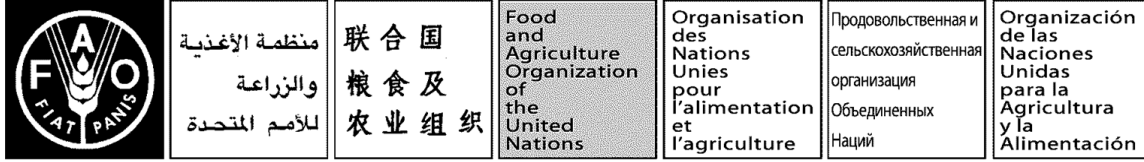


April 2022

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WESTERN CENTRAL ATLANTIC FISHERY COMMISSION (WECAFC)
ELEVENTH (VIRTUAL) SESSION OF THE SCIENTIFIC ADVISORY GROUP (SAG)
25-27 April 2022
Interim Data Collection Reference Framework – Version 0.8



Rome, 2022

Version History

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Acronyms and Abbreviations

ABNJ	Areas Beyond National Jurisdiction
ASFIS	Aquatic and Science Fisheries Information System
BS	Biological Sampling
CARICOM	Caribbean Community
CCCFP	Caribbean Community Common Fisheries Policy
CITES	Convention on International Trade in Endangered <i>Species</i>
CF	Conversion Factor
CPUE	Catch Per Unit of Effort
CRFM	Caribbean Regional Fisheries Mechanism
CWP	Coordinating Working Party on fishery statistics
DANIDA	Danish Development Cooperation
DCRF	Data Collection Reference Framework
EAF	Ecosystem Approach to Fisheries
EEZ	Economic Exclusive Zone
ETP	Endangered, Threatened and Protected (species)
EU	European Union
FAD	Fishing Aggregating Device
FDS-WG	Fisheries Data and Statistics Working Group
FIRMS	Fisheries and Resources Monitoring System
FMP	Fishery Management Plan
GFCM	General Fisheries Commission for the Mediterranean
GRT	Gross Registered Tonnage
GT	Gross Tonnage
hp	horse power
ICCAT	International Commission for the Conservation of the Atlantic Tunas
ICM	Interim Coordination Mechanism
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer
ILO	International Labor Organization
IMO	International Maritime Organization
IOTC	Indian Ocean Tuna Commission
IRCS	International Radio Call Sign
ISO	International Organization for Standardization
ISSCFG	International Standard Statistical Classification of Fishing Gears
ISSCFV	International Standard Statistical Classification of Fishery Vessels
IUU	Illegal, Unregulated and Unreported fishing
kW	kiloWatt
LOA	Length OverAll
OBS	Observer
OSPESCA	Organización del Sector Pesquero y Acuícola del Istmo Centroamericano
PS	Port Sampling

PSMA	Port State Measures Agreement
RFB	Regional Fishery Body
RFMO	Regional Fishery Management Organization
SEAFDEC	Southeast Asian Fisheries Development Center
SPAW	Specially Protected Areas and Wildlife
SU	Scientific Survey
t-RFMO	tuna Regional Fishery Management Organization
UN	United Nations
WECAFC	Western Central Atlantic Fishery Commission
WGFDs	Working Group on Fisheries Data and Statistics
WPAMSR	Working Party on Assessment of Marine Fishery Resources

This document is dedicated to our colleague Dr. Fabio Hazin, in memory of his contributions to the work of the FDS-WG and his unwavering dedication to advancing science on fisheries matters in the WECAFC region.

1 Purpose and background

1.1 About WECAFC

The Western Central Atlantic Fishery Commission (WECAFC) was established in 1973 by Resolution 4/61 of the FAO Council under Article VI (1) of the FAO Constitution. Its statutes were amended by the FAO Council at its Seventy-fourth Session in December 1978 and by the Hundred and Thirty-first Session of the FAO Council in November 2006. WECAFC is a Regional Fishery Body (RFB), which has the mandate to issue fishery management advice, which may be implemented by its members on a voluntary basis. Regional Fishery Bodies do not have the authority to issue binding advice for its members.

The WECAFC area covers nearly 15 million km² of marine area extending from Cape Hatteras in North Carolina, United States of America (35°N) to south of Cape Recife, Brazil (10°S). This area covers the south-east coast of the United States, the Gulf of Mexico, the Caribbean Sea and the north-east coast of South America. Approximately 51% of the mandate area is in areas beyond national jurisdiction (ABNJ) and around 81% corresponds to waters with depths greater than 400 m. Except for Northern Brazil which is included in FAO Area 41, the rest of the management area corresponds to FAO Area 31 (Fig. 1).

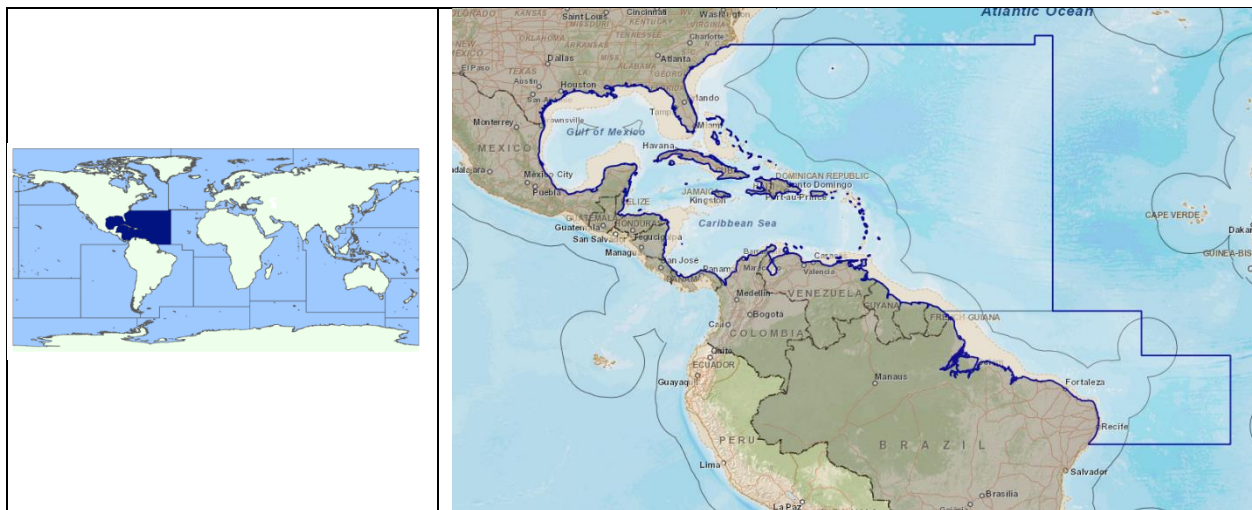


Figure 1: WECAFC Competence Area

Disclaimer: The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Currently the Commission has 34 members, including the European Union.

The 16th Commission agreed to establish a Working Group for fisheries data and statistics (FDS-WG) matters, based on the ongoing work of the WECAFC-FIRMS partnership and supported the development of a regional database in collaboration with the Members and partners in the region. At the 16th Commission Members Adopted Resolutions that 1) Members contribute to the RDB through the FDS-WG and provide national data and statistics according to the guidelines of the interim DCRF and 2) build on best practice guidelines for logbooks, and contribute to developing and updating national inventories of fisheries and resources.

The Commission during its 16th session¹ agreed to launch a process to establish a Regional Fisheries Management Organization (RFMO) in the WECAFC area of competence, being the Western Central Atlantic (area 31) and the Northern part of the South West Atlantic (area 41) and to collaborate in fisheries management and conservation in the Areas Beyond National Jurisdiction (ABNJ) of straddling stocks, deep sea fish stocks and highly migratory species that are not under the mandate of ICCAT (International Commission for the Conservation of the Atlantic Tunas). The Commission discussed intersessional activities of Working Groups and regional collaboration in addressing Illegal, Unregulated and Unreported (IUU) fishing, and approved the Programme of Work (2016–17).

The most recent Commission session (17th) convened in 2019 in Miami, Florida (USA) with 28 members participating. Observers from four Regional Fishery Bodies (RFBs) and four intergovernmental organizations also participated. The Commission adopted eleven regional fisheries management recommendations respectively on: 1) conservation and management of sharks and rays in the WECAFC Area, 2) on the management of Caribbean spiny lobster in the WECAFC Area, 3) on the regional data access and sharing policies, 4) on management of shrimp and groundfish resources of the North Brazil-Guianas Shelf in the WECAF Area, 5) on improved compliance with trade measures for Queen conch, 6) on Queen conch conversion factor, 7) on the monitoring and control of transshipment at sea, 8) on the application in the region of the technical guidelines on methodologies and indicators for the estimation of the magnitude and impact of Illegal, Unreported and Unregulated (IUU) fishing, 9) on the marking of fishing gear, 10) Amendment to WECAFC/17/2019/21 on the sustainability of fisheries using moored fish aggregating devices in the WECAFC area, 11) on the WECAFC interim Data Collection Reference Framework (iDCRF), 12) on the Reference List of Aquatic Species for data collection in the WECAFC area, 13) on the sustainable management of spawning aggregations and aggregating species.

More specifically on data and statistics, Members adopted Recommendations that: 1) Members endorses the structure and concept of developing a Reference list of aquatic species, according to guidance provided through the Interim DCRF on harmonization of collection of data and statistics, including socio-economic data, based on several selection supporting criteria by the FDS WG-1, 2) endorses the Interim Data Collection Reference Framework (DCRF), as a foundation for fisheries data and statistics collection and collation to feed the needs of developing, monitoring, assessing and reviewing regional fisheries policies, taking into account the need for adaptive review, 3) Members promote the provision of national data and statistics to the WECAFC-CRFM-OSPESCA Regional DataBase (RDB) according to the Interim DCRF,

¹ <http://www.fao.org/3/a-bo086e.pdf>

and 4) Members encourage strengthened collaboration between the FDS-WG and thematic working groups to refine and keep updated the DCRF and associated data sharing policies, taking into account the input from all Members.

1.2 About the Data Collection Reference Framework (DCRF) and its development process

The WECAFC Data Collection Reference Framework (DCRF) is the first instrument to establish the foundation for comprehensive fisheries data and statistics collection and collation in the WECAFC area. The DCRF will feed the needs of developing, monitoring, assessing and reviewing regional fisheries policies such as FMPs as needed by any regional or sub-regional RFB. The ultimate aim of the DCRF is to provide a path for achieving improved data collection in the entire region for informing regional and sub-regional management plans. The DCRF should be reviewed by relevant bodies in the WECAFC area (e.g., CRFM, OSPESCA, etc.) to accommodate needed improvements and requirements from the Commission, including new recommendations.

1.2.1 Background

WECAFC Members recognized in the 1970s and 1980s that without the necessary data and information, it would be impossible for the countries in the region to manage their shared fisheries. Following major investments by the countries, with support from the Danish Government (DANIDA) capacity building projects and the FAO/Norway EEZ programme (1982 -1985), the availability of data and information on the status of the stocks and the fisheries improved significantly. However in the 1990s and first decade of this millennium less emphasis was given to fisheries statistics and the need for sharing fisheries data and statistics between states, particularly for use in regional assessments. This resulted in increasing the already significant existing gaps in very basic information, making it difficult for fisheries managers and decision makers to make well-informed choices based on data, information and scientific evidence. Compared to the 1990s, fishery managers were faced with much less data for decisions on management and conservation purposes. Accurate stock assessments using up to date fishery statistics became increasingly difficult, and the rapid increase in Fish Aggregating Devices (FADs) fisheries in the 1980's and 1990s has exacerbated the situation. As a result, fishery management in the WECAFC region has become even more challenging and decisions have been postponed. Consequently, the stocks of many shared and highly migratory species, such as billfishes, continue to be heavily exploited and increasingly targeted for harvest even though they are already depleted well below biomasses that could achieve maximum sustainable yields.² As recent as 2015 it was estimated that 54% of the species or species-groups were considered overfished or over-totally fished in the WECAFC region³. Furthermore, the commitment of CARICOM States to improving evidence based decision-making through regional cooperation has been clearly articulated in several

² <http://www.fao.org/3/a-i6204e.pdf>

³ <http://www.fao.org/fi/static-media/MeetingDocuments/WECAFC/WECAFC17/3Reve.pdf>

regional policy documents including the “Strategic Action Programme for the Caribbean Large Marine Ecosystem”, the CARICOM Strategic Plan, 2015 - 2019, the Caribbean Community Common Fisheries Policy (CCCFP) and the CRFM Strategic Plan, 2013-2021. Concrete action in this direction led to the establishment of the WECAFC-FIRMS partnership in 2014 which among other results led to the establishment of WECAFC Data and Statistics Working Group in 2016. Moreover, data and information on some key commercial fisheries target species (Spiny lobster, Queen conch, Flying fish, some snappers/groupers and shrimp stocks of the north Brazil and Guianas shelf) are being shared between the members of CRFM, OSPESCA and WECAFC, through joint working groups on these specific fisheries.

At the 15th session of the WECAFC Commission convened in Trinidad in March 2014, the minimum steps needed to improve the capability of the Commission in becoming a functional management organization were identified as:

- 1. Increase and improve information content on fisheries data and statistics*
- 2. Increase accuracy of data and statistics via utilizing agreed practices in data collection*
- 3. Develop and implement agreed practices for data sharing*
- 4. Identify feasible stock assessment models for the region*

As a decisive step into this focus area, the WECAFC-15 agreed to enter into a collaboration with the FAO, Fisheries and Resources Monitoring System (FIRMS), thus formally engaging the WECAFC-FIRMS Partnership recognizing the need to make these regional improvements in the basic fisheries data. This Partnership was successfully implemented in 2015 and 2016 during the WECAFC-FIRMS Regional Database project (phase I). The three main achievement outputs respectively were: 1: FIRMS regional inventories published⁴ and capacity built for national inventories in a few pilot countries, 2: Plans developed⁵ for strengthening national and sub-regional capacity in data collection and data sharing in support to WECAFC fishery management plans, and 3: Foundations of a Regional Database proposed and tested with pilot data contributions. A regional data workshop was convened in January of 2016 and the report of the workshop is available on-line⁶.

WECAFC-FIRMS phase II (implemented in 2017/2018) was a continuation of the WECAFC-FIRMS Phase 1 project and primarily was in support of the mandate of the Working Group on Fisheries Data and Statistics (FDS-WG), agreed by the Members during WECAFC 16th Commission Session which convened in Guadeloupe in June 2016. The Phase II project support focused on agreements regarding minimum data requirements for fisheries under management plans, and on the governance and operationalization of the WECAFC Regional Database, including development of a regional data collection reference framework (DCRF) and documentation of best practices for logbooks and data sharing policies and guidelines.

WECAFC-FIRMS phase III is a continuation of the WECAFC-FIRMS phase II project and is primarily supporting the activities of the WECAFC Fisheries Data and Statistics Working Group. Three main

⁴[http://firms.fao.org/figis/website/FIRMSSearch.do?dslist\[0\]=fishery&refxml=false&startrow=1&bsize=15&lixsl=webapps/figis/firms/format/searchfsfirmslist.xml&kw\[0\]=institution&kv\[0\]=WECAFC&logop=and](http://firms.fao.org/figis/website/FIRMSSearch.do?dslist[0]=fishery&refxml=false&startrow=1&bsize=15&lixsl=webapps/figis/firms/format/searchfsfirmslist.xml&kw[0]=institution&kv[0]=WECAFC&logop=and)

⁵ [FAO, 2018. Report of technical workshop on global harmonization of Tuna fisheries statistics, March 2018](#)

⁶ [WECAFC-FIRMS data workshop. http://www.fao.org/3/a-i5789e.pdf](http://www.fao.org/3/a-i5789e.pdf)

priorities have been identified: 1) the organization of the WG's second meeting, 2) the operationalization of the WECAFC regional database by developing national capacity to upload data in the system, and 3) the reinforcement of national capacities in fisheries data and statistics.

The general objective of WECAFC is to promote the effective conservation, management and development of the living marine resources of its area of competence, in accordance with the FAO Code of Conduct for Responsible Fisheries (CCRF)², and to address common problems of fisheries management and development faced by members of the Commission. Accordingly, the collection and quality of data and information is a crucial requirement for effective management, thus consideration of the quantity, quality and comprehensiveness are required.

1.2.2 The DCRF manual

This manual outlines the primary principles of the DCRF through providing the main indications for data collections by WECAFC members in a standardized way such to inform relevant WECAFC bodies with minimum information needed for stock assessment and monitoring.

The DCRF manual has been drafted under the WECAFC-FIRMS Phase II project with the goal of collection and collation of information to feed the needs of developing, monitoring, assessing and reviewing regional fisheries policies such as FMPs as required by any regional/sub-regional fishery body. In that regard, inspiration was sought from RFBs and RFMOs DCFs (e.g., the General Fisheries Commission for the Mediterranean (GFCM) through the 2016 GFCM Data Collection Reference Framework⁷ and further from International Commission for the Conservation of the Atlantic Tunas (ICCAT)⁸. Improvements on this first version were further accomplished from inputs of multiple species Working groups (Joint Spiny Lobster, March 2018 Dominican Republic; Northern Brazil Shelf Shrimp and Groundfish, Barbados October 2018).

The manual is organized as follows: Working Definitions, Structure of data collection, and Supplemental Appendices providing WECAFC standard classifications and a Glossary.

The first formal version (v0.4, 2018.1) was reviewed by the Ninth Session of the Scientific Advisory Group (SAG) in November 2018 and eventually presented for endorsement at WECAFC 17 in July 2019, which endorsed it as an Interim document (i-DCRF). This manual is to be further enriched through several accompanying documents of which two initial documents include: Data Access and Sharing Policies, and Regional Guidelines for Logbooks.

Following WECAFC 17, the Interim DCRF was further enriched from Members' comments/input received on the version presented at SAG through January 2019. Further modifications were then brought before FDS-WG2 Preparatory sessions that convened virtually between July and September 2020. The modifications brought after these Preparatory sessions incorporated comments received during these Preparatory sessions in order to ready a more-advanced version for review by FDS-WG2 in October 2020.

⁷ <http://www.fao.org/gfcm/data/dcrf/en/>

⁸ <https://www.iccat.int/en/submitSTAT.htm>

The FDS-WG2 recognized that the DCRF represents a data and statistics standards framework, harmonized with other reporting frameworks (e.g. FAO, ICCAT, WECAFC Members frameworks) while encompassing supplementary flexible provisions for the region, and strives aiming at collecting robust, harmonized and comparable fisheries data addressing end-users needs.

The FDS-WG2 also recognizes that the DCRF should ensure compatibility with existing data collection frameworks already implemented by WECAFC members and should be aligned with the mandate of WECAFC to avoid any duplication in data collection processes in the region and foster optimization of resources already allocated to data collection mechanisms (e.g. avoid duplication of data collection tasks/work/resources covered by other organizations such as ICCAT).

The FDS-WG2 acknowledges that the DCRF v0.7 serves a minimum of two purposes currently:

- A. Capacity building tool, which can be used by countries as a reference standard framework to set-up national data collection and information systems for all aquatic marine species, in support of national policies and reporting needs including for the provision of data to WECAFC.
- B. An instrument to support science based conservation and management of marine biological resources under the mandate of WECAFC, the mandate and priorities of WECAFC-CRFM-OSPESCA Interim Coordination Mechanism (ICM), by implementing a modular task oriented structure articulated around five supporting bases (clustered in three Species Groups) for the WECAFC Reference list of aquatic species, through an incremental approach to implementation for some countries.

1.2.3 Features of the DCRF

Version 0.6 presented at FDS-WG2 Extended session (May 2021) implemented changes as per the recommendations made during the October session of FDS-WG2 to adopt the rationale of facilitating operationalization of the DCRF for the proposed modified structure including Objectives, Scope, and clearly defined Rules for implementing the general Data access and sharing policy. The FDS-WG2 agreed to improve the Task description by i) articulating the Tasks on well-defined WECAFC objectives; ii) refining a scope clearly aligned with WECAFC objectives, mandate and taking into account capabilities of the Members; and by iii) providing informative and acceptable/workable Data access and sharing rules. Accordingly, Version 0.6 implemented in each Tasks section the following structure:

- an '*Objectives*' header identifying how the collected data relates with WECAFC assessment and/or management strategies
- a '*Scope*' header defining boundaries of the data for upload to the Regional database, e.g. sets the list of concerned species for the Task
- '*Rules*' are defined for access and sharing and are proposed under "Data access and sharing rules"

Version v0.7 presented at FDS-WG2 Conclusion session (10 March 2022) implemented further modifications as per the recommendations of the FDS-WG2 Extended session (May 2021). These included:

For the main document:

- better alignment between Table 1 and the Objectives at Tasks level
- simplified presentation by focusing on the WECAFC regional level, in particular most of the recommendations for the national level were removed in order to reduce confusion
- a focused priority for provision of data to the Regional Database on Group1 (i.e. basis 1) Species
- a precision reflected by change of title for Task III from “Fleet, and Vessels” into “Fleet engagement, and Vessels” supplemented by an added paragraph in the Task III.1 description
- addition of the 12 meters length as the minimum vessel length for the vessel registries Appendix
- “notes to reviewers” of past use were removed
- inclusion of other suggested editing by reviewers (in particular EU, Barbados, OSPESCA), including replacement of “Country” by WECAFC Member”

For the appendices:

- Appendix 2:
 - o title modified for clarity and accuracy from “Spatial units for fishing zones (WECAFC subareas/divisions)” to “WECAFC fishing subareas/divisions for statistical purpose”
 - o content developed from the decisions taken by the two sessions of FDS_WG2 including options proposed, principles retained, and description of current state of adoption of the subareas/divisions, with names proposed for these.
- Appendix 3 - WECAFC Reference List of Aquatic Species
 - o this appendix is now composed of three sub-appendices, clearly distinguishing in their titles the Group 1 - Main Reference Species (Appendix 3.1), the Group 2 - Other Reference Species (Appendix 3.2), and Group 3 - Other Species (Appendix 3.3)
 - o the Bases and subgroup are there but played down at Titles levels in order to simplify the naming’s. This in order to facilitate use of this reference in the DCRF text, with the flexibility to either refer to Groups, or to Bases, and if necessary to subgroups when both concepts need be combined.
- Appendix 4:
 - o title modified for clarity and accuracy from “Fleet segment - vessel types by length classes” to “Fishing vessels typology”, while appendix 4.1 conserves the title of “Fleet segment - vessel types by length classes”
- Appendix 5.2:
 - o Table of codes updated with the latest draft proposals by the CWP Fishing Effort working group
- finally, inclusion of other suggested editing from Members reviews of v0.6.

This current Version v0.8 implements the modifications requested by the Conclusion session (10 March 2022) of the FDS WG2.

For the main document:

- the FAO disclaimer for maps of subareas and divisions will appear as a FAO publication standard in the prelims of final DCRF document

For the appendices:

- Appendix 2: added the FAO disclaimer for maps of subareas and division

- Appendix 3: minor editorial changes upon comments received on the proposed Recommendations to the Commission 18, for review by the SAG
- Appendix 4.1: added an additional length class [18 – 19.9m] to the Fleet segment table

DCRF Features

- Indications of main themes of data collection (‘tasks’) and the objectives these respond to
- Description of data variables by tasks
- Scope for Tasks’ data
- Concepts of data aggregation and frequency of reporting
- Data access and sharing rules
- Identification of concept of species lists for which data collection is encouraged according to varying categorization (in this version, 4 bases)
- Identification of relevant operational units (e.g., fleet segment/vessel mapping schema, mode of fishing, gear, spatial unit of fishing)
- Biological references (e.g., conversion factors, growth schedules, maturity schedules, etc...).
- Questionnaires
- Glossary of terms

2 Definitions

A **glossary** is available in appendix 9 with all the concepts and controlled terms definitions presented in alphabetical order. Here follows a few important working definitions.

Fish: The term “fish” refers to all species of living marine resources, whether processed or not (Port State Measures Agreement - PSMA⁹).

Species: The term ‘species’ is also used herein in the broad sense and refers to both individual species (e.g.: *Epinephelus striatus*, Nassau grouper) and in cases where identification of individual species is problematic to species-groups (e.g.: *Epinephelus* spp., Groupers), acknowledging the preference of using individual species.

Species-group: The term ‘species-group’ refers to a collection of species which have been grouped together, often because these species are difficult to differentiate without detailed examination (very similar species) or because data for the separate species are not available (e.g. in fishery statistics or commercial categories) (SEAFDEC handbook on data collection¹⁰).

3 Structure of data collection

3.1 The different needs for data in the WECAFC region

Needs for data at the level of the WECAFC are of varying natures in alignment with specific needs and aims of managers and stakeholders in the context of the Ecosystem Approach to Fisheries (EAF). Scientific assessments are essential for the evaluation of fish stocks status, the provision of robust science based advice for their sustainable management and the mitigation of potential impacts of fishing activities on the marine ecosystems, especially for the shared and/or straddling and transboundary stocks such as flying fish, dolphin fish, wahoo and resources considered overfished and/or threatened (e.g., some of the shark and ray species). It is also essential to provide evidence based statistics to support monitoring and management of shared fishery resources (implementation and monitoring of regional fishery management plans, planning for regional registry of vessels as two of many examples). Finally, in addition to the above fisheries management considerations including their environmental dimension, a set of minimum statistics are required to take into account the social and economic dimensions in policy making and management decisions.

The DCRF recognizes the importance of detailed information on national fleets, catch, effort and biological data for main and/or other reference species, including discards and incidental catches. Additionally, it is recognized that socio-economic, notably employment and price data, are required to characterize fishing

⁹ <http://www.fao.org/fishery/psm/agreement/en>

¹⁰ <http://www.seafdec.org/download/handbook-on-collecting-fishery-statistics/#>

operations, enterprise, employment trends and national capacities. WECAFC members should strive to collect and submit information of the highest quality and submit such statistics in a timely manner.

While the resolution and scope of statistics to be submitted to WECAFC regional database is set in consideration of the WECAFC mandate and objectives, Members are encouraged to extend resolution details and species scope when applying DCRF for their national data collection and information system, in accordance with their national policies and reporting needs.

To respond to these different needs, the WECAFC data collection framework is divided in six (6) tasks as described below.

DCRF Tasks

- Task I – Regional figures of national fisheries
- Task II – Catch and effort (landings data, catch data per species)
- Task III – Fleet engagement, and Vessels
- Task IV – Biological information
- Task V – Incidental catches
- Task VI – Socioeconomics

Aquaculture is not considered here and shall be subject to another data collection framework document. Recreational fishing can be considered here as an additional fleet segment. It should be revised and endorsed by the Commission.

Table 1 describes in more details the data requirements of the DCRF, together with its main purposes and the relation to current data requirements described in existing WECAFC Resolutions and Recommendations.

Table 1: DCRF Task summary highlighting purpose, data requirements, and reference to WECAFC Resolutions and Recommendations. (words in italics indicate optional fields)

DCRF Tasks					
ID	Task	Sub-task	Data	Purpose and Description	WECAFC Resolution / Recommendation
I	Regional Statistics	Provide a regional summary overview of the fishery sector's Fishing capacity ¹¹ by country in terms of inputs (quantity of operating fishing fleet), and outputs (biomass removed from the ecosystem by fishing operations). This is fundamental to monitor the status of stocks as well as the impact of fishing on marine resource populations, and to support the management of fishing capacity for sustainable fisheries.			
		I.1 Fishing capacity (This Task can be generated for WECAFC with global statistics provided to FAO)	Number of active Fishing Vessels / Total Capacity (GT) / Engine Power (Kw) Total Nominal Catch by year by Flag state by <i>Fleet segment</i> , by Subarea.	Provide a general summary overview of the fishery sector of each country in the wider Caribbean region, with an indication of total fleet capacity and total nominal catches, reported [if possible by Fleet segment and] for subareas relevant to WECAFC.	
		I.2. Landings (Statlant A – a breakdown by subareas of FAO Catch questionnaire NS1)	Nominal Catch by year by Flag state by Subarea by Species	The regional overview of Nominal Catches by country, species and subareas for all aquatic species provides the overall reference for fisheries total removals in each subarea, and allows to monitor catch trends by species among subareas, a key aspect of Ecosystems and Climate Change/natural disasters impacts assessment.	
II	Catch and effort	Provide key fisheries monitoring data on Catch and Effort in support of/for management and stock assessment at either national or regional levels (with estimates of target and by-catch species / nominal, retained, or discarded catches / dead or live)			
		II.1. Catch	Nominal Catch / retained Catch / discarded Catch by year by Flag State, by Fleet segment, by Fishing mode by Subarea, by Species	Catches, provided on a yearly basis by fishing unit ¹² , are for most fisheries defined in weight units as the total weight of catches (in live weight equivalent), and in number of individuals regarding discards, or for certain tuna fisheries.	Interim endorsement at WECAFC 17/2019/22

¹¹ The FAO technical guidelines developed to support the implementation of the IPOA for the Management of Fishing Capacity define fishing capacity as “the amount of fish or fishing effort that can be produced over a period of time by a vessel or a fleet if fully utilized. That is, if effort and catch were not constrained by restrictive management measures”.

¹² a fishing unit is here materialized as the combination of Flag State x Fleet segment x Fishing mode x Subarea x Species

DCRF Tasks					
ID	Task	Sub-task	Data	Purpose and Description	WECAFC Resolution / Recommendation
		II.2. Effort by fleet segment	Days Fishing Nominal Effort Fishing Vessel Count by year by Flag State, by Fleet segment, by Fishing mode, by Subarea.	The Fishing effort deployed by national flagged Vessels, reported on a yearly basis by Fleet segment, [gear type, and] Fishing mode, and subarea, with catches (and landings) for the corresponding Fishing units ¹² reported in Task II.1	Interim endorsement at WECAFC 17/2019/22
III	Fleet engagement, and Vessels	Data on Vessels is critical for Monitoring, Control and Surveillance, and provide the sources for the planned regional vessel registry as envisaged in support of/for regional fishery management plans. Data on Fleets engaged by fishery provide additional fisheries monitoring data in support to assessment and management of fishing capacity.			
		III.1. Fleet engaged by fishery (i.e. by primary gear and target species)	Number of active vessels potentially or actually engaged in a fishery, i.e. by Subarea, by Fleet segment, by target Species.	Provide first level fisheries monitoring data on Nominal Effort engaged by fishery, in support of/for management at either national or regional levels. Nominal effort by fishery is expressed in terms of capacity (Number vessels, GT, KW) by Subarea, fleet segment and target species.	Interim endorsement at WECAFC 17/2019/22
		III.2. Vessel registry	Vessel descriptors	Regional vessel registry fed by the national vessel records or registries	Interim endorsement at WECAFC 17/2019/22
IV	Task IV: Biological information	Biological data are key to population dynamic studies, regional or national stock assessment in support to fisheries management, stock status determination e.g. in the context of indicator SDG14.4.1			
		IV.1: Size data	Total Retained Catch (weight) Total discarded catch Total weight of samples Length class /sex/maturity Number of individuals at length Total weight of Individuals	Size frequencies of the samples (nominal and raised) measured by species (retained and discarded), and reproductive state of individuals for selected species, classified by fleet segment, gear sample units, time unit, area, and sex for select species	Interim endorsement at WECAFC 17/2019/22
		IV.2: Catch at Size data	Length Class/Sex/ Stage of Maturity Total Weight of Individuals Total Catch	Reported catch at size (raised to Task II Catch data) classified by fleet segment, gear, species, time unit, area, and by sex (for select species)	Interim endorsement at WECAFC 17/2019/22
V	Endangered, Threatened, Protected (ETP) species catches	To conserve natural resources through sustainable fisheries, bycatch of marine endangered species such as seabirds, sea turtles, elasmobranchs and marine mammals must be quantified with the goal to assess fisheries impacts on the ecosystem and to control mortality to levels below those that threaten the conservation status of endangered species.			
		V.1 By- Catch ETP	Landings (in numbers or weight as appropriate) Number of discards including fate upon release (dead/alive) (in	The bycatch concerning endangered, threatened or protected (ETP) species are reported, whether landed,	Interim endorsement at WECAFC 17/2019/22

DCRF Tasks					
ID	Task	Sub-task	Data	Purpose and Description	WECAFC Resolution / Recommendation
			numbers or weight as appropriate) Number of discards dead (in numbers or weight as appropriate)	discarded dead or discarded alive.	
VI	Socio economics	Provide primary data for monitoring the economic and social status of the fishing sector in support to appropriate policies and strategies, especially in relation to promoting fishing as a source of livelihoods thanks to the long-term sustainability of resources and fleets.			
		VI.1: Employment	Number of fishers by Country by Sub-area by time-use, by gender, by age group (for primary sector only)	Employment in the fishery sector is a useful indicator of the importance of the fishery sector in the region, with specific attention to be paid to gender, youth, decent/child labour, and more generally to the dynamics of populations engaged in fishing activities (primary production sector).	Interim endorsement at WECAFC 17/2019/22
		VI.2: Participation in fishing activities	Count of fishers Count of fishers x days fishing	The participation in fishing activities, measured by the number of fishers actively taking part to fishing activities and the intensity of such involvement, is key for assessing the productivity of manpower, the assessment of individual income levels, and overall the social impact of management decisions on specific fisheries.	Interim endorsement at WECAFC 17/2019/22
		VI.3: Value of catches	Total nominal catch Unit price by species Total Value by year by Country	The monetary value of total capture fisheries production at first sale after landing of the catch (ex-vessel price), and the average value of species' prices/kg, in local currency then converted into US\$.	Interim endorsement at WECAFC 17/2019/22

3.2 WECAFC Data Sharing and Access Policies

All data transmission are subject to WECAFC data sharing and access policy as per general principles and implementation options defined in the document “WECAFC fisheries data sharing policies and guidelines”¹³.

Submitted data should in principle be made publicly available, however the data access and sharing rules address details regarding the steps of the validation process as well as relevant levels of aggregation for published data, and confidentiality rules. Tasks specific to Data access and sharing rules are here drafted, with the understanding that this needs to be further piloted and adjusted as the Regional database becomes operational, and that in their final version these will be approved by the Commission as the result of a consultative process involving the FDS-WG, the WECAFC-WGs, and the SAG.

3.3 Components of the Data Collection Framework

This section introduces the structure and how data will be collected/called for.

DCRF Task Components
<ul style="list-style-type: none"> • Main objective(s) supported by the Task • Description of Task • Scope • Countries involved • Data to be Reported • Frequency and Deadline of Reporting • Data Access and Sharing rules

3.3.1 Task I: Regional Statistics

Objective

Task I aims to provide WECAFC with a regional summary overview of the fishery sector’s Fishing capacity¹⁴ by country in terms of inputs (quantity of operating fishing fleet) and outputs (biomass removed from the ecosystem by fishing operations), by country and in the wider Caribbean region. This is fundamental to monitor the status of stocks as well as the impact of fishing on marine resource populations, and to support the management of fishing capacity for sustainable fisheries.

¹³ <http://www.fao.org/fi/static-media/MeetingDocuments/WECAFC/FDSWG/2018/5e.pdf>

¹⁴ The FAO technical guidelines developed to support the implementation of the IPOA for the Management of Fishing Capacity define fishing capacity as “the amount of fish or fishing effort that can be produced over a period of time by a vessel or a fleet if fully utilized. That is, if effort and catch were not constrained by restrictive management measures”.

3.3.1.1 Task I.1: Fishing Capacity and total nominal catches

Objective

To provide a general summary overview of the fishery sector of each country, with an indication of total fleet capacity and total nominal catches for sub-areas relevant to WECAFC.

Description

Total fleet capacity and nominal catches for subareas relevant to WECAFC and reference year.

Note for reviewers:

The Data reported in this task are in principle the sum of other indicators available in Task II.1 (for nominal catches) and Task III.1 (for Fleet engaged by subarea), and therefore Totals must be aligned. This principle is true at national database level. At regional level, this principle depends on decisions regarding species included in the scope for reporting to the RDB, and in case species are not specifically included in the regional reporting, how these would be summarized as e.g., nei category.

Note from GFCM: fleet segments could be merged (i.e. aggregating vessel length classes) if they have similar exploitation patterns (targeting the same species), and exploiting the same portion of the population (i.e. juveniles or adults)

Scope

Total catches and Total numbers of vessels should be reported in the WECAFC Regional Database for:

- all species of the overall WECAFC Reference list of aquatic species for which Nominal catches are available at Fleet segment and subarea levels.
- all vessels flagged under member countries in the WECAFC areas (including distant water fishing fleet vessels also registered under member countries in the WECAFC area).

WECAFC Members involved

All WECAFC Members

Data to be reported (fields in *italics* are optional)

Field	Definition
Flag State	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter</i>	<i>Optional, and for specific sub-sets (if available in the WECAFC Member)⁽²⁾</i>
Fleet Segment	See appendix 4 for fleet segment definition

Area	“Area 31” is compulsory, subareas are optional and can be aggregated at Area 31 level. In any case, national figures must be provided for the fishing activities taking place in the WECAFC area See appendix 2 for regional subareas’ definition
Total Nominal Catch	Weight of total landed fish (no breakdown by species) for the given species in live weight equivalent (in tonnes), by fleet segment and for the reference year (or quarter)
Active Fishing Vessel Count	Total number of active fishing vessels during the reference year (or quarter) by fleet segment (see Appendix 4 for fleet segment definitions)
Total Capacity (GT)	Total capacity, in gross tonnage (GT), of all active fishing vessels by fleet segment in the reference year (or quarter) (see appendix 4 for fleet segment)
Total Engine Power (kW)	Total main engine power, in kilowatt (kW) ⁽¹⁾ , of all active fishing vessels by fleet segment in the reference year (or quarter)

⁽¹⁾ 1 hp = 0.7457 kilowatt (kW).

⁽²⁾ Optional means that this information can be reported if and when relevant to the member country.

Frequency and deadline of transmission

Once a year prior to the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *first/preliminary data submission accessible to concerned WECAFC Member and FAO data manager for validation.*
- *the integration and validation as final data reporting is under the responsibility of the sole WECAFC data manager, who eventually decides the publishing*
- *eventually publicly available*

3.3.1.2 Task I.2: Nominal catches by species and sub-areas (Statlant¹⁵)

Objective

The regional overview of total catches by country, species and sub-areas for all species in the WECAFC Reference list of aquatic species provides the overall reference for fisheries total removals in each subarea, and allows to monitor catch trends by species among subareas, a key aspect of Ecosystems and Climate Change/natural disasters impacts assessment.

Description

Total catch by species should be considered as the weight of the total yearly catches, including retained catch (landings) and the discarded quantities (discards). This sub-task is a breakdown by subarea of the questionnaire NS1 submitted by countries to FAO.

Scope

Total catches by species should be reported in the WECAFC Regional Database for:

- all species of the Reference list of aquatic species for Group1 and Group2 species: data is expected at species taxonomic level for Group1 species (basis 1; Appendix 3.1); for Group 2 species (basis 2,3,4; Appendices 3.2), data is expected at taxonomic level to the extent possible, but otherwise at higher taxonomic levels of the ASFIS list.
- all vessels flagged under member countries in the WECAFC areas (including distant water fishing fleet vessels also registered under member countries in the WECAFC area).

WECAFC Members involved

All WECAFC Members

¹⁵ Reference to Statlant

Data to be reported (fields in *italics* are optional)

Field	Definition
Flag State	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter</i>	<i>Optional, and for specific sub-sets (if available in the member country)(2)</i>
Area	See appendix 2 for regional subareas' definition
Species	See appendix 3 for the main commercial species (scientific name)
<i>Retained Catch</i>	<i>Optional: Weight of retained species (including landed catches or catches retained for other uses¹⁶), for the given species in live weight equivalent (in tonnes) for the reference year or quarter</i>
<i>Discarded Catch</i>	<i>Optional: Weight or numbers of discarded species, for the given commercial species in live weight equivalent (in tonnes) for the reference year or quarter</i>
Nominal Catch per species	Weight of total landed fish for the given species in live weight equivalent (in tonnes)

Frequency and deadline of transmission

Once a year prior to the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *first/preliminary data submission accessible to concerned Member country and FAO data manager for validation.*
- *the integration and validation as final data reporting is under the responsibility of the sole WECAFC data manager, who eventually decides the publishing*
- *eventually publicly available*

¹⁶ The term 'retained catch' refers to the component of the catch which is retained on board the fishing vessel (including catches landed plus catches retained for other uses, such as consumption by the crew, utilization as bait, quantities for home consumption) and reported as the total live weight of fish and other organisms retained, and in some fisheries the number of individuals retained.

3.3.2 Task II: Catch and effort

Objective

Provide key fisheries monitoring data on Catch and Effort in support of/for management and stock assessment at either national or regional levels (e.g., landing data, catch data per species, fleet segment/geartype, and effort).

3.3.2.1 Task II.1: Catch

Description

Nominal catches (target and by-catch species), retained and discarded (dead and live) catch estimates, provided on a yearly basis by Fleet segment-[Geartype]-Fishing mode and subarea, with the corresponding fishing effort provided in Task II.2.

A statistical Fishing unit is materialized in this Task by the Fleet segment, associated [geartype and] Fishing mode, deployed in a fishing area, and catching a specific species.

Catches are defined in number of individuals as all the fish removed during the fishing activities whether targeted or taken as bycatch: thus, the term “catches” encompasses retained fractions (supposedly all landed) and the discarded quantity (see definitions, section 2).

Catches are defined in weight units as the total weight of catches per species, area, fleet segment [and geartype], for the given year.

Weight is defined as the live equivalent (see appendix 3 for regional conversion factors - when available, national conversion factors should be shared with WECAFC).

It is acknowledged that discards are not collected in many countries in the WECAFC area. This is a target to be achieved. Reporting of discards is done on a “data availability” basis. Sampling resources should be put in place to collect these data as they are key for stock assessment and monitoring (see Section IV on biological data).

Scope

Provision of

Catch and effort should be reported in the WECAFC Regional Database for:

- Group1 species (basis 1, Appendix 3.1) of the Reference list of aquatic species..
Data for Group2 species (basis 2,3,4- see Appendix 3.2) may be reported as well.
- all vessels flagged under member countries in the WECAFC areas (including distant water fishing fleet vessels also registered under member countries in the WECAFC area).

Note: Group3 species (basis 5) do not fall under the WECAFC mandate. It is recommended that WECAFC Members handle these species in accordance with ICCAT data requirements and in ways harmonized and consistent with Group1 species.

WECAFC Members involved

All WECAFC Members.

Data to be reported (fields in *italics* are optional)

Field	Definition
Flag State	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter / Month</i>	<i>Optional, and for specific sub-sets if/as indicated by specific WGs</i>
Fleet Segment	See appendix 4 for fleet segment definition
<i>Gear type</i>	<i>See Appendix 5.1 for gear type codes from ISSCFG</i>
Fishing mode	See appendix 5.2 for fishing mode definition
Area	See appendix 2 for regional subareas' definition
Species	See appendix 3 for the main commercial species (scientific name)
Retained Catch	Weight of retained species (including landed catches or catches retained for other uses ¹⁷), for the given species in live weight equivalent (in tonnes) for the reference year or quarter
Discarded Catch	Weight of discarded species, for the given commercial species in live weight equivalent (in tonnes) for the reference year or quarter
Nominal Catch	Weight of total landed fish for the given species in live weight equivalent (in tonnes)

FDS-WG2 noted that in future developments, this indicator could be provided by Fishery as identified in the WECAFC-FIRMS inventory of fisheries.

Frequency and deadline of transmission

Once a year prior to the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *first/preliminary data submission accessible to the concerned WECAFC Member and FAO data manager for validation.*
- *integration of this submission by the FAO data manager in a wider dataset viewable by all Members of a specific [species] Working Group who have duly submitted their data, for validation of the data call by the WG as a whole as final reported data*
- *eventually publicly available (and possibly at aggregated level)*

¹⁷ The term 'retained catch' refers to the component of the catch which is retained on board the fishing vessel (including catches landed plus catches retained for other uses, such as consumption by the crew, utilization as bait, quantities for home consumption) and reported as the total live weight of fish and other organisms retained and in some fisheries the number of individuals retained.

3.3.2.2 Task II.2: Effort by fleet segment / gear type

Description

The Fishing effort deployed by national flagged Vessels, reported on a yearly basis by fishery, with catches (and landings) for the corresponding Fleet segment-[Gear type]-Fishing mode and subarea reported in Task II.1.

A fishery is materialized in this Task by the combination of Fleet segment, [gear type, and] Fishing mode, target species, and subarea.

Scope

Effort data should be reported in the WECAFC Regional Database for all flagged fishing vessels actively fishing within the reference period in the WECAFC competence area, and conducting fishing operations catching Group1 species (basis 1; Appendix 3.1) of the Reference list of aquatic species.

Data for Group2 species (basis 2,3,4; Appendices 3.2) of the Reference list of aquatic species may be reported also.

Note: For Vessels conducting fishing operations concerning Group3 species (basis 5) which do not fall under the WECAFC mandate, it is recommended that countries manage fishing effort data in accordance with ICCAT data requirements and in ways harmonized and consistent with WECAFC data requirements.

WECAFC Members involved

All WECAFC Members

Data to be reported (fields in *italics* are optional)

Field	Definition
Flag State	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter / Month</i>	<i>Optional (same as for Task II.1)</i>
Fleet Segment	See appendix 4 for fleet segment definition
<i>Gear type</i>	<i>Optional, but recommended in particular for vessel categories of Fleet segment making use of multiple gears. See Appendix 5.1 for gear type codes from ISSCFG</i>
<i>Target species</i>	<i>Optional See Appendix 3 for the main commercial species (scientific name)</i>
Fishing Mode	See Appendix 5.2 for fishing mode definition

Area	See Appendix 2 for regional subareas' definition
Days Fishing	Number of days spent fishing for the fleet segment/Fishing mode in the subarea for the reporting period
Nominal Effort	Value of Nominal effort for the fleet segment/Fishing mode in the subarea for the reporting period

FDS-WG2 noted that in future developments, this indicator could be provided by Fishery as identified in the WECAFC-FIRMS inventory of fisheries (www.fao/firms/en).

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (same as section 3.3.2.1)

3.3.3 Task III: Fleet engagement, and Vessels

Objective

Data on Vessels is critical for Monitoring, Control and Surveillance, and provide the sources for the planned regional vessel registry as envisaged in support of/for regional fishery management plans. Data on Vessels provides the framework for the regional vessel registry as per the regional fishery management plans, and is critical for Monitoring, Control and Surveillance. Data on Fleets engaged by fishery provide additional fisheries monitoring data in support to assessment and management of fishing capacity.

The FAO technical guidelines developed to support the implementation of the IPAO for the Management of Fishing Capacity define fishing capacity as “the amount of fish or fishing effort that can be produced over a period of time by a vessel or a fleet if fully utilized. That is, if effort and catch were not constrained by restrictive management measures.

3.3.3.1 Task III.1: Fleet engaged by fishery

Objective

Provide first level fisheries monitoring data on Nominal Effort engaged by fishery, in support of/for management at either national or regional levels.

Description

The engagement in a fishery can be “potential” when deducted from a vessel registry and licensing information, or “actual/realized” when deducted from actual monitoring of operations.

Potential engagement (i.e. Fishing capacity): the Fleet potentially engaged in a fishery by a Flag State is defined as the number of vessels of a given Fleet segment registered as “active” in the vessel

registry with authorization/license to access a fishing area with certain fishing gear (optionally) and to fish certain target species (optionally). Alternative measures are Total GT and Kw.

Actual/realized engagement: the Fleet actually engaged in a fishery by a Flag State is defined as the number of vessels of a given Fleet segment active and actually operating in a fishing area with certain target species. Alternative measures are Total GT and Kw. Measuring actual/realized engagement requires identifying vessels according to their registration number in data collection at fishing operations level.

According to the DCRF, a vessel in a Vessel Registry is mapped to a Fleet segment which includes the notion of predominant gear type. However such vessel may engage in fishing activity with another Gear type, therefore the Gear type can be optionally used to describe engagement in a fishery.

The concept of Nominal effort (i.e. number of vessel) engaged in fisheries implies that vessels may be double counted in particular when they are multigear vessels, as they may engage in various fisheries. The concept is however important for the management of specific fisheries as it informs on the potential or actual number of vessels which may participate in such fishery.

Note: in absence of vessel registry and licensing system, the potential engagement can be estimated through frame surveys designed to map the surveyed vessels to a Fleet segment, together with the combination of gears used and target species.

Scope

Potential and Actual/realized engagement should be reported in the WECAFC Regional Database for all species of Group 1 (basis 1) of the Reference list of aquatic species as defined in Appendix 3.

WECAFC Members involved

All WECAFC Members

Data to be reported (fields in *italics* are optional)

Field	Definition
Flag State	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
Area	See Appendix 2 for regional subareas' definition
Fleet Segment	See Appendix 4 for Fleet segment classification
<i>Gear type</i>	<i>Optional - Predominant / primary gear See Appendix 5.1 for gear type codes from ISSCFG</i>
<i>Target species</i>	<i>Optional - See Appendix 3 for the main commercial species (scientific name)</i>
Engagement type	“P” for potential; “A” for actual/realized
Number	Number of active vessels for the considered Fleet segment in the subarea during the reference year
Total Capacity (GT)	
Total Engine Power (Kw)	

FDS-WG2 noted that in future developments, this indicator could be provided by Fishery as identified in the WECAFC-FIRMS inventory of fisheries.

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *first/preliminary data submission accessible to the Member country and FAO data manager for validation.*
- *integration of this submission by the FAO data manager in a wider dataset viewable by all Members of a specific Working Group who have duly submitted data, for validation of the data call by the WG as a whole as final reported data*
- *eventually publicly available (and possibly at aggregated level)*

3.3.3.2 Task III.2: Vessel registry

Provision has been made in the regional fishery management plan to create a regional vessel registry fed by the national vessel records or registries.

Description

The minimum set of information required for the description of fishing vessels is as recommended by the WECAFC IUU Working Group in its second meeting (Barbados, Sept 2017).

The second (and supplemental) subset of data is time dependent and concerns information on fishing licenses granted to registered vessel.

The information on the primary, secondary and third fishing gear(s) allow to map the vessel to a Fleet segment for a given year – considering the eventuality of a predominant gear, and to generate Task III.1 data. In absence of a licensing scheme, this information can be collected during vessels' frame surveys.

Scope

The regional register contains the minimum set of information recommended by the WECAFC Working Group on IUU. In its first phase, it should include all vessels above 12 meters, commercial or recreational, with focus during phase 1 implementation on those engaged in Fisheries under FMP.

Note: it is recommended that the source national vessel registry and licensing system include all vessels above 12 meters, and below this length should include to extent possible all vessels involved in commercial fishing activities, vessels engaged in recreational fishing, and all vessels engaged in fisheries under fishery management plans.

WECAFC Members involved

All WECAFC Members

Data¹⁸

Vessel information	Mandatory / Optional	Definition
Unique identifier		WECAFC vessel unique identifier
Name	M	Current Vessel Name
Registration Number	M	National Vessel Registration Number

¹⁸ Second meeting of the WECAFC Working Group on IUU (Barbados, Sept 2017)

Home Port (Registration Port)	M	Vessel Home Port Name
Owner(s)	M	Name of the current vessel owners
Flag	M	Current Vessel Flag (country of vessel registration – ISO3)
Operational status	M	Is the status of the vessel: active, decommissioned, sunk etc...
IMO (*)	O	International Maritime Organization Number
IRCS (*)	M	International Radio Call Sign
LOA (m) (*)	M	Length OverAll is the maximum length of a vessel's hull measured parallel to the waterline ¹⁹
Draft (m)	O	Is the vertical distance from the bottom of the keel to the waterline.
Beam (m)	O	is the width of the hull
GT (t) (*)	O	Gross Tonnage
GRT (t) (*)	O	Gross Registered Tonnage
Main engine Power (kW)	M	Power of the vessel main engine (in-board or outboard)
Hull type	O	Type of the watertight body of the vessel (steel, aluminum, fiber glass, wood,
Vessel Type	M	Type of fishing vessel according to the ISSCFV, taking into account the WECAFC consideration of predominant gear.
Year of construction	M	Year of the original vessel construction
Location of construction	O	Location of the vessel shipyard
Image	M	Image of the vessel (with registration number)
Previous flag(s)	O	Previous country(ies) of vessel registration (ISO3)
Previous name	O	Previous vessel name
Beneficial owner	O	Name of the vessel beneficial owner
Year of entry into fishing activity	O	The year in which the vessel commenced its fishing activity

Time dependent / fishing activity related data: these fields extend the above Global Vessel Records²⁰ standard with the minimal information necessary for the DCRF tasks, namely the Activity and Fleet segment classification

Year	O	Reference Year for Reporting
Actually active	O	Indicator Y or N ; information from Registry/License, or from census
Fleet Segment		Fleet segment in which the fishing vessel is classified for the reporting year See Appendix 4 for Fleet segment classification

¹⁹ Launer, Donald (2006). *Dictionary of Nautical Acronyms and Abbreviations*. Sheridan House, Inc. p. 64. ISBN 978-1-57409-239-4

See

https://books.google.com/books?id=9_7ycOuv6a4C&pg=PA64&dq=LOA+length+overall+LOD+donald#v=onepage&q&f=false

²⁰ FAO Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels <https://www.fao.org/global-record/en/>

Note: in addition to the above fields, it is recommended that the vessel register / licensing system at national level contains some or all of the following fields, so to enable the classification of the fishing vessel in one Fleet segment for regional database submission.

Authorization to fish (license indicator)	O	Any authorization to fish, e.g. license, permit or any other official denomination; indicator Y/N
Main fishing gear used	O	The main gear, according to the fishing license of the vessel or the owner/operator, using the Appendix 5.1 for gear type codes from ISSCFG
Secondary fishing gear	O	The secondary gear, according to the fishing license of the vessel or the owner/operator, using the Appendix 5.1 for gear type codes from ISSCFG
Third fishing gear	O	The tertiary gear, according to the fishing license of the vessel or the owner/operator, using the Appendix 5.1 for gear type codes from ISSCFG
<i>Target species</i>	<i>O</i>	<i>Optional: the main target species as authorized in the license or known from the owner/operator</i>

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *First/preliminary data submission accessible to the Member country and FAO data manager for validation.*
- *Integration of this submission in a wider dataset maintained by the FAO data manager.*
- *New updates published on a continuous basis*

3.3.4 Task IV: Biological information

Objective

Biological data are key to population dynamic studies, regional or national stock assessment in support to fisheries management, stock status determination e.g. in the context of indicator SDG14.4.1.

More specifically: monitor the structure of exploited populations based on length frequencies, and other biological data such as sex or maturity stages on select species.

3.3.4.1 Task IV.1: Size data

Description

Size frequencies of the samples (nominal and raised) measured by species (retained and discarded), classified by fleet segment, gear sample units, time unit, area, and sex (where possible and relevant) for select species from the Reference list of aquatic species (Appendix 3).

And for selected species, the sex and the stage of maturity.

It is acknowledged that biological data on discards are not collected in many countries in the WECAFC area. This is a target to be achieved. Reporting of discards is done on a “data availability” basis. Effort should be put in place to collect these biological data for some portion of the numbers discarded as they are key for stock assessment and monitoring.

Note: this Task describes the overall list of fields with reference to statistical standards. The species Working Groups will be requested to further tailor the description of the Task for their specific needs.

Scope

Size frequencies should be reported in the WECAFC Regional Database for Group1 species (basis 1, Appendix 3.1) from the Reference list of aquatic species, and as per specification of WECAFC-CRFM-OSPESCA working groups for other selected species (Group2, basis 2,3,4; Appendix 3.2), and subareas.

WECAFC Members involved

All WECAFC Members when data are available.

Data to be reported (fields in *italics* are optional)

Field	Definition
Flag State	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter/Month</i>	<i>Optional: by quarter or month if available</i>
Fleet Segment	See appendix 4 for fleet segment definition
Geartype	See Appendix 5.1 for geartype codes from ISSCFG. The technical characteristics of the sampling gears (e.g. mesh size, number of hooks, etc...) should be provided in Metadata associated with the reported data.
Fishing mode	See appendix 5.2 for fishing mode definition
Area	See appendix 2 for regional subareas' definition
Source of data	Source of data: Port sampling from scientists (PS) or Scientific Research Survey (SU), Observer (OBS), Self-reported (fishers)
Species	Required for group 1 basis 1 species; optional for other species. See appendix 3.1 for the main commercial species (Scientific name)

Total Retained Catch (weight)	Weight of retained species, for the given commercial species in live weight equivalent (in tonnes)
Total discarded catch	Amount of catch discarded and not brought to landings site, for the given commercial species in live weight equivalent (in tonnes). Use NA if discards were not recorded, and 0 if discards were actually zero and no catch was discarded.
Total weight of samples	Weight of sampled species
Length class	The value of the length class of the measured individuals. See appendix 6.1
Length class unit	Length class units are recorded as TL, SL, or FL. See appendix 6.1
Sex	Sex with the stage of maturity where appropriate for selected species (male = M, female = F, total = T, unknown = U) -- total catch observations = T, but allows separation by sex if available
Maturity stage	Stage of maturity where appropriate See Appendix 6.2
Maturity scale	(e.g. stage 1 on a scale 1 – 5 or 1 on a scale 0-1 as specified in Appendix 6.2)
Number of individuals by length class	Total number of fish in the sample for the given length class and (where appropriate for selected species) sex with the stage of maturity (see Appendix 6.2 for maturity schedules)
Total weight of individuals by size class	Total weights of individuals in length class and (where appropriate for selected species) sex with the stage of maturity, + indicate unit (e.g. grams or kilograms).

Note: A detailed regional classification of gear type by characteristics (gillnet net by mesh size, longline by group of number of hooks etc...) could be developed

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *Approach: Task IV.1 is first available to specific Species WGs at the highest resolution level. WGs validate the aggregated table, then the WG can possibly advise to publish it at aggregated level. Scope of the published data will always be clearly mentioned in the Metadata.*
- *Rules:*
 - *First/preliminary data submission accessible to WECAFC Members and dedicated WG scientific data manager for validation.*
 - *WG scientific data manager integrates submitted data in a wider dataset viewable by all WECAFC Members of a Species WG having submitted, for validation by the WG as a whole as final reported data.*
 - *The eventual published format would be recommended by the WG.*

3.3.4.2 Task IV.2: Catch at Size data

Description

This task originates and is an aggregated level of Task IV.1, however acknowledging that varying constraints may prevent countries from submitting at Task IV.1 level, thus IV.2 provisions for countries reporting statistics as the extrapolated level. Reported catch at size (raised to Task II Catch data) classified by fleet segment, gear type, species, time unit, area and (where appropriate for selected species) sex with the stage of maturity.

Scope

Catch at size data should be reported in the WECAFC Regional Database as per specification of WECAFC-CRFM-OSPESCA working groups for selected species from the Reference list of aquatic species (e.g., Group1 species, basis 1; Appendix 3.1) and subareas.

- Data for Group2 species (e.g. basis 2,3,4; Appendix 3.2) may be reported as well.

WECAFC Members involved

All WECAFC Members

Data to be reported (fields in *italics* are optional)

Field	Definition
Country	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter/Month</i>	<i>Optional: by quarter or month if available</i>
Fleet Segment	See appendix 4 for fleet segment definition
Gear type (with details)	See Appendix 5.1 for gear type codes from ISSCFG The technical characteristics of the sampled gears (e.g. mesh size, number of hooks, etc...) should be

	provided in Metadata associated with the reported data.
Fishing mode	See appendix 5.2 for fishing mode definition
Area	See appendix 2 for regional subareas' definition
Species	See appendix 3.1 for the main commercial species (Scientific name)
Length Class	The value of the length class of the measured individuals. Length classes should be reported in centimeters (cm), as a whole number, or in half centimeters (e.g., 0.5, 1.0, 1.5 cm, etc.) for fish (including elasmobranchs) and cephalopods. For crustaceans, length classes should be reported in millimeters (e.g., 1, 2, 3, 4 mm, etc.) Convention for length type and interval identity to be further specified.
Length class unit	Length class units are recorded as TL, SL, or FL. See appendix 6.1
Sex	Sex where appropriate for selected species (male = M, female = F, total = T, unknown = U) -- total catch observations = T, but allows separation by sex if available
Stage of Maturity	Stage of maturity where appropriate for selected species (as specified per species in Appendix 6.2, see below)
Total Weight of Individuals by length class (expanded)	Total weight of individuals in length class ² and (where appropriate for selected species) sex with the stage of maturity, + indicate units (e.g. grams or kilograms).
Total Catch (expanded)	Total number of individuals (raised to task II total catch) for length of the entire catch by fleet, gear type, Year/Quarter/Month, area

Notes:

Same as for Task IV.1 concerning a detailed classification on gear type

Note for reviewers: There is a need to define a regional reference list of stage of maturity per species. Advice is expected from the Species Working during the 2022-2023 intersession period. Appendix 6.2 proposes an initial structure in this respect

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

Same as for Task IV.1

3.3.5 Task V: Endangered, Threatened, Protected (ETP) species catches

Objective

To conserve natural resources through sustainable fisheries, bycatch of marine endangered species such as seabirds, sea turtles, elasmobranchs and marine mammals must be quantified with the goal to assess fisheries impacts on the ecosystem and to control mortality to levels below those that threaten the conservation status of endangered species.

Description

The bycatch concerning endangered, threatened or protected species (ETP) are reported, whether landed, discarded dead, or discarded alive.

Scope

By-catch should be reported in the WECAFC Regional database for all ETP species in the Reference list of aquatic species.

Note for reviewers: the list of ETP species can be identified either among the existing bases, or through a specific basis or appendix to be developed and inputs are requested during the 2022-2023 intersession.

WECAFC Members involved

All WECAFC Members when data are available

Data to be reported (fields in *italics* are optional)

Field	Definition
Flag State	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter/Month</i>	<i>Optional: by quarter or month if available</i>
Fleet Segment	See appendix 4 for fleet segment definition

Gear type	See Appendix 5.1 for gear type codes from ISSCFG
Fishing mode	See appendix 5.2 for fishing mode definition
Area	See appendix 2 for regional subareas' definition
Species	An appendix 3.4 is proposed for ETP species (Scientific name)
Landings (in numbers or weight as appropriate)	Number and estimated weight landed
Number of discards alive (in numbers or weight as appropriate)	Number of discards and estimated weight for alive fish
Number of discards dead (in numbers or weight as appropriate)	Number of discards and estimated weight for dead fish

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *first/preliminary data submission accessible to WECAFC Member and FAO data manager for validation.*
- *the integration and validation is under the responsibility of the sole WECAFC data manager, who eventually decides the publishing as final reported data.*
- *eventually publicly available*

3.3.6 Task VI: Socio economics

Objective

Monitor the economic and social status of the fishing sector in support to appropriate policies and strategies, especially in relation to promoting fishing as a source of livelihoods thanks to the long-term sustainability of resources and fleets.

Economic and social data are generally collected through sampling surveys using questionnaires, but for some fleet segments and some variables, other data sources could be used (e.g. administrative records, auction sales, and census).

3.3.6.1 Task VI.1: Employment

Objective

Employment in the fishery sector is a useful indicator of the importance of the fishery sector in the region, with specific attention to be paid to gender, youth, decent/child labor, and more generally to the dynamics of populations engaged in fishing activities (primary production sector).

Description

This indicator aims to present the total number of fishers by sex (male / female), age group, time-use (full time employment or part time employment), and area for the reference year.

Age groups are set according to the ILO guidelines “Decent work indicators: for producers and users of statistical and legal framework indicators”, with categories <15 (for child labor); 15-24 (for youth employment); 24-65; >65

Time-use categories (full-time fisher / part-time fisher) refer to CWP and are described in the definition section of this document. While Country Members should follow these definitions, they should provide along with the data the related metadata qualifying what is a full-time fisher and part-time one.

Scope

This task addresses the primary fishery production sector

WECAFC Members involved

All WECAFC Members

Data to be reported (fields in *italics* are optional)

Field	Definition
Country	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
Area	See appendix 2 for regional subareas' definition
Sex	Male or Female
Age Group	0-15 / 15-24 / 24-65 / >65 (See Appendix 7.1)
Time-use category	Full-time fisher / part-time fisher
Count of fishers	Number of fishers for the specified sex / age group / time-use category / (excluding workers in secondary sector)

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *First/preliminary data submission accessible to WECAFC Member and FAO data manager for validation.*

- *the integration and validation is under the responsibility of the sole WECAFC data manager, who eventually decides the publishing as final reported data.*
- *eventually publicly available*

3.3.6.2 Task VI.2: Participation in fishing activities

Objective

The participation in fishing activities, measured by the number of fishers actively taking part in fishing activities and the intensity of such involvement, is key for assessing the productivity of manpower, the assessment of individual income levels, and overall the social impact of management decisions on specific fisheries.

This Task is particularly important for hand collection fishing operations from shore

Description

The intensity of employment for fishers actively engaged in fishing activities, measured in numbers of persons and total number of days spent fishing.

Scope

This task addresses the primary fishery production sector, and concerns all fisheries with however a primary focus on fisheries under WECAFC Fishery Management Plan.

WECAFC Members involved

All WECAFC Members

Data to be reported (fields in *italics* are optional)

Field	Definition
Country	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
<i>Quarter/Month</i>	<i>Optional: by quarter or month if available</i>
Fleet Segment	See appendix 4 for fleet segment definition
<i>Geartype</i>	<i>Optional - See Appendix 5.1 for geartype codes from ISSCFG</i>
<i>Fishing mode</i>	<i>Optional, but important for fishing activities without vessel - See appendix 5.2 for fishing mode definition</i>
Area	See appendix 2 for regional subareas' definition
Count of fishers	Number of fishers actively taking part to fishing activities
Count of fishers x days fishing	Number of fishers multiplied by number of fishing days (intensity of fishers involvement in fishing activities)

Note: FDS-WG2 noted that in future developments, this indicator could be provided by Fishery as identified in the WECAFC-FIRMS inventory of fisheries.

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *First/preliminary data submission accessible to WECAFC Member and FAO data manager for validation.*
- *the integration and validation is under the responsibility of the sole WECAFC data manager, who eventually decides the publishing as final reported data.*
- *eventually publicly available*

3.3.6.3 Task VI.3: Value of catches

Note: There is increasing global policy demand for assessing the value of capture fisheries, and CWP has added at its 26th session (May 2019) **this** variable as part of the minimum data requirement for socio-economic statistics at the global scale.

Objective

Assessment of the total income of the primary fishing sector and its contribution to national GDP e.g. for SDG indicator 14.7.1, trends analysis of average annual prices for commercial species; also a foundation for the assessment of the fleet socio-economic performance.

Description

The monetary value of total capture fisheries production at first sale after landing of the catch (ex-vessel price), and the average value of species' prices/kg, in local currencies available for conversion in US\$ using appropriate average annual exchange rates. The value should exclude taxes, transportation costs and marketing expenses, and the profit of fishers. The concept of the ex-vessel price in some countries can correspond to the landed value and of first-hand selling (or first sale) price.

Scope

Value of catches should be reported in the WECAFC Regional database for all species of the WECAFC Reference list of aquatic species (Appendix 3).

WECAFC Members involved

All WECAFC Members

Data to be reported (fields in *italics* are optional)

Field	Definition
Country	The M49 UN code for the country (see appendix 1)
Year	Reference year for reporting
Species	See appendix 3 for the main commercial species (scientific name)
Total nominal catch	Weight of total landed fish for the given species in live weight equivalent (in tonnes).
Unit price by species	The average value of species' prices (price/kg) during the reference year (in local currency) - (converted into US\$ in the regional database)
Value	Total monetary value of total landed fish for the given species (in local currency) - (converted into US\$ in the regional database) - (See Appendix 7.1)
Currency	The International Standard for currency codes ISO 4217 (e.g. USD for US dollar)

Frequency and deadline of transmission

Once a year before the end of the first semester of the following year.

Data access and sharing rules (see section 3.2)

- *first/preliminary data submission accessible to Member country and FAO data manager for validation; includes conversion of local currencies into USD by FAO manager;*
- *the integration and validation is under the responsibility of the sole WECAFC data manager, who eventually decides the publishing as final reported data;*
- *eventually publicly available.*

