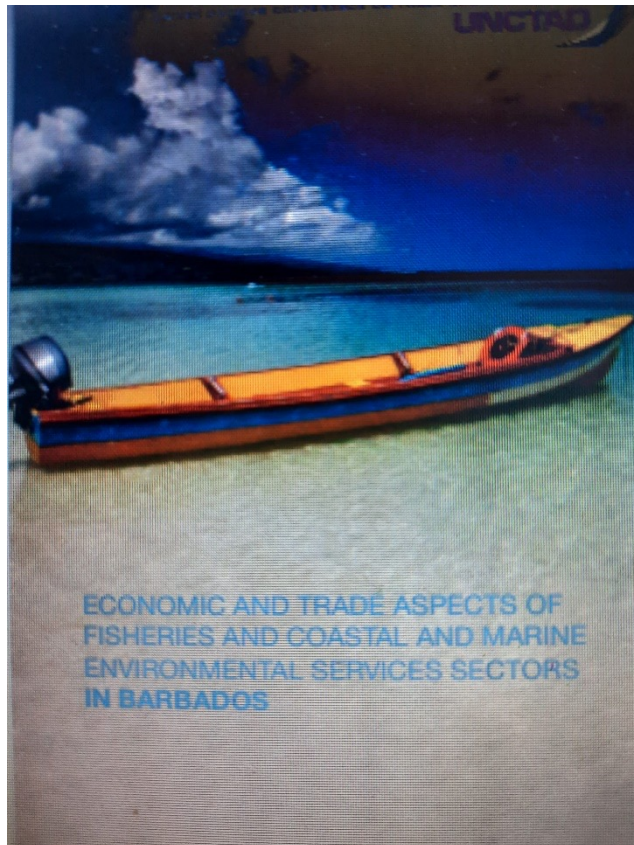
PHASE 1 -Conduct Situation Analysis – Data Collection

- Map Stakeholders in 4 ocean based economy sectors with potential products and service
- Conduct an Economic and Trade Assessment
- Conduct Desk Study on the Legal and Institutional framework for the sectors

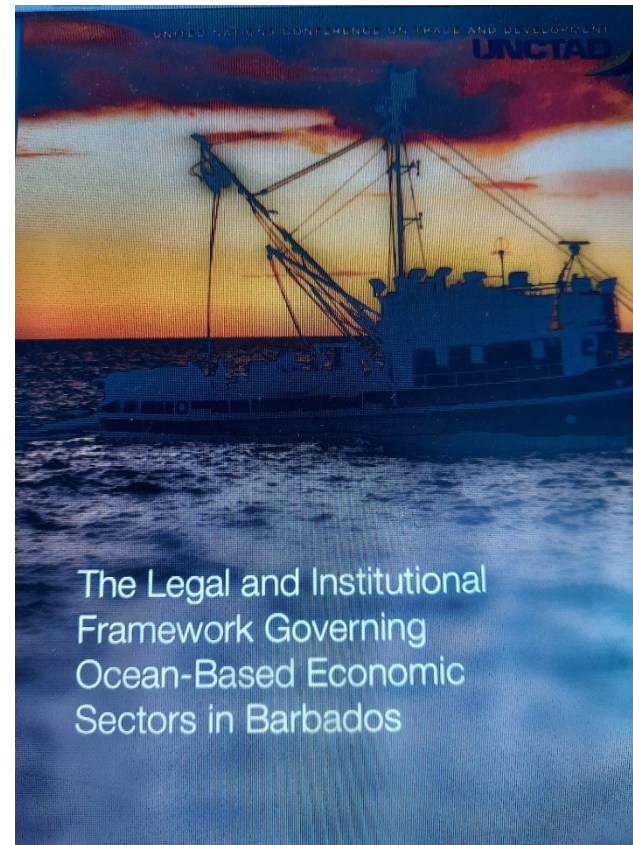
SECTORS SELECTED TO BE RESEARCHED

- Marine fisheries
- Marine aquaculture
- Seafood processing
- Coastal and Marine Environmental Services

Economic And Trade Aspects Of
Fisheries And Coastal And
Marine Environmental Services
Sector In Barbados



The Legal and Institutional Framework
Governing Ocean-Based Economic
Sectors in Barbados-2019



THE BARBADOS LONGLINE INDUSTRY

Origins:

In the early 1990's Barbados Development Bank commissioned a feasibility study on the potential for developing a longline fishery in Barbados, which concluded that longlining would be viable in Barbados provided that smaller boats (40 to 50 ft. LOA or 12.2 to 15.2m) were used.

That fleet model has remained to the present day with the active longliners all being under 20m LOA

A number of them are retrofitted iceboats.



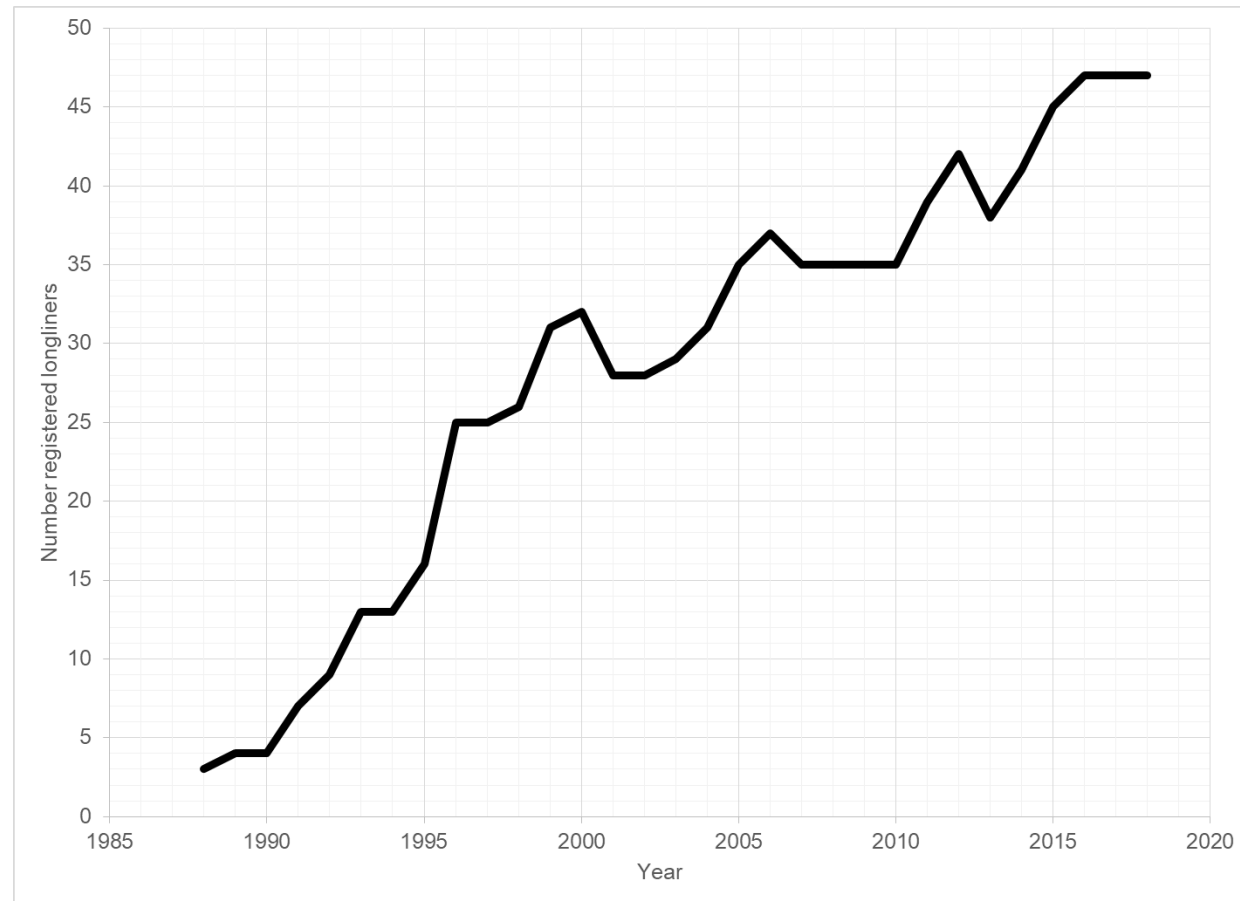
THE BARBADOS LONGLINE INDUSTRY

Origins:

The longline fishery started in Barbados in 1988 with three vessels

By 2014 the Barbados longline fishing fleet had grown to 47 over the last six years.

However, only a portion of that number ranging from around 25 to a maximum of 32 in 2018 actually fish in any given year



THE BARBADOS LONGLINE INDUSTRY

Longliners contribute over 90% of the island's total catches of t Tunas, billfishes and swordfish.

In earlier years swordfish were targeted much more than currently and also exported.

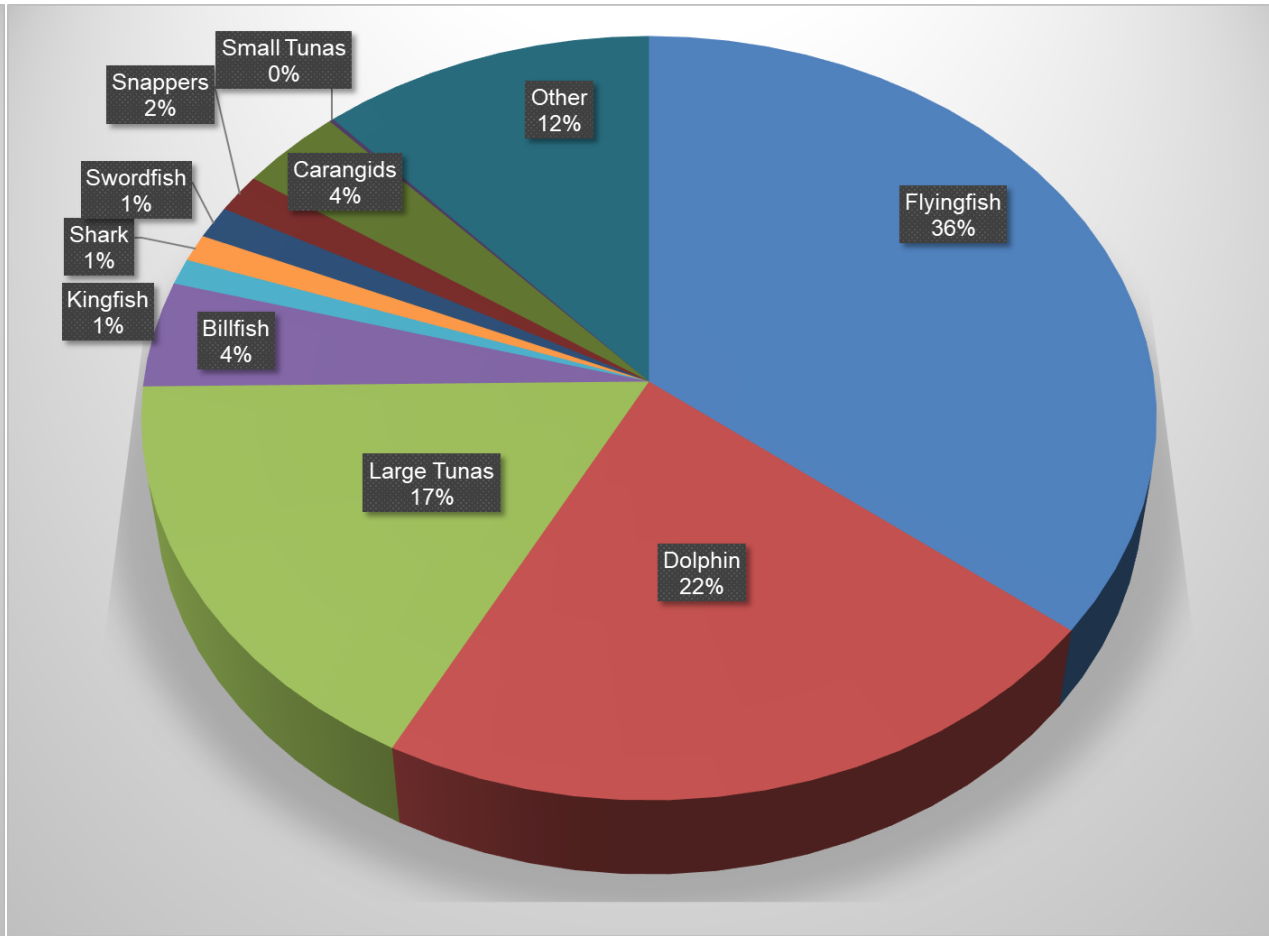
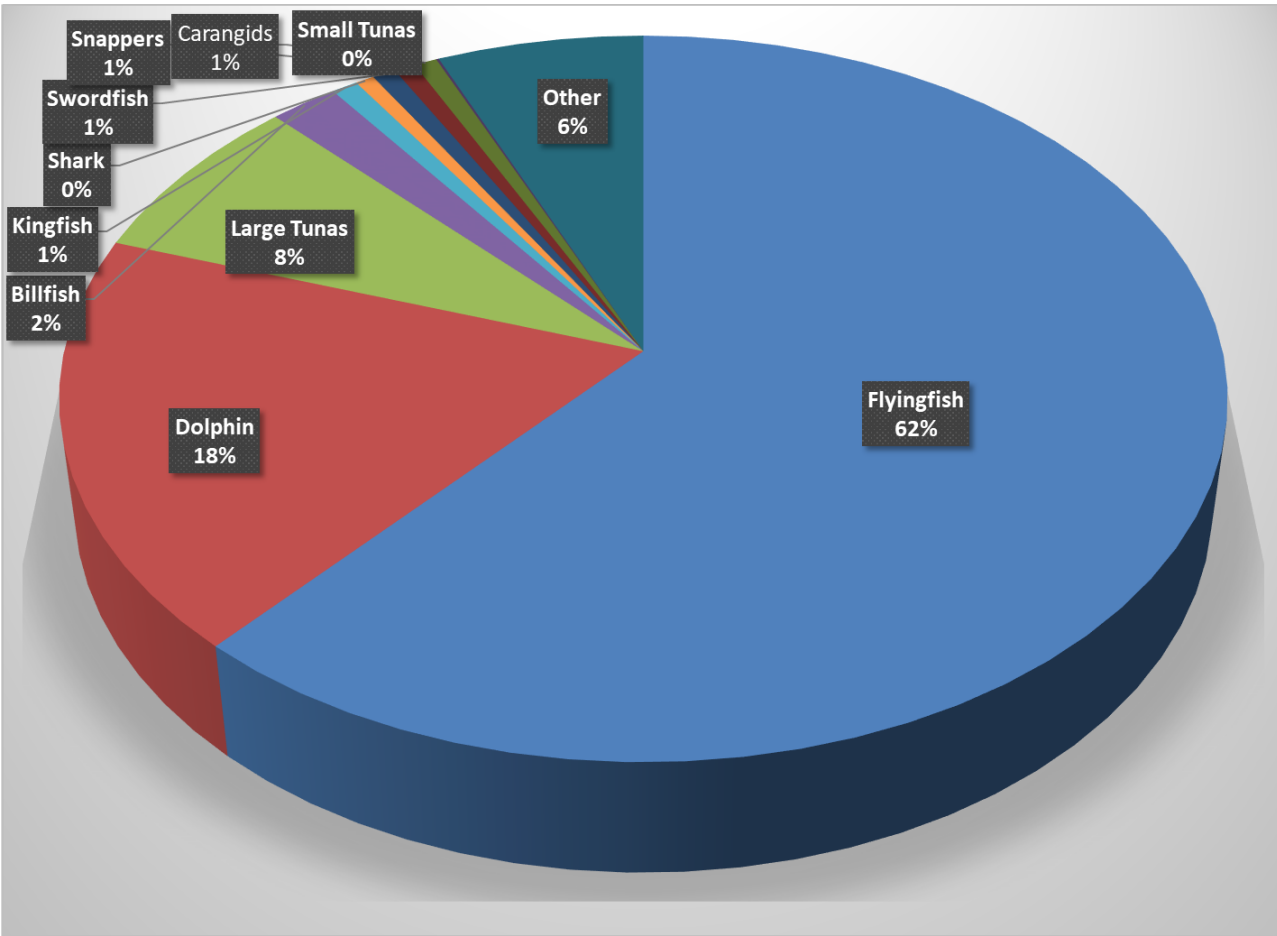
However tunas specifically yellowfin tuna are primarily targeted and exported exclusively to the USA

According to data from the US NMFS, the average annual weight of tunas exported from Barbados over the last 10 year period was around 176t with a (custom's) value of around US\$1.6 M



THE BARBADOS LONGLINE INDUSTRY

The largest contributor to the island's total fish catch by weight has been flying fish (blue) but during the "sargassum" years (2011-present) catches declined, the contribution of Large Pelagics (green) increased.





THE BARBADOS LONGLINE INDUSTRY

OPPORTUNITIES

- Strong global demand for raw tuna
- Increase export of Yellowfin & Bigeye Tuna (grade 1 and volume)
- Potential increase in capture of swordfish and albacore tuna

CHALLENGES

- High operating costs
- Dependent on single importer
- Grading risks
- Inconsistent data collection
- Aging infrastructure
- Inefficient vessel management
- Co-management limitations

POINTS TO NOTE ABOUT FISHERY PERFORMANCE INDICATORS BY DEVELOPERS ANDERSON ET AL (2016/18)

The FPIs have been tested in over 60 fisheries management systems so far, and the results of these case studies inform the manual developed

When implementing the FPIs, 122 individual metrics are scored from 1 to 5 using level criteria


By analyzing relationships among the output and input metrics, the FPIs dataset can be used to understand the causes, correlations and paths toward successful and sustainable industry development

UNCTAD 5 OCEANS ECONOMY PILLARS

Economic
Environmental
Social
dimensions
Scientific
knowledge
Ocean
Governance

Fisheries Performance Indicators (Assessment Model) Anderson et al (2016/18)

- Model used to score the current status of the Longline Fishery against (UNCTADs) oceans economy 5 pillars
- Assessed the potential for improving the sub-sector in these terms
- The FPIs were developed in recognition of the fact that an effective management system is one that is, socially acceptable, ecologically sustainable and generates sustainable resource rents or profits, using a marine ecosystem approach
- (people, planet, profits) Triple bottom line



FISHERY PERFORMANCE INDICATORS

INPUT

Parameters

enabling conditions,
that contribute to the
process of
incentivizing socio-
ecologically
sustainable use of
fish resources

• INPUT Parameters

• Macro factors – Exogenous Environmental

- i.e. Pollution, Disease, Pathogens, natural disasters

• Property Rights & Responsibilities

• Co- Management – Organisations, Leadership, cohesion, Meetings, financial support, gender roles

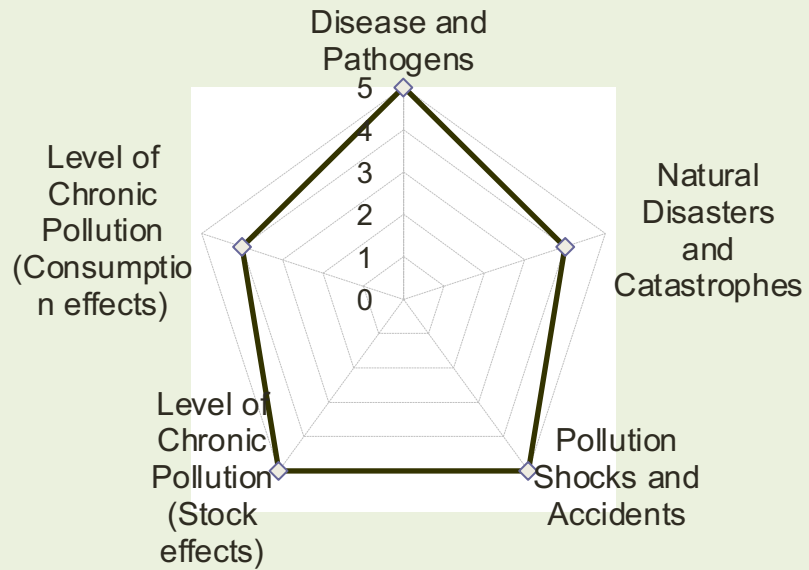
• Management methods- data, MPAs,

• Post Harvest – Markets & Institutions

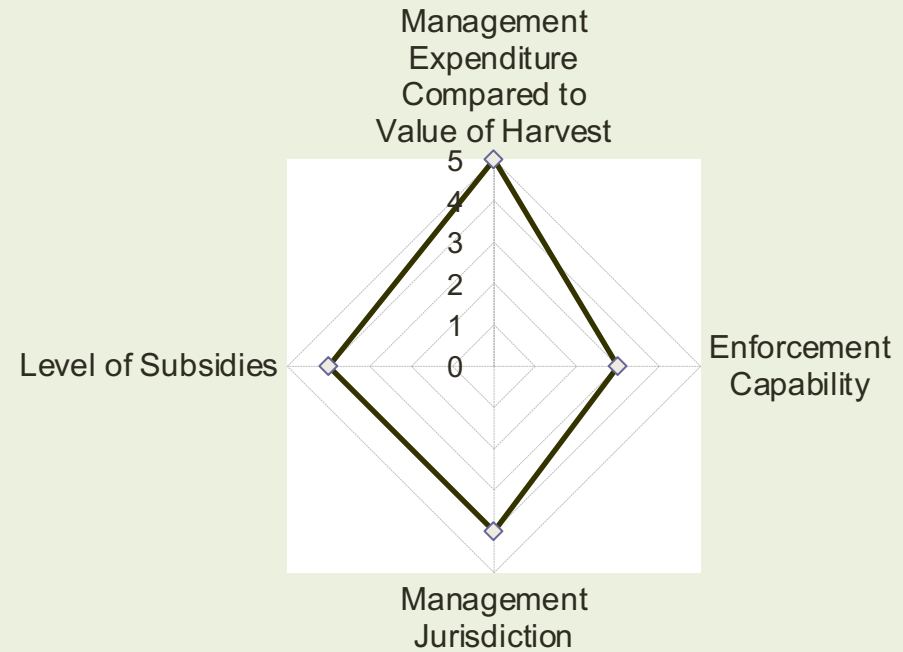
• Infrastructure – Roads, utilities, ice & refrigeration, technology, extension service

INPUT INDICATORS

Exogenous environmental factors

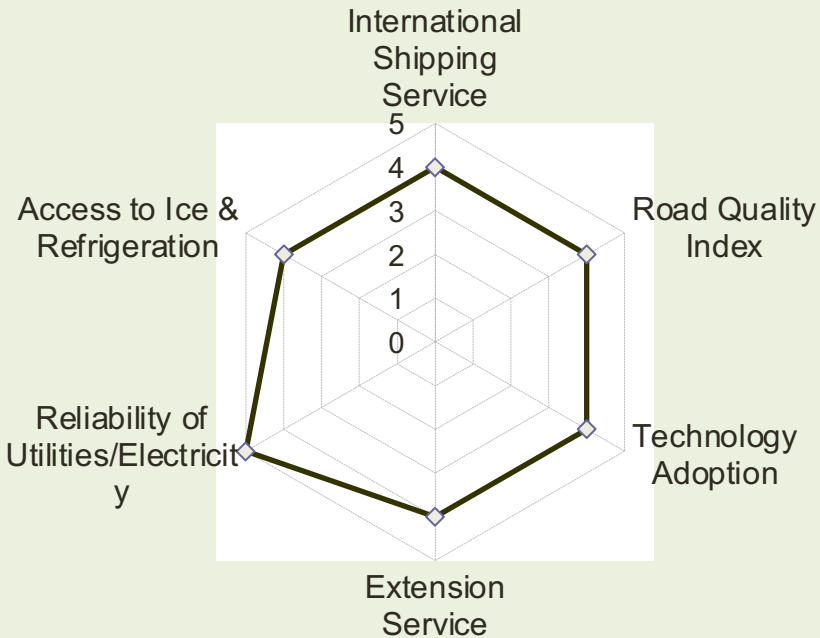


Management inputs

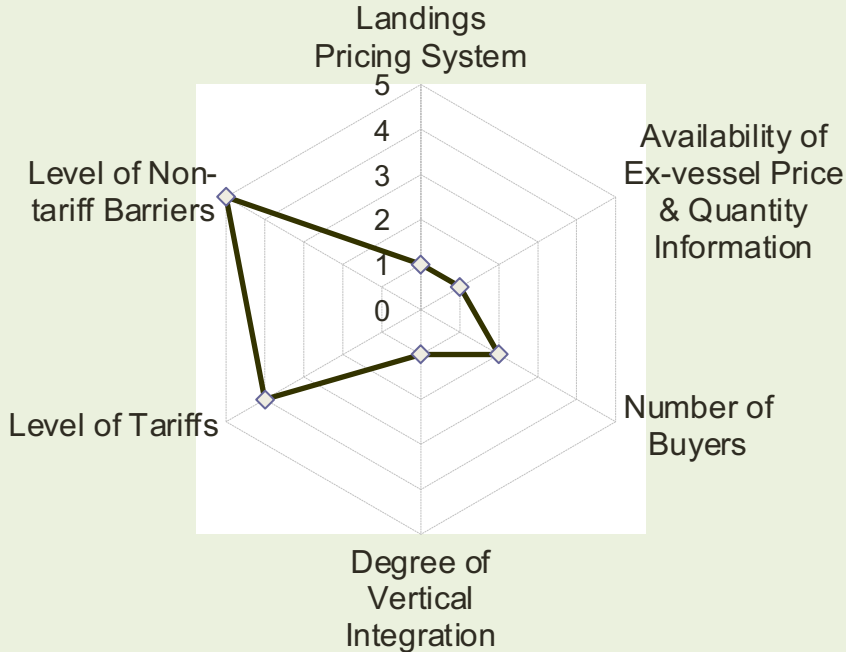


INPUT INDICATORS

Management inputs



Management inputs



FISHERY PERFORMANCE INDICATORS

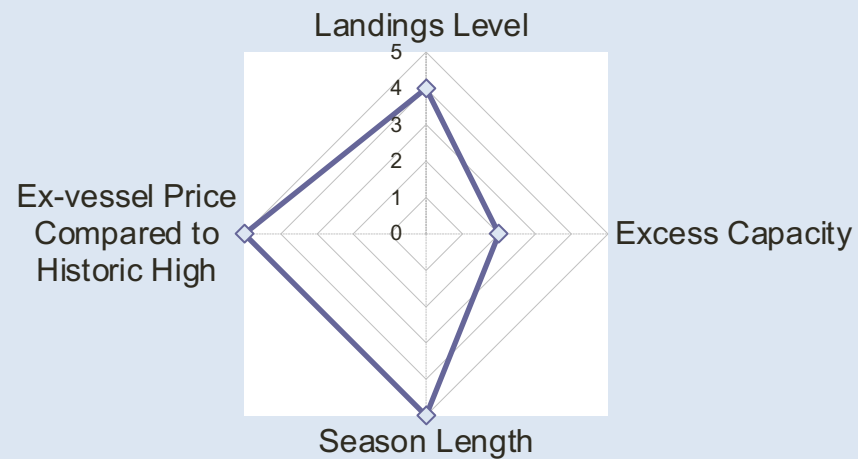
The FPI system
is used for
research that
supports
evidence-based
policymaking

OUTPUT Parameters (Indicators)

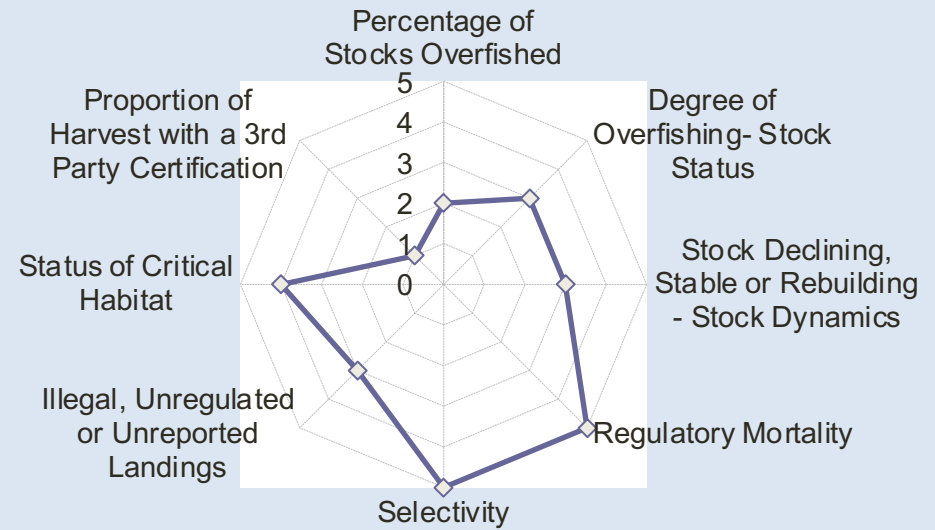
- Stock performance - Ecological
- Harvest sector performance – Economic & Community level
- Post-harvest sector performance - Economic & Community level

OUTPUT INDICATORS

Harvest



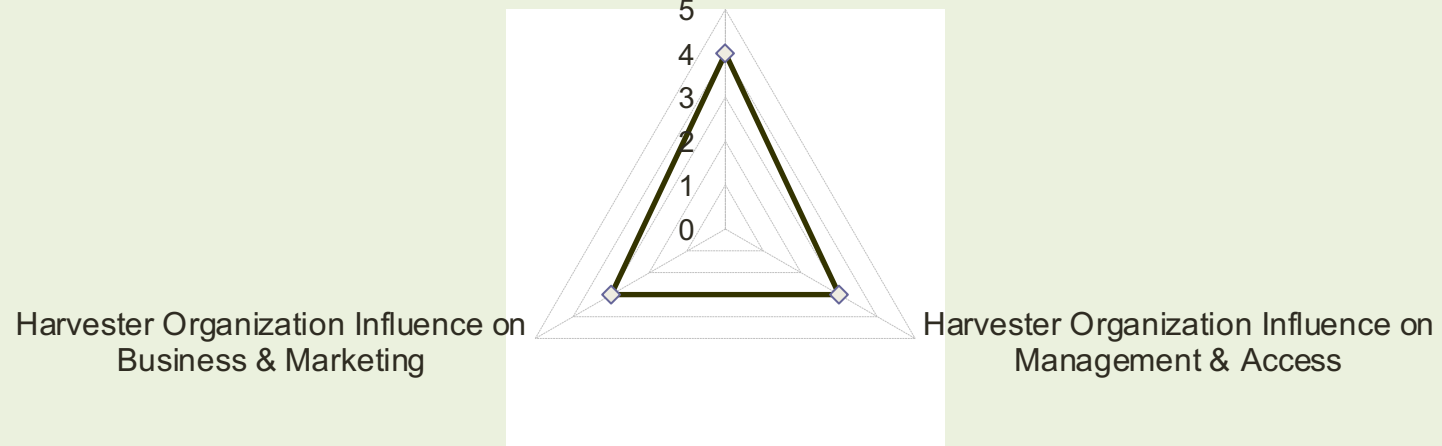
Fish stock health and environmental performance



INPUT INDICATORS

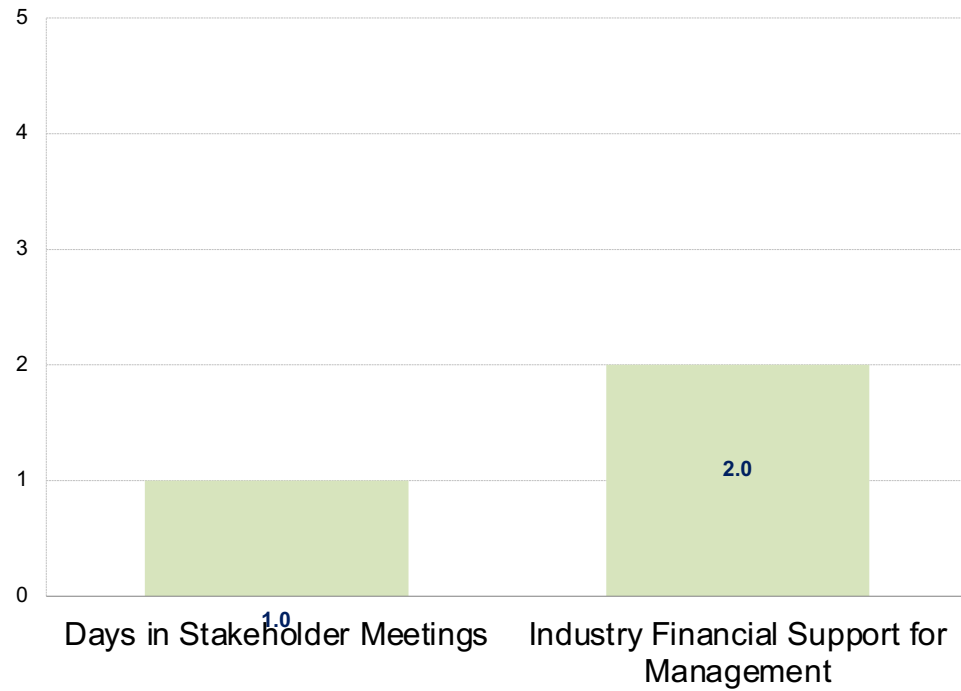
Collective action

Proportion of Harvesters in Industry Organizations

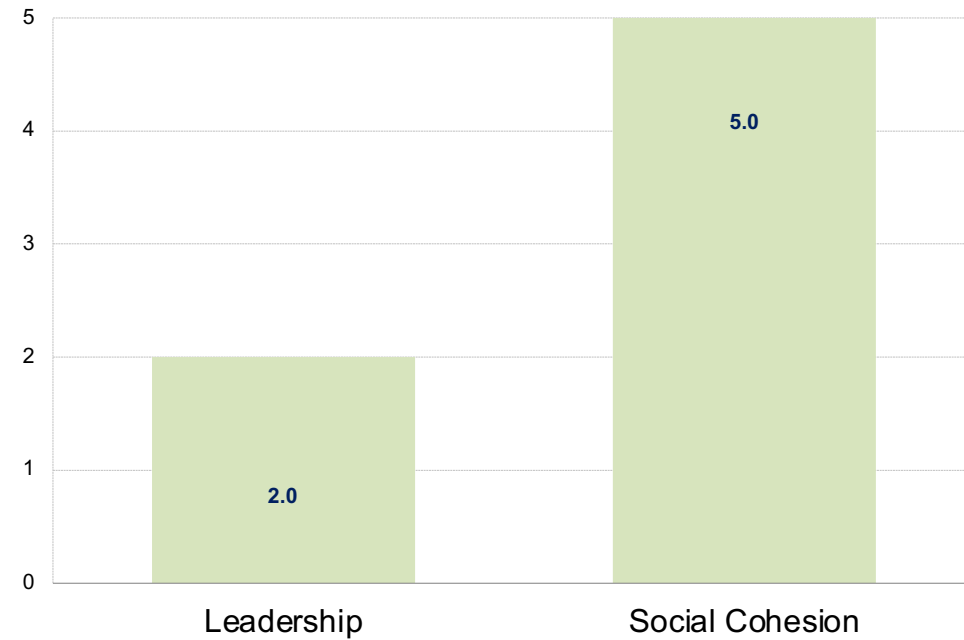


OUTPUT INDICATORS

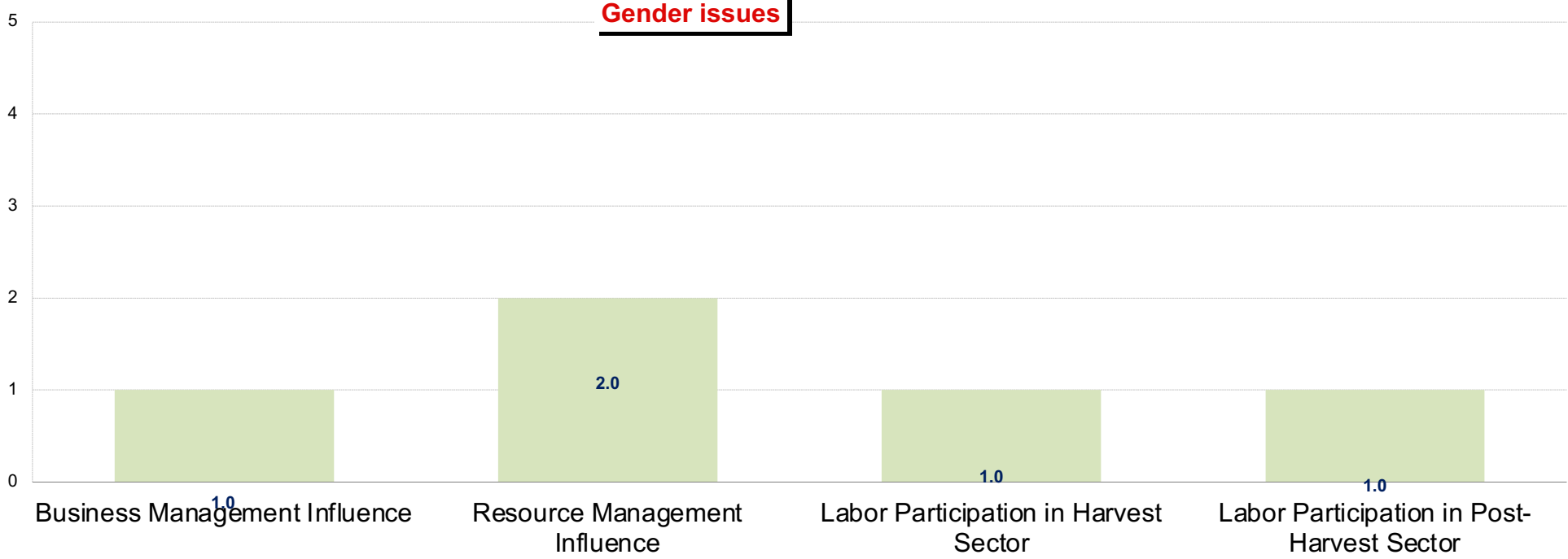
Management participation



Community involvement

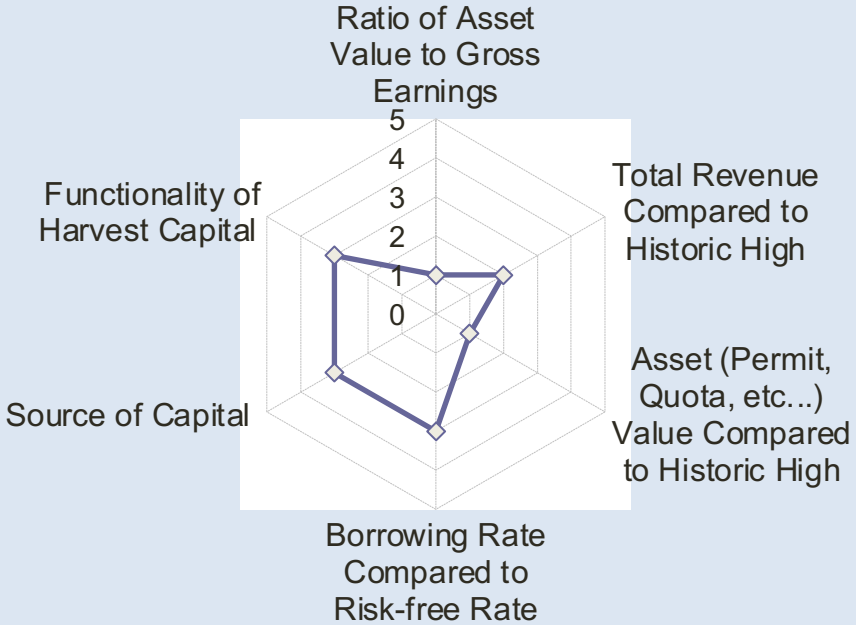


OUTPUT INDICATORS

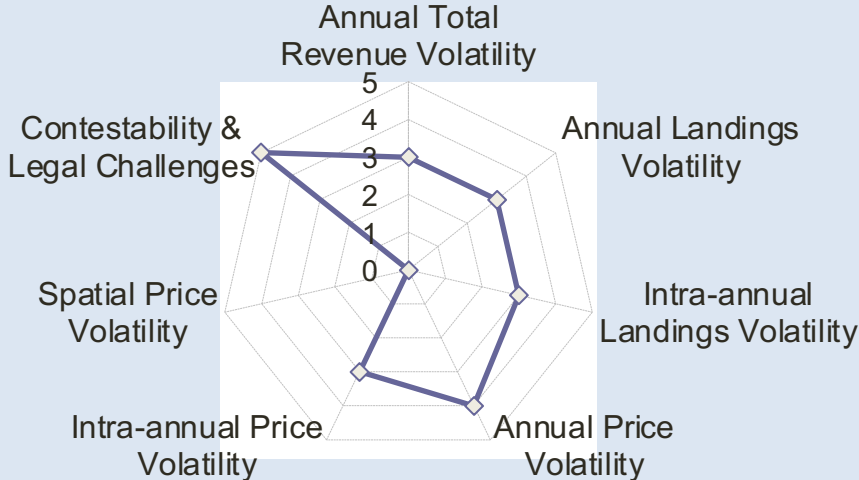


OUTPUT INDICATORS

Harvest assets

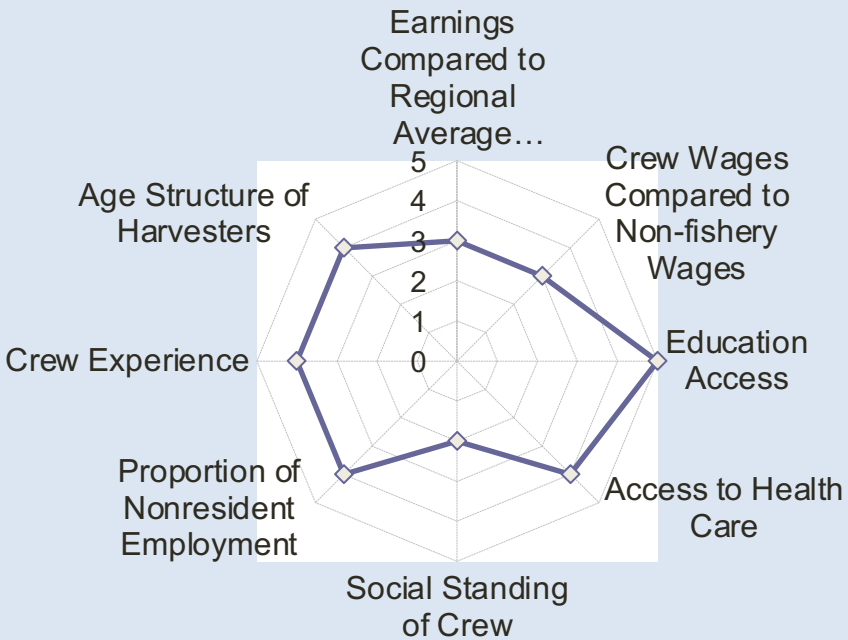


Risk

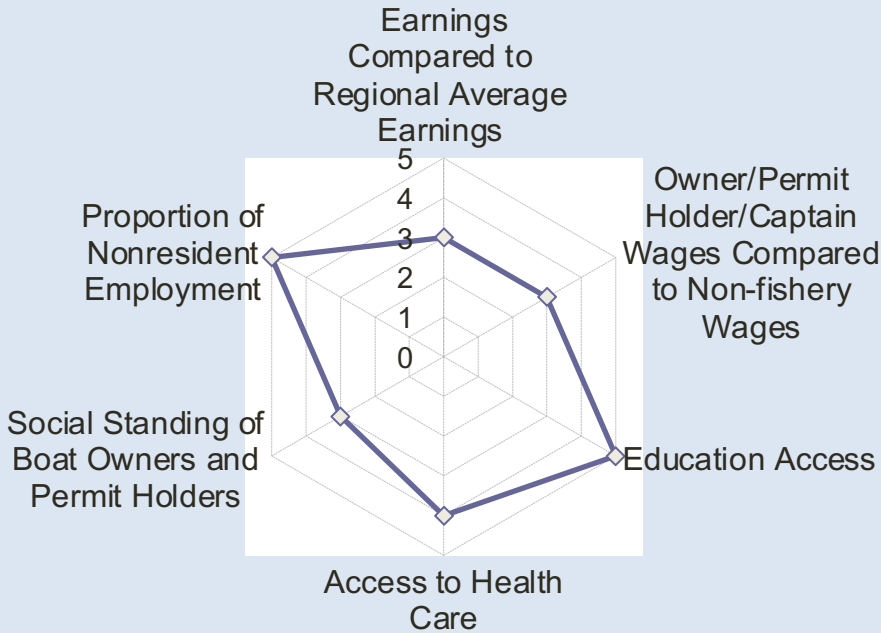


OUTPUT INDICATORS

Labor returns



Managerial returns



RECOMMENDATIONS

A C-FIP

- increases market access
- improves local management
- enhances ICCAT compliance
- can maintain favourable ICCAT country quotas
- and advocate for future quotas

A comprehensive fishery improvement plan C-FIP, which will set sustainability benchmarks that are independently audited.

Enter fishery into a C-FIP.

- Conduct C-FIP pre-assessment.
- Develop C-FIP work plan.

Take action on legislative and fishery management recommendations in C-FIP work plan.

Assess fishery progress bi-annually to ensure targets are met

Design an electronic landings and export data system aligned with current and future Government regulations.

KEY INTERVENTIONS OUTCOMES IN THE FISHERY IMPROVEMENT PLAN

(1) Reinforce and streamline processes for government's collection of fisheries data.

(2) Streamline processes for government's collection of fisheries data.

(1)

Revise data collection methodologies of the Fisheries Division to include both digital information formats and analog formats.

(2)

Includes combination of:

- Vessel Registry to international standards
- Vessel logbooks including electronic reporting formats;
- Vessel monitoring (VMS);
- Electronic catch reporting at landing sites;
- Catch documentation and traceability (CDT) scheme;

KEY INTERVENTIONS OUTCOMES IN THE FISHERY IMPROVEMENT PLAN

**(3) Finance and test of
bycatch reduction gear
technologies. (PLANET AND
PROFIT)**

(3)

- Replacement of “J” hooks with circle hooks to reduce mortality rate of fish on the line before haul-back, this will:
 - Reduce deterioration of the target tuna species before icing and thus improve the grade and value of final product.
 - Allow for live release of incidental catches of non-target species (e.g. marine turtles)
 - Allow for live release of non-target managed species such as marlins as a means to reduce catches within TACs limits.

- Test fishing at deeper depths through use of longer drop lines to reduce catch rates of non-target billfishes to keep within ICCAT TACs while

- increasing Swordfish catches for which Barbados has available quota, increase Bigeye tuna harvests and improve yellowfin tuna grades.

KEY INTERVENTIONS OUTCOMES IN THE FISHERY IMPROVEMENT PLAN

(4) Revise fisheries legislation to include limited entry to Barbados' large pelagic LL fishery. (PLANET AND PROFIT)

(5) Undertake a market study and marketing campaign to explore export opportunities and potential barriers for the Barbados large pelagic LL fishery's products in markets with preferential access, whether through the GSP (e.g. Canada and Switzerland) or through Preferential or Free Trade Agreements (e.g. European Union-CARIFORUM EPA). (PROFIT)

(4)

Note that this can be effected through the Draft 2021 Fisheries Management Regulations

(5)

Self-explanatory

FPI COMPARED TO MSC CERTIFICATION

COMPLEMENTING SUSTAINABILITY CERTIFICATION

The FPIs are designed to complement many of the fishery-specific, science-intensive third-party certification programs developed over concerns for the need for biologically and socially sustainable fishing

One such programme is the Marine Stewardship Council (MSC) certification with three principles: Sustainable fish stocks, Minimizing environmental impact, Effective management

MSC has certified over 200 individual fisheries; many are located in developed countries. Although this program and others are a positive force for change, two shortcomings have become apparent

1) the emphasis is on biological and ecosystem indicators and regulatory compliance that does not address the essential issue of managing fisheries—to create sustainable livelihoods, and

2) given the substantial cost of the certification process, the MSC certification program and others like it are inherently biased toward fisheries in rich nations.

FPI COMPARED TO MSC CERTIFICATION

FPIs incorporate biological metrics, such as the sustainability of fisheries as certified by organizations such as the MSC,

A broad range of additional economic and social metrics that reflect income accumulation and community sustainability, and factors that enable these outcomes

FPIs are relatively low cost-per-evaluation, centrally funded data gathering, organization and analysis effort

FPI data can be collected for developed and developing countries providing benchmarking and process data for countries that cannot afford extensive studies of individual fisheries.

FPIs expand upon the sustainability certifications, they are not intended to supplant them.

The FPIs assess management bodies and systems at a high level, not individual fisheries



SUMMARY CONCLUSION

The above analysis and comparison suggests that a Comprehensive Fishery Improvement Plan C-FIP should be done prior to a Specific fishery sustainability certification programme

Thankyou