



Food and Agriculture  
Organization of the  
United Nations



# Data sets and data elements to share by country in support of WECAFC FMPs

Identify data sets and data elements to be shared by  
country  
in support of WECAFC FMPs

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Rel. to agenda item 20: **“Identify data sets and data elements to be shared at regional level by the countries”**

WECAFC-FIRMS Data workshop. Barbados, 19-21 January 2016

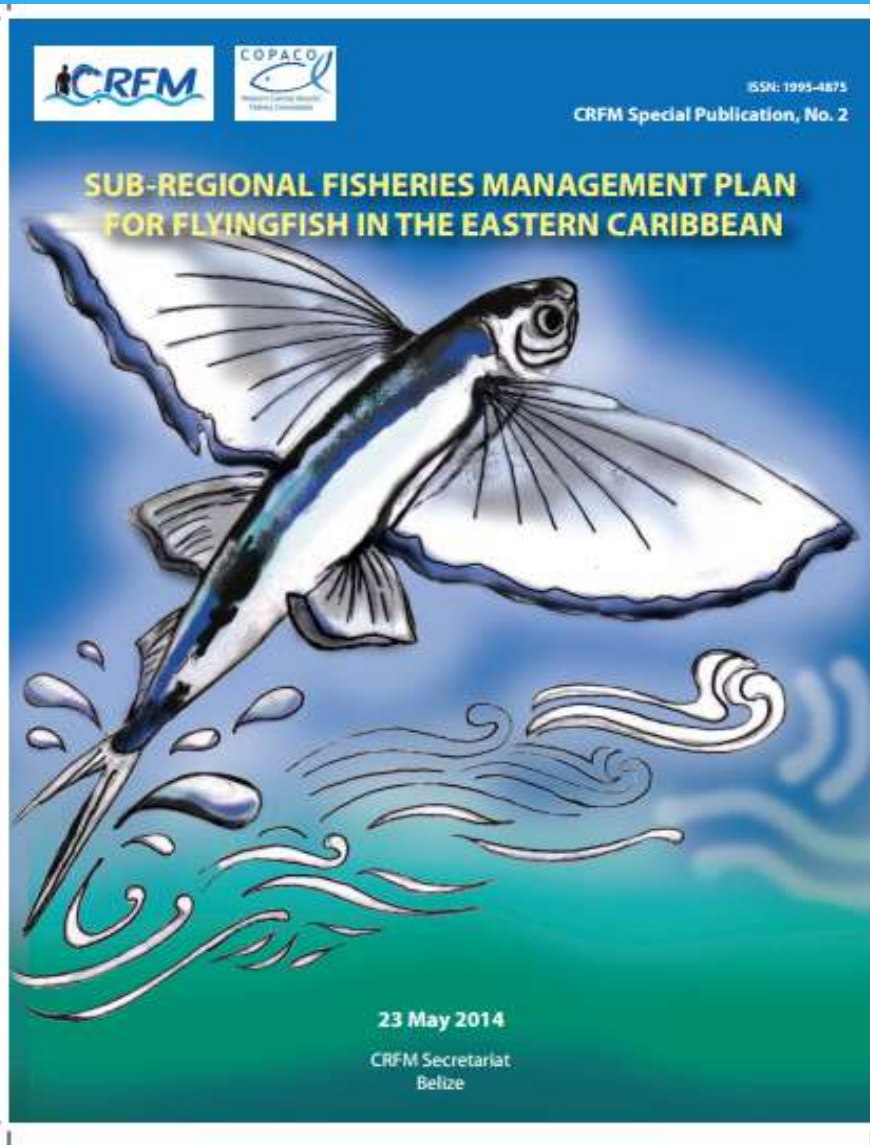
# Review of the WECAFC FMPs for which the repository is being made

- \* Queen Conch Fishery –
- \* Flying Fish Fishery
- \* Lobster Fishery
- \* Billfishes Fishery – To be addressed at a later date
- \* Other Fisheries - Here you can enter details on another commercially important fishery
- \* Marine Resources - To be addressed at a later date

# Methodology

- \* For each Fishery I examined the Regional Management Plan. I looked at the objectives of the plan to see the type of data needed and what data should be collected to make the objectives a reality.

# Sub-Regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean



The management objective is to ensure the long-term sustainability of the resource through implementation of best fishing practices in accordance with the FAO Code of Conduct for Responsible Fishing, such that the *H. affinis* resource in the waters of the eastern Caribbean is optimally utilized for the long-term benefit of all people in the eastern Caribbean region.

- \* **The major exploiting Countries**
- \* **Barbados, Tobago, Martinique and Saint Lucia all have large flyingfish fisheries and to a lesser extent Dominica and Grenada.**
- \* Barbados accounts for about two thirds of the regional catch.

# Flyingfish objectives and data needed to achieve the objective

<b>Data related operational objectives</b>	<b>Collected data should be able to do the following.</b>
Sustained Resources – Preventing Overfishing	Provide estimates of catches , CPUE, stock biomass, MSY levels.
Accurate information – Effective data collection systems	Follow accurate sampling coverage, sampling design and adequate coverage of landing sites.
Effective Management – Adaptive management	Data formatted for a harmonized sub-regional database, provide estimates of flyingfish fleets licensed, determine reference points , identify Invasive species

# Flyingfish objectives and data needed to achieve the objective

Data related operational objectives	Collected data should be able to do the following.
Sustained ecosystem health – ecological	Water quality parameters, /pollution occurrence, Predator – prey composition, species composition of catches and characteristics( eg. size)
Optimal social, economic and financial benefits	Provide estimate of employment level (fishers and licenses/permits), per capita fish consumption, price/value, number of vessels, Income level, return on investment, credit access , quality and safety standards, trade in fish.

## Summary of Data sets and data elements to be shared by country in support of the Sub-Regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean

- \* **Harmonization and improvement of national vessel registration and licensing systems.**
- \* Data collected at national level according to accepted research and survey protocols and submitted to a harmonized sub-regional database.

### **Data sets or elements to be considered:**

- **Catch/landings and fishing effort** - Expansion of coverage of data collection systems to systematically include flyingfish caught for bait.
- **Abundance – Stock size**

Summary of Data sets and data elements to be shared by country  
in support of the Sub-Regional Fisheries Management Plan for  
Flyingfish in the Eastern Caribbean

- **Biological data** - Species composition of catches, numbers in catch, individual size, length, weight.
- **Socio economic data** - Employment level Income level Return on investment Credit access , %of population consuming flyingfish, Price/value /Market price of flyingfish
- **Data from fleet and fisher registration/licensing systems** - number of vessels, fishers and licenses/permits)
- **Data on ecosystem health** - Water quality parameters (Perhaps from another agency)
- **Marine debris/pollution occurrence**

# THE “MARPLESCA” PLAN

## THE CARIBBEAN SPINY LOBSTER (*Panulirus argus*) REGIONAL FISHERY MANAGEMENT PLAN



THE “MARPLESCA” PLAN  
THE CARIBBEAN SPINY LOBSTER (*Panulirus argus*) REGIONAL FISHERY  
MANAGEMENT PLAN

General objective the establishment of a systematic management regime for the Caribbean Spiny Lobster (*Panulirus argus*) fishery in the countries of its geographical distribution.

The responsible governments should control, inspect, monitor and follow up in their territories and waters all actions related to their area particularly extractive activities, transshipment, landings, processing and marketing.

The Regional Coordination Monitoring should standardize and harmonize these efforts through the creation of a regional information base that will enable the sustainable management of the lobster as a shared resource.

# Lobster fishery objectives and data needed to achieve the objective

<b>Data Related Objectives /Macro Activities</b>	<b>Collected data should be able to do the following.</b>
Harmonized landing controls	<p>To achieve harmonization of data collection in the different fishing methods the use of “Production Record by Boat” form is proposed (Annex 1A).</p> <p>The idea is to harmonize and if possible standardize the product landing Forms</p>
Fishing fleet with common protocols	<p>To structure a digitized municipal registry of artisanal vessels. For the analysis of catch and effort harmonized to standard units. Landings should be expressed in landings/time on fishing days based on the captain’s fishing logbook for the industrial fleet</p>

# Lobster fishery data related objectives and data needed to achieve the objective

Data Related Objectives /Macro Activities	Collected data should be able to do the following.
Common Protocols processing	The Plan considers the collection of harmonized data at the process plants for subsequent integration to the regional database.
Common methodology (onboard and in processing plants) sampling	<p>Statistical catch and effort data derived from the industrial and artisanal fishing fleets.</p> <p>Industrial monthly data by commercial lobster categories derived from the processing plants.</p> <p>Biological sampling data (lengths) on board commercial fishing vessels, scientific field monitoring, sampling in processing plants and storage facilities.</p> <p>Calculation of morphometric relationships in length-weight to obtain the equation and conversion factors.</p>

# Summary of Data sets and data elements to be shared by country in support of the THE “MARPLESCA” PLAN

Harmonization and improvement of national vessel registration and licensing systems.

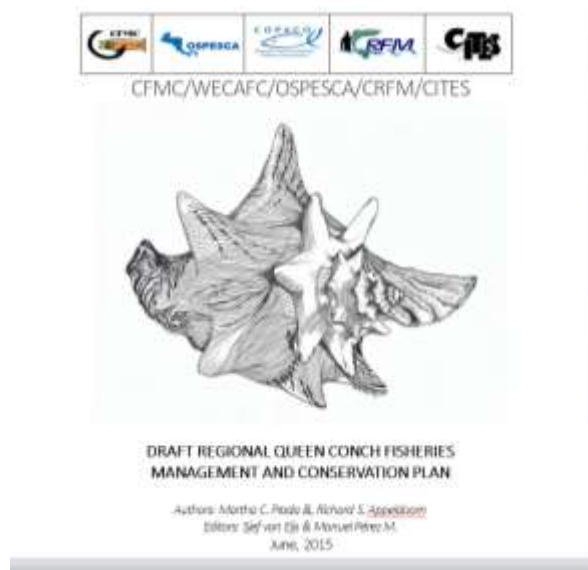
- \* Data collected at national level according to accepted research and survey protocols and submitted to a harmonized sub-regional database.
- Socio economic data –the gathering, handling and interpretation of socioeconomic information. In particular the information sought will be related to economic, social and environmental, employment etc. indicators.
- Data from fleet and fisher Licensing systems – fleet size and characteristics, gears and equipment used by fishers and licenses/permits), numbers and categories of fishers
- Catch/landings and fishing effort - catch and effort data derived from the industrial and artisanal fishing fleets. Industrial monthly data by commercial lobster categories derived from the processing plants. Monthly or annual catch on the number of individuals caught by group sizes

## Summary of Data sets and data elements to be shared by country in support of the THE “MARPLESCA” PLAN

- Growth parameters (natural mortality  $M$ , growth coefficient  $K$ , infinite length  $L_{\infty}$  and starting age  $t_0$ ).
- Biological data - Calculation of morphometric relationships in length-weight to obtain the equation and conversion factors.
- The MARPLESCA Plan considers to establish information sets, access to markets and trading responsible actions so that only products extracted following the established national and regional laws can be sold.
- Sharing of the satellite tracking system installed at the national fisheries offices will be encouraged so that the fisheries offices, Naval Forces and Maritime Authorities can share information in a timely manner.

# Queen Conch Fishery Management Plan

## 10-year Regional Queen Conch Fishery Management and Conservation Plan



## Overall objective

- \* Overall objective is to guide the implementation of a set of identified management measures that can be applied at the regional or sub-regional level for the sustainability of queen conch populations

# Queen Conch Fishery Management Plan

- \* There are 14 fourteen (14) management measures, analyzed and technically endorsed by experts participating at the Second Meeting of the WECAFC/CFMC/OSPESCA/CRFM Working Group, held in the Republic of Panama from 18 to 20 November 2014.
- \* There are:
  - \* Recommended short-term management measures
  - \* Mid-term recommended management measures
  - \* And long term measures

# Queen Conch Fishery Management Plan

Data related operational objectives	Collected data should be able to do the following.
<p>To improve the collection and integration of scientific data needed to determine the overall queen conch population status as the basis for the application of ecosystem-based management.</p>	<p>Form Integrated national and regional databases with population status data, based on accepted research and survey protocols. Harmonized and integrated catch and fishing effort monitoring programs. Regional habitat maps</p>
<p>To harmonize measures aimed at increasing the stability of the queen conch population</p>	<ul style="list-style-type: none"> <li>• Harmonized regional closed season.</li> <li>• Harmonized regional meat conversion factors.</li> <li>• Protocol to establish adequate adult density per hectare.</li> <li>• Standardized NDF format for all countries and all queen conch products.</li> </ul>

# Queen Conch Fishery Management Plan

<b>Data related operational objectives</b>	<b>Collected data should be able to do the following</b>
Achieving better education and outreach, monitoring and research, co-management and strengthening, optimizing and harmonizing regional governance arrangements.	<ul style="list-style-type: none"><li>• License systems for artisanal and industrial fishers</li><li>• Regional agreement on use of different fishing gears and protocols on its application</li><li>• Multilateral agreements on joint application, monitoring and enforcement of VMS systems.</li><li>• Traceability protocols to determine origin and combat IUU fishing and trade.</li></ul>

Summary of Data sets and data elements to be shared by country  
in support of CFMC/WECAFC/OSPESCA/CRFM/CITES REGIONAL  
QUEEN CONCH FISHERIES  
MANAGEMENT AND CONSERVATION PLAN

- \* Data collected according to accepted research and survey protocols and where necessary submitted in defined harmonized formats

Data to be shared:

- Catch and fishing effort
- **Socio Economic Data**
- Abundance - density per hectare
- Habitat Maps
- Biological data
- Data from fleet and fisher Licensing systems for artisanal and industrial fisheries.
- Information on gears and protocol for use
- Data on enforcement
- Integrated VMS system and data exchange

# Summary of what the data collection framework at national level should entail

- \* (Given that the data systems collect data on all species)

## Data sets / elements to be considered:

- \* Catch/landings and fishing effort -
- \* Abundance – Stock size
- \* Biological data - Species composition of catches, numbers in catch, individual size, length, weight.

# Summary of what the data collection framework at national level should entail

- \* Socio economic data - Employment level, Income level, Return on investment , Credit access, Price/value /Market price .
- \* Data from fleet and fisher registration/licensing systems - number of vessels, fishers and licenses/permits, categories of vessels
- \* Data on ecosystem health - Water quality parameters (Perhaps from another agency)
- \* Marine debris/pollution occurrence
- \* **Data Harmonized at the regional level**
- \* **Data collected at national level according to accepted research and survey protocols and submitted to a harmonized sub-regional database.**



**Thank You!**  
**Merci!**