May 2021

E

منظمة الأغذية والزراعة للأمم المتحدة	联合国粮食及农业组织	Food and Agriculture Organization of the United Nations	Organisation des Nations Unies pour l'alimentation et l'agriculture	Продовольственная и сельскохозяйственная организация Объединенных Наций	Organización de las Naciones Unidas para la Agricultura y la Alimentación

Food and Agriculture Organization of the United Nations

COPACO
Western Central Atlantic Fishery Commission

WESTERN CENTRAL ATLANTIC FISHERY COMMISSION (WECAFC)

Extended session of the Second meeting of the WECAFC-CRFM-OSPESCA Fisheries Data and Statistics Working Group (FDS-WG)

Virtual Meeting, 25-28 May 2021

Interim Data Collection Reference Framework: Appendixes

Interim Data Collection Reference Framework: Appendixes

Version 0.6

TABLE OF CONTENTS

1 38
2 38
3 38
4 Appendix 38
4.1 Appendix 1 - List of WECAFC country/territory codes (M49) 38
4.2 Appendix 2 - Spatial units for fishing zones (WECAFC subareas/divisions) 41
4.2.1 Introduction 41
4.3 Appendix 3 - WECAFC – List of species, fisheries and stocks 44
4.3.1 Appendix 3.1 - WECAFC Reference list of aquatic species 44
4.3.2 Appendix 3.2 - List of national fisheries in the WECAFC competence area 91
4.3.3 Appendix 3.3 - List of stocks - national and shared - in the WECAFC competence area 99
4.4 Appendix 4 - Fleet segment - vessel type / length class 111
4.4.1 Introduction 111
4.4.2 Appendix 4.1 Fleet segment - vessel types by length classes 112
4.5 Appendix 5 - Fishing Practice 113
4.5.1 Appendix 5.1 - Fishing Gear 113
4.5.2 Appendix 5.2 - Fishing Mode 115
4.5.3 Appendix 5.3 - Fishing Effort 116
4.5.4 Appendix 5.4 - Effort measurement by fleet segment 118
4.6 Appendix 6 - Biological references – work in progress 119
4.6.1 Appendix 6.1 - Fish length measurement standards 119
4.6.2 Appendix 6.2 - Scales of maturity stages 120
4.6.3 Appendix 6.3 - Growth models adopted by WECAFC for primary species 125
4.6.4 Appendix 6.4 - Conversion factors adopted by WECAFC for primary species 125
4.7 Appendix 7 - Socio-economics (Age groups, Currency, …) 129
4.7.1 Appendix 7.1 - Age groups 129
4.7.2 Appendix 7.2 - Currency 130
4.8 Appendix 8: Questionnaires and data submission schedule 131
4.9 Appendix 9 - Glossary 132

1
2
3
4 Appendix

4.1 Appendix 1 - List of WECAFC country/territory codes (M49[1])

FAO and CWP are advising to use the M49 classification as Global statistical standard for Countries and Territories. However for administrative purpose (e.g. the vessel registries), fishery agencies make use of the ISO3 alpha code. This table provides both standards for the WECAFC Countries and territories.

Name	M49 code	ISO3 code
Anguilla	660	AIA
Antigua and Barbuda	028	ATG
Bahamas	044	BHS
Barbados	052	BRB
Belize	084	BLZ
Brazil	076	BRA
Colombia	170	COL
Costa Rica	188	CRI
Cuba	192	CUB

[1] https://unstats.un.org/unsd/methodology/m49/

CWP FAO countries code list: http://www.fao.org/3/bt978e/bt978e.pdf

Dominica	212	DMA
Dominican Republic	214	DOM
Europeean Union	n/a	EU[2]
France	250	FRA
Grenada	308	GRD
Guadeloupe	312	GLP
Guatemala	320	GTM
Guinea	324	GIN
Guyana	328	GUY
French Guyana	254	GUF
Haiti	332	HTI
Honduras	340	HND
Jamaica	388	JAM
Japan	392	JPN
Martinique	474	MTQ
Mexico	484	MEX
Netherlands	528	NLD
Nicaragua	558	NIC

[2] This is the ISO2 code, there is no ISO3 for EU

Panama	591	PAN
Republic of Korea	410	KOR
Saint-Barthélemy &	652	N/A
Saint Kitts and Nevis	659	KNA
Saint Lucia	662	LCA
Saint-Martin (French Part)	663	MAF
Saint Vincent/Grenadines	670	VCT
Spain	724	ESP
Suriname	740	SUR
Trinidad and Tobago	780	TTO
United Kingdom	826	GBR
United States of America	840	USA
Rep of Venezuela	862	VEN

4.2 Appendix 2 - Spatial units for fishing zones (WECAFC subareas/divisions)

4.2.1 Introduction

Proposals for the WECAFC sub-areas and divisional boundaries were developed in accordance with the following considerations:

a) Maintain consistency of boundaries with marine ecosystems.
b) Desire to implement the UNGA-FSA[3] recommendations and CWP initiative to obtain and maintain distinct separate data between catches taken inside and outside the exclusive economic zones (EEZs) of coastal States.
c) Considerations to facilitate reporting of spatially disaggregated data by WECAFC members.
d) Accounting for references to previous work on FAO areas and discussions for draft WECAFC sub-areas (including the legacy 1978 boundaries[4]).
e) Consistency with concentrations of main fishing activity.

The WWF Maritime ecoregions[5] database was used as a reference in combination with digital maps of the Large Marine Ecosystems (LMEs)[6] and the continental shelf. Specific attention was given to defining the main sub-areas according to the major ecosystems (*e.g., Southeast U.S. Continental Shelf, Gulf of Mexico, Caribbean Sea, High Seas Western Atlantic, West Caribbean, South West Caribbean, North Brazil Shelf*); as well as defining sub-divisions according to secondary marine ecoregions (MEOW[7]), as far as possible.

Two options for the delineation of final subarea proposal were presented to the participants of the FDS-WG2 in October 2021, including via an interactive map viewer:
https://wecafc-firms.d4science.org/data-viewer/index.html

i. Option 1:
   - Base the statistical limits on officially recognized treaty lines and 200 nautical mile boundary lines.
   - In areas where treaties do not exist, the statistical boundaries are to be delimited according to simple longitudinal or latitudinal straight lines, drawn according to the initial considerations a) to e) above.

ii. Option 2:
   The approach avoids constructing statistical divisions based on treaty lines, and instead:
   - Proposes subarea boundaries to be simple longitudinal/latitudinal statistical limits as close as possible to these treaty lines and according to the initial considerations a) to e) above, in addition to;

[3] FAO, 2016. COFI 32 meeting information document. http://www.fao.org/3/a-mq951e.pdf
https://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm
[4] www.fao.org/3/am819e/am819e.pdf

[5] https://www.worldwildlife.org/publications/marine-ecoregions-of-the-world-a-bioregionalization-of-coastal-and-shelf-areas

[6] https://www.thegef.org/topics/large-marine-ecosystems

[7] https://geospatial.tnc.org/datasets/ed2be4cf8b7a451f84fd093c2e7660e3_0

- the 200 nautical mile boundaries.

Of the two options presented for defining the boundary lines, the FDS-WG2 favoured, where possible, existing EEZ boundary lines over straight longitudinal/latitudinal lines, in accordance with the Option 1, while also adhering to the general principles outlined below:

1. That the WECAFC subareas boundaries, as far as possible, provision for consistency with the major ecosystems in the region as the starting point for defining the boundaries, as the overarching principle.
2. That in defining boundary lines, EEZ boundary lines are utilized (where they are formalized through treaties and are not disputed) and other default limits (e.g., 200 nautical miles) as the prevailing principle, in combination with, where required or preferred, simple longitudinal, latitudinal or oblique straight lines in the cases where:

   (a.) there is no clear demarcation of the maritime boundaries, to avoid issues of undefined/disputed maritime spaces;

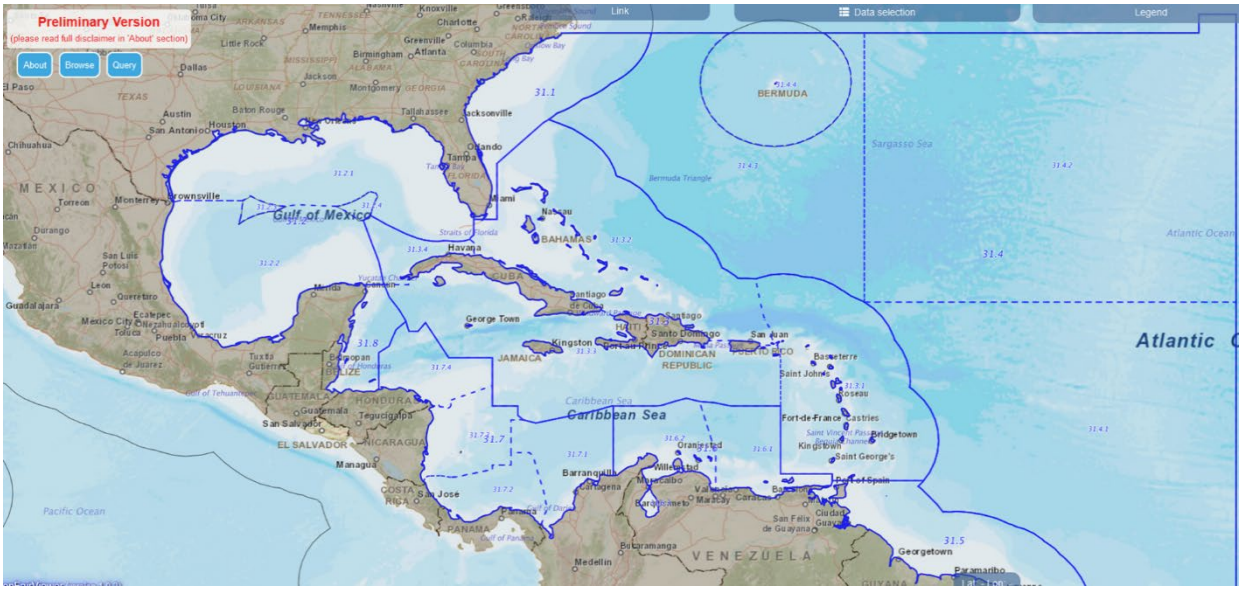
   (b.) there are locally recognized and important ecosystem boundaries, together with other considerations such as countries' data collection capacity.

The FDS-WG2 recommends that the above general principles constitute decisive criteria and should be referenced in the case of further proposals on the final boundaries, subject to agreement of the WECAFC Members directly involved. The WG further recommends that, to the extent possible, reporting is done at the finest possible division level to ensure the availability of spatial granular data required for scientific purposes.

Note for reviewers: Issues related to the delineation of boundaries in specific subareas[8], including agreement on the possibility of short and long-term solutions, remain pending and subject to further discussion with the member countries concerned. The aim is to provide formal advice, and a final decision, on proposals for delineation of these subareas prior to the extended session of the FDS-WG2 meeting scheduled for May 2021. Upon finally approved proposal, this appendix will precisely describe all subarea and divisional boundaries

Option 1: Proposes to base the statistical limits on officially recognized treaty lines and 200 nautical mile boundary lines. In areas where treaties do not exist, boundaries are delimited according to simple longitudinal or latitudinal straight lines, according to the initial considerations a) to e) outlined above.

[8] Notably sub-areas 31.8 and 31.7 (concerning Honduras EEZ, and the countries under the OSPESCA umbrella); and sub-area 31.5 (concerning French Guiana and Brazil).


Preliminary Version
(please read full disclaimer in 'About' section)
About
Browse
Query
Link
Data selection
Legend
Gulf of Mexico
Caribbean Sea
Atlantic
Pacific Ocean
Sargasso Sea
Bermuda Triangle
BERMUDA
BAHAMAS
CUBA
JAMAICA
HAITI
DOMINICAN REPUBLIC
PUERTO RICO
MEXICO
GUATEMALA
HONDURAS
EL SALVADOR
NICARAGUA
COSTA RICA
PANAMA
VENEZUELA
Havana
Miami
Nassau
Tampa
Orlando
Jacksonville
Tallahassee
Mobile
New Orleans
Houston
Brownsville
Monterrey
Merida
Campeche
Veracruz
Tuxtla Gutierrez
Belmopan
Guatemala
Tegucigalpa
San Salvador
Managua
San Jose
Panama City
Medellin
Bucaramanga
Barranquilla
Cartagena
Maracaibo
Valencia
Caracas
Maracay
Barquisimeto
Ciudad Guayana
San Felix de Guayana
Georgetown
Paramaribo
Port-of-Spain
Bridgetown
Kingstown
Saint George's
Castries
Fort-de-France
Basseterre
Saint Johns
Roseau
Santiago
Santo Domingo
San Juan
Kingston
Port-au-Prince
Nassau
Oranjestad
Willemstad
Tuxtla Gutierrez
Acapulco de Juarez
Mexico City
Puebla
Toluca
Ciudad Juarez
Durango
Torreon
Chihuahua
Guadalajara
Queretaro
Leon
San Luis Potosi
Mazatlan
Tulsa
Oklahoma City
Little Rock
Memphis
Dallas
Austin
San Antonio
Baton Rouge
Jackson
Birmingham
Atlanta
Montgomery
Charlotte
Knoxville
Nashville
Columbia
Greenville
Raleigh
Norfolk
Tampa Bay
Straits of Florida
Yucatan Channel
Gulf of Tehuantepec
Gulf of Panama
Caribbean Sea
31.1
31.2
31.3
31.4
31.5
31.6
31.7
31.8

4.3 Appendix 3 - WECAFC – List of species, fisheries and stocks

4.3.1 Appendix 3.1 - WECAFC Reference list of aquatic species

1. Introduction to list of species

As a preamble, WECACF competence is recalled regarding species and stocks coverage.

"*All living marine resources, without prejudice to the management responsibilities and authority of other competent fisheries and other living marine resources management organizations or arrangements in the area*."[9]

Commonalities on WECAFC species categorizations are identifiable from interest expressed for the need of monitoring certain species through the historical establishment of species (conch, lobster, flying fish) and/or fisheries (e.g., FAD, deep sea, recreational billfish) working groups and of policies within the region. Initial listings for reporting have derived from policy priorities agreed by Commissions of WECAFC, CRFM and OSPESCA, or other processes (CITES or the Cartagena Convention (Specially Protected Areas and Wildlife (SPAW) Protocol) – UN Environment, Strategic Action Programme for Caribbean and North Brazil Shelf Large Marine Ecosystem (CLME+)) and for which additional data and information are needed for monitoring, reporting, assessment and /or decision-making purposes. Thus, inclusion of specific species into the list for data collection is supported in that they support the policy priorities for the multiple regional Commissions (WECAFC, CRFM, OSPESCA) including informing the various fishery management plans under development. These listings further support the interim framework agreed by regional fishery bodies as specified by the 2016 Interim Coordination Mechanism (ICM)[2] to facilitate, support and strengthen the coordination of actions, among the organizations for sustainable fisheries in the Western Central Atlantic. In particular the ICM specified support for the queen conch, spiny lobster, flying fish, shrimp and groundfish fisheries.

Additionally, it is recognized that other support for species categorization can derive from interest:

- to monitor the high seas straddling/migratory/deep sea species in areas beyond national jurisdiction that would correspond to the WECAFC-as-a body with management authority (e.g., as an RFMO as per WECAFC 16[10] decision), and
- to monitor species identified to other importance to the regional fishery bodies (e.g., CRFM, or OSPESCA), and responding to criteria that would make the sub-regional list distinct from the ICM criteria.

[9] http://www.fao.org/fishery/rfb/wecafc/en

[10] http://www.fao.org/3/a-bo086e.pdf

Therefore two main groupings of importance for species reporting are defined for countries:

Appendix 3.1 Group 1 Species - Main Reference Species:

These are key species of to the region and of specific interest to the WECAFC mandate for which States are strongly encouraged to statistical reporting. These key species are defined as follows and are supported on one or more primary subgroup bases (i.e., criteria for inclusion) and have specific reporting requirements under the DCRF:

- **Subgroup Basis 1:** Species with fisheries management plans endorsed (Conch, lobster, flying fish) or under development (e.g., Conch, lobster and Flyingfish, North Brazil Shelf-Guianas Shrimp and Groundfish) (Appendix 3.1a)

- **Subgroup Basis 2 [former basis 4 v.6]:** Species of interest to historical WGs of regional bodies (WECAFC, CRFM, OSPESCA, including through their ICM). These species would include those such as: small and/or coastal tunas, dolphinfish, wahoo, reef and shelf species (e.g., shrimps, groupers, snappers, acoupas, etc.), recreational, and commercially targeted and threatened sharks, rays (Appendix 3.1b).

- **Subgroup Basis 3 [former basis 3 v6]:** Species in high seas (areas beyond national jurisdiction)/straddling/shared (Appendix 3.1c) and, not under mandate of another RFMO (i.e., as in Appendix 3.2a).

- **Subgroup Basis 4 [former v.6 basis 5].** Species for WECAFC region originating from 1978 working party on fishery statistics and/or of interest for other reasons (e.g., of local interest including high commercial value, for biodiversity reasons, or for importance of impacts from due to climate changes) (Appendix 3.1d)

Appendix 3.2 Group 2 Species - Other species:

- **Subgroup Basis 5 [former basis 2 v.6]** Species having reporting mandates to neighboring RFMO (e.g., ICCAT- https://old.iccat.int/en/introduction.htm) including tuna and tuna like species (Appendix 3.2a)

2. Species listing Structure:
   The regional WECAFC 'main' and 'other reference' species categorization refers to the ASFIS classification enriched with regional names in English, Spanish and French. This CWP classification is maintained and used by FAO to standardize species of fisheries and aquaculture interest. See http://www.fao.org/fishery/collection/asfis/en. It contains standard (official) names in English, French and Spanish.

The proposed structure is the following:

- ASFIS unique 3 alpha code (3 digits) (from ASFIS classification)
- Scientific name (from ASFIS classification)
- FAO Official English name (from ASFIS classification)
- FAO Official French Name (from ASFIS classification)
- FAO Official Spanish Name (from ASFIS classification)

The complete list of WECAFC List of Main Reference species and other species of interest is to be defined through process of FDS-WG review. Initially taken from the 1978 list of species of high commercial interest and subsequently revised taking into account national policies and country capacities. Further refinements incorporating flexibilities according to individual tasks of the interim DCRF. Stakeholders are requested to continually reivew the interim list and confirm additional species from the Subgroup species listings according to bases 1-4 for reporting.

iDCRF_Appendix 3.1. WECAFC List of Main Species and Important Subareas

- ***Appendix 3.1a: Species of key importance for the region - with regional fishery management plans*** *(Subgroup basis 1).*

ASFIS code	*Scientific name*	Reg En Name	Reg Fr Name	Reg Sp Name	ASFIS en Name	ASFIS Fr Name	ASFIS En Name	Subgroup basis	WECAFC Sub-area of Reporting	DCRF Task
Species with management plan										
SLC	*Panulirus argus*	Caribbean spiny lobster	Langouste blanche	Langosta común	Caribbean spiny lobster	Langouste blanche	Langosta común del Caribe	1	WCA	I, II, III, IV, V, VI
FFV	*Hirundichthys affinis*	Flying Fish	Exocet hirondell	Volador golondrin	Fourwing flyingfish	Exocet hirondelle	Volador golondrina	1	WCA	I, II, III, IV, V, VI
COO	*Lobatus gigas*	Queen conch	Strombe rose	Cobo rosado	Queen conch	Lambi	Caracol reina	1	WCA	I, II, III, IV, V, VI
Ground fish (species to be promoted as main species upon advice from Species WGs and other Reviewer Stakeholders, can be found in the Other Reference Species listing)										

YNA	*Cynoscion acoupa*	Acoupa weakfish	Acoupa toeroe	Corvineta amarilla	Acoupa weakfish	Acoupa toeroe	Corvinata amarilla	1	Northen Brazil Shelf	I, II, III, IV, V, VI
SNC	*Lutjanus purpureus*	Southern red snapper	Vivaneau rouge	Pargo colorado	Southern red snapper	Vivaneau rouge	Pargo colorado	1	Northen Brazil Shelf	I, II, III, IV, V, VI
SNL	*Lutjanus synagris*	Lane snapper	Vivaneau gazon	Pargo biajaiba	Lane snapper	Vivaneau gazou	Pargo biajaiba	1	WCA	I, II, III, IV, V, VI
WKK	*Macrodon ancylodon*	King weakfish			King weakfish			1	WCA	I, II, III, IV, V, VI
YNV	*Cynoscion virescens*	Green weakfish			Green weakfish			1	WCA	I, II, III, IV, V, VI
Shrimps (species to be promoted to the List of Main species upon advice from Species WGs and other Reviewer Stakeholders, can be found in the Other Reference Species listing)										
PNU	*Farfantepenaeus subtilis*	Southern brown shrimp	Crevette café	Camarón café sureño	Southern brown shrimp	Crevette grise du Sud	Camarón café sureño	1	Northen Brazil Shelf	I, II, III, IV, V, VI

Question for reviewers:

Identify the key shrimp and ground fish species for the region, and annotate the sub-region where the species is of importance, and fill out above table.

- ***Appendix 3.1b.*** **Species of interest to historical WGs of regional bodies** (WECAFC, CRFM, OSPESCA, including through their ICM). These species would include those such as: small and/or coastal tunas, dolphinfish, wahoo, reef and shelf species (e.g., shrimps, groupers, snappers, acoupas, etc.), recreational, and commercially targeted and threatened sharks, rays (Subgroup basis 3).

ASFIS CODE	Scientific Name	Reg En Name	Reg Fr Name	Reg Sp Name	ASFIS en Name	ASFIS Fr Name	ASFIS En Name	Subgroup Basis	WECAFC Sub-area of Reporting	DCRF Task
Commercially targeted and/or threatened Sharks										
SUD	*Squatina dumeril*	Atlantic Angel Shark			Sand devil	Ange de mer de sable	Tiburón ángel	2	WCA	II, III
CIO	*Isogomphodon oxyrhynchus*	Daggernose Shark	Requin bécune	Cazón picudo sudamericano	Daggernose shark	Requin bécune	Daggernose Shark	2	WCA	II, III
OCS	*Carcharhinus longimanus*	Oceanic whitetip shark			Oceanic whitetuip	Requin océanique	Oceanic whitetip	2	WCA	II, III
RHN	*Rhincodon typus*	Whale Shark			Whale shark	Requin baleine	Whale shark	2	WCA	II, III

FAL	*Carcharhinus falciformis*	Silky Shark			Silky Shark	Requin soyeux	Tiburón jaquetón	2	WCA	II, III
BTH	*Alopias superciliosus*	Bigeye thresher shark			Bigeye thresher	Renard à gros yeux	Zorro ojón	2	WCA	II, III
SMA	*Isurus oxyrinchus*	Shortfin mako			Shortfin mako	Taupe bleue	Marrajo dientuso	2	WCA	II, III
POR	*Lamna nasus*	Porbeagle shark			Porbeagle shak	Requin-taupe commun	Marrajo sardinero	2	WCA	II, III
BSH	*Prionace glauca*	Blue shark			Blue shark	Peau bleue	Tiburón azul	2	WCA	II, III
SPL	*Sphyrna lewini*	Scalloped hammerhead shark			Scalloped hammerhead	Requin-marteau halicorne	Cornuda común	2	WCA	II, III

SPK	*Sphyrna mokarran*	Great hammerhead			Great hammerhead	Grand requin marteau	Cornuda gigante	2	WCA	II, III
SPZ	*Sphyrna zygaena*	Smooth hammerhead			Smooth hammerhead	Requin-marteau commun	Cornuda cruz(=Pez martillo)	2	WCA	II, III
SPQ	*Sphyrna tudes*	Smalleye hammerhead			Smalleye hammerhead	Requin-marteau à petits yeux	Cornuda ojichica	2	WCA	II, III
N/A	*Rhizoprionodon porosus*	Caribbean sharpnose shark			Caribbean sharpnose shark	Requin aiguille antillais	Cazón picudo antillano	2	WCA	II, III
N/A	*Rhizoprionodon lalandii*	Brazilian sharpnose shark			Brazilian sharpnose shark			2	WCA	II, III
N/A	*Carcharhinus porosus*	Smalltail shark			Smalltail shark			2	WCA	II, III

CTI	*Mustelus canis*	Dusky smooth-hound			Dusky smooth-hound	Émissole douce	Boca dulce	2	WCA	II, III
MTR	*Mustelus norrisi*	Florida smoothhound			Narrowfin smooth-hound	Émissole veuve	Musola viuda	2	WCA	II, III
	Carcharhinus limbatus	Blacktip shark						2	WCA	II, III
	Carcharhinus sacronotus	Blacknose shark						2	WCA	II, III
	Mustelus higmani	smalleye smoothhound						2	WCA	II, III
	Galeocerdo cuvier	Tiger shark						2	WCA	II, III
	C. plumbeus	*Sandbar Shark*						2	WCA	II, III
	C. leucas	*Bull Shark*						2	WCA	II, III
	Mustelus canis	Smooth dogfish						2	WCA	II, III

N/A	*Mustelus sinusmexicanus*	Gulf smoothhound						2	WCA	II, III
RPP	*Pristis pectinata*	Smalltooth sawfish			Smalltooth sawfish	Poisson-scie tident	Requin-marteau halicorne malltooth sawfish	2	WCA	II, III
RPM	*Pristis microdon*	Largetooth sawfish			Largetooth sawfish	Poisson-scie grandent	Largetooth sawfish	2	WCA	II, III
N/A	*Aetobatus narinari*	Spotted eagle ray (chucho)			Spotted eagle ray (chucho)			2	WCA	II, III
N/A	*Mobula birostris*	Giant Oceanic Manta Ray			Giant Oceanic Manta Ray			2	WCA	II, III
N/A	*Dasyatis americana*	Sting ray			Sting ray			2	WCA	II, III

N/A	*Narcine bancroftii*	Caribbean Electric Ray			Caribbean Electric Ray			2	WCA	II, III

ASFIS CODE	Scientific Name	Reg En Name	Reg Fr Name	Reg Sp Name	ASFIS en Name	ASFIS Fr Name	ASFIS En Name	Supporting Basis	WECAFC Sub-area of Reporting	DCRF Task
SUD	*Squatina dumeril*	Atlantic Angel Shark			Sand devil	Ange de mer de sable	Tiburón ángel	2	WCA	II, III
CIO	*Isogomphodon oxyrhynchus*	Daggernose Shark	Requin bécune	Cazón picudo sudamericano	Daggernose shark	Requin bécune	Daggernose Shark	2	WCA	II, III

OCS	*Carcharhinus longimanus*	Oceanic whitetip shark			Oceanic whitetuip	Requin océanique	Oceanic whitetip	2	WCA	II, III
RHN	*Rhincodon typus*	Whale Shark			Whale shark	Requin baleine	Whale shark	2	WCA	II, III
FAL	*Carcharhinus falciformis*	Silky Shark			Silky Shark	Requin soyeux	Tiburón jaquetón	2	WCA	II, III
BTH	*Alopias superciliosus*	Bigeye thresher shark			Bigeye thresher	Renard à gros yeux	Zorro ojón	2	WCA	II, III
SMA	*Isurus oxyrinchus*	Shortfin mako			Shortfin mako	Taupe bleue	Marrajo dientuso	2	WCA	II, III
POR	*Lamna nasus*	Porbeagle shark			Porbeagle shak	Requin-taupe commun	Marrajo sardinero	2	WCA	II, III
BSH	*Prionace glauca*	Blue shark			Blue shark	Peau bleue	Tiburón azul	2	WCA	II, III

SPL	*Sphyrna lewini*	Scalloped hammerhead shark			Scalloped hammerhead	Requin-marteau halicorne	Cornuda común	2	WCA	II, III
SPK	*Sphyrna mokarran*	Great hammerhead			Great hammerhead	Grand requin marteau	Cornuda gigante	2	WCA	II, III
SPZ	*Sphyrna zygaena*	Smooth hammerhead			Smooth hammerhead	Requin-marteau commun	Cornuda cruz(=Pez martillo)	2	WCA	II, III
SPQ	*Sphyrna tudes*	Smalleye hammerhead			Smalleye hammerhead	Requin-marteau à petits yeux	Cornuda ojichica	2	WCA	II, III
N/A	*Rhizoprionodon porosus*	Caribbean sharpnose shark			Caribbean sharpnose shark	Requin aiguille antillais	Cazón picudo antillano	2	WCA	II, III

N/A	*Rhizoprionodon lalandii*	Brazilian sharpnose shark			Brazilian sharpnose shark			2	WCA	II, III
N/A	*Carcharhinus porosus*	Smalltail shark			Smalltail shark			2	WCA	II, III
CTI	*Mustelus canis*	Dusky smooth-hound			Dusky smooth-hound	Émissole douce	Boca dulce	2	WCA	II, III
MTR	*Mustelus norrisi*	Florida smoothhound			Narrowfin smooth-hound	Émissole veuve	Musola viuda	2	WCA	II, III
N/A	*Mustelus sinusmexicanus*	Gulf smoothhound						2	WCA	II, III
RPP	*Pristis pectinata*	Smalltooth sawfish			Smalltooth sawfish	Poisson-scie tident	Requin-marteau halicorne malltooth sawfish	2	WCA	II, III
RPM	*Pristis microdon*	Largetooth sawfish			Largetooth sawfish	Poisson-scie grandent	Largetooth sawfish	2	WCA	II, III

N/A	*Aetobatus narinari*	Spotted eagle ray (chucho)			Spotted eagle ray (chucho)			2	WCA	II, III
N/A	*Mobula birostris*	Giant Oceanic Manta Ray			Giant Oceanic Manta Ray			2	WCA	II, III
N/A	*Dasyatis americana*	Sting ray			Sting ray			2	WCA	II, III
N/A	*Narcine bancroftii*	Caribbean Electric Ray			Caribbean Electric Ray			2	WCA	II, III

Question for Reviewers:

Stakeholders are invited to confirm the list and elevate any species from Appendix 3.1d to this list.

See http://www.fao.org/3/i8718en/I8718EN.pdf for the list of sharks from the sharks working group

- **Appendix 3.1c**: **High Seas and Deep Sea Species falling under a possible mandate of WECAFC as RFMO** (Subgroup basis 3)

ASFIS CODE	Scientific Name	Reg En Name	Reg Fr Name	Reg Sp Name	ASFIS en Name	ASFIS Fr Name	ASFIS En Name	Subroup basis	WECAFC Sub-area of Reporting	DCRF Task
BXD	*Beryx decadactylus*	Alfonsino			Alfonsino	Béryx commun	Alfonsino palometón	3	WCA	II, III
BSF	*Aphanopus carbo*	black scabbard fish			Black scabbardfish	Sabre noir	Sable negro	3	WCA	II, III
EPI	*Epigonus telescopus*	black cardinal fish			Black cardinal fish	Poisson cardinal	Boca negra(=Pez del diablo)	3	WCA	II, III
WRF	*Polyprion americanus*	wreckfish			Wreckfish	Cernier commun	Cherna	3	WCA	II, III
ARS	*Aristaeomorpha foliacea*	giant red shrimp			Giant red shrimp	Gambon rouge	Gamba española	3	WCA	II, III
RRS	*Pleoticus robustus*	royal red shrimp			Royal red shrimp	Salicoque royale rouge	Camarón rojo real	3	WCA	II, III
NIS	*Penaeopsis serrata*	pink speckled deep sea shrimp			Megalops shrimp	Crevette mégalops	Camarón megalops	3	WCA	II, III

MFI	*Metanephrops binghami*	deep sea lobster			Caribbean lobster	Langoustine des Caraïbes	Cigala del Caribe	3	WCA	II, III
GPX	*Epinephelus spp*				Groupers nei	Mérous nca	Meros nep	3	WCA	II, III
SNA	*Lutjanus spp*				Snappers nei	Vivaneaux nca	Pargos tropicales nep	3	WCA	II, III
RPU	*Rhomboplites aurorubens*				Vermilion snapper	Vivaneau ti-yeux	Pargo cunaro	3	WCA	II, III
n/a	*Erytrochles monody*							3	WCA	II, III
HOF	*Merluccius albidus*				Offshore silver hake	Merlu argenté du large	Merluza blanca de altura	3	WCA	II, III
MVJ	*Lophius gastrophysus*				Blackfin goosefish	Baudroie pêcheuse	Rape pescador	3	WCA	II, III
n/a	*Zenopsis conchifera*							3	WCA	II, III
n/a	*Acanthocaris caeca*							3	WCA	II, III
NFI	*Nephropsis rosea*				Two-toned lobsterette	Langoustine bicolore		3	WCA	II, III

NFU	*Nephropsis aculeata*				Florida lobsterette	Langoustine de Floride	Cigala de Florida	3	WCA	II, III
NFN	*Nephropsis neglecta*				Ruby lobsterette			3	WCA	II, III
n/a	*Aristaemorpha folicea*							3	WCA	II, III
AVD	*Aristeus virilis*				Stout red shrimp	Gambon gaillard	Gambon colorado	3	WCA	II, III
ANJ	*Aristeus antillensis*				Purplehead gamba prawn	Crevette pourprée	Gamba purpurea	3	WCA	II, III
SSH	*Plesiopenaeus edwardsianus*				Scarlet shrimp	Gambon écarlate	Gamba carabinero	3	WCA	II, III
n/a	*Benthesicymus bartletti*							3	WCA	II, III
CRR	*Chaceon quinquedens*				Red crab	Gériocrabe rouge	Geriocangrejo rojo	2	WCA	II, III
ELQ	*Chaceon eldorado*				El Dorado shrimp	Géryon El Dorado	Cangrejo El Dorado	2	WCA	II, III

Question for reviewers:

This list is to be filled out [the proposed species have been extracted from the VME / high sea working groups] – there is no list of species in the ToRs of the High Seas working group. See http://www.fao.org/3/i8718en/I8718EN.pdf for the list of sharks from the sharks working group

- **Appendix 3.1d. Species for WECAFC region originating from 1978 working party on fishery statistics and/or of interest for other reasons** (e.g., of local interest including high commercial value, for biodiversity reasons, or for importance of impacts from due to climate changes) (Subgroup basis 4)**.**

ASFIS CODE	Scientific Name	Reg En Name	Reg Fr Name	Reg Sp Name	ASFIS en Name	ASFIS Fr Name	ASFIS En Name	Subgroup Basis	WECAFC Sub-area of Reporting	DCRF Task
Small pelagics species										
AVA	*Cetengraulis edentulus*	Atlantic anchoveta	Anchois queuejaune	Anchoveta rabo amarillo	Atlantic anchoveta	Anchois queue jaune	Anchoveta rabo amarillo	4	WCA	II, III
SAA	*Sardinella aurita*	Round sardinella (Spanish sardine)	Allache	Sardinela atlantica	Round sardinella	Allache	Alacha	4	WCA	II, III
	Sardinella brasiliensis	Brazilian sardinella (TT-Jashua)						4	WCA	II, III
POM	*Trachinotus carolinus*	Florida pompano	Pompaneau sole	Pámpano amarillo	Florida pompano	Pompaneau sole	Pámpano amarillo	4	WCA	II, III

LHT	*Trichiurus lepturus*	Largehead hairtail	Poisson sabre (de l'Atlantique)	Sable	Largehead hairtail	Poisson-sabre commun	Pez sable	4	WCA	II, III
LOB	*Lobotes surinamensis*				Atlantic tripletail	Croupia roche	Dormilona	4	WCA	II, III
Reef and Slope species										
Grouper										
GPR	*Epinephelus morio*	Red grouper	Mérou rouge	Mero americano	Red grouper	Mérou rouge	Mero americano	4	WCA	II, III
GPN	*Epinephelus striatus*	Nassau grouper	Mérou raye	Cherna criolla	Nassau grouper	Mérou rayé	Cherna criolla	4	WCA	II, III
MAB	*Mycteroperca bonaci*	Black grouper			Black grouper	Badèche bonaci	Cuna bonací	4	WCA	II, III
EEU	*Epinephelus guttatus*	Red hind			Red hind	Mérou couronné	Mero colorado	4	WCA	II, III

EET	*Epinephelus itajara*	Goliath grouper			Atlantic goliath grouper	Mérou géant de l'Atlantique	Mero gigante del Atlántico	4	WCA	II, III
CFJ	*Cephalopholis fulva*	Coney			Coney	Coné ouatalibi	Cherna cabrilla	4	WCA	II, III
CFL	*Cephalopholis cruentata*	Graysby			Graysby	Coné essaim	Cherna enjambre	4	WCA	II, III
EFD	*Epinephelus adscensionis*	Rock hind			Rock hind	Mérou oualioua	Mero cabrilla	4	WCA	II, III
MKT	*Mycteroperca tigris*	Tiger grouper			Tiger groupe	Badèche tigre	Cuna gata	4	WCA	II, III
MKV	*Mycteroperca venenosa*	Yellowfin grouper				Badèche de roche	Cuna de piedra	4	WCA	II, III
EEY	*Epinephelus mystacinus*	Misty grouper				Mérou brouillard	Mero listado	4	WCA	II, III

EEL	*Epinephelus flavolimbatus*	Yellowedge grouper				Mérou aile jaune	Mero aleta amarilla	4	WCA	II, III
MKN	*Mycteroperca interstitialis*	Yellowmouth grouper				Badèche gueule jaune	Cuna amarilla	4	WCA	II, III
Grunts										
HLI	Haemulon plumierii	White grunt				Gorette blanche	Ronco margariteño	4	WCA	II, III
HLU	Haemulon album	White Margate				Gorette margate	Ronco jallao	4	WCA	II, III
HHI	Haemulon sciurus	Bluestriped grunt				Gorette catire		4	WCA	II, III
Porgies										

CBD	*Calamus bajonado*	Jolthead porgy				Daubenet trembleur	Pluma bajonado	4	WCA	II, III
CFE	*Calamus penna*	Sheepshead porgy				Daubanet bélier		4	WCA	II, III
n/a	*Calamus pennatula*	Pluma porgy				Daubenet Plume		4	WCA	II, III
n/a	n/a	Sea bream						4	WCA	II, III
Squirrelfishes	*Holocentrus rufus*	Longspine squirrelfish						4	WCA	II, III
Jacks										
RUB	*Caranx crysos*	Blue runner				Carangue coubali	Cojinúa negra	4	WCA	II, III
CVJ	*Caranx hippos*	Crevalle				Carangue crevalle	Jurel común	4	WCA	II, III

LIJ	*Alectis ciliaris*	African Pompano				Cordonnier fil	Pámpano de hebra	4	WCA	II, III
RRU	*Elagatis bipinnulata*	Rainbow runner				Comète saumon	Macarela salmón	4	WCA	II, III
LJN	*Lutjanus analis*	Mutton snapper	Vivaneau sorbe	Pargo criollo	Mutton snapper	Vivaneau sorbe	Pargo criollo	4	WCA	II, III
LJP	*Lutjanus apodus*	Schoolmaster snapper	Vivaneau dentchien	Pargo amarillo	Schoolmaster snapper	Vivaneau dent-chien	Pargo amarillo	4	WCA	II, III
LJU	*Lutjanus buccanella*	Blackfin snapper	Vivaneau oreille noire	Pargo sesí	Blackfin snapper	Vivaneau oreille noire	Pargo sesí	4	WCA WCA	II, III
SNR	*Lutjanus campechanus*	Northern red snapper	Vivaneau campèche	Pargo del Golfo	Northern red snapper	Vivaneau campèche	Pargo del Golfo	4	WCA	II, III
LJY	*Lutjanus cyanopterus*	Cubera snapper			Cubera snapper	Vivaneau cubera	Pargo cubera	4	WCA	II, III

LJI	*Lutjanus griseus*	Gray snapper			Grey snapper	Vivaneau sarde grise	Pargo prieto	4	WCA	II, III
LJJ	*Lutjanus jocu*	Dogteeth snapper			Dog snapper	Vivaneau chien	Pargo jocú	4	WCA	II, III
SNC	*Lutjanus purpureus*	Southern red snapper	Vivaneau rouge	Pargo colorado	Southern red snapper	Vivaneau rouge	Pargo colorado	4	WCA	II, III
LTJ	*Lutjanus vivanus*	Silk snapper	Vivaneau soi	Pargo de lo alto	Silk snapper	Vivaneau soie	Pargo de lo alto	4	WCA	II, III
n/a	*Pristipomoides aquilonaris*	Wenchman snapper						4	WCA	II, III
UPZ	*Pristipomoides macrophthalmus*	Cardinal snapper						4	WCA	II, III
RPU	*Rhomboplites aurorubens*	Vermillion snapper				Vivaneau ti-yeux	Pargo cunaro	4	WCA	II, III

SNY	*Ocyurus chrysurus*	Yellowtail snapper	Vivaneau queue jaune	Rabirubia	Yellowtail snapper	Vivaneau queue jaune	Rabirrubia	4	WCA	II, III
ASX	*Apsilus dentatus*	Black snapper				Vivaneau noir	Pargo mulato	4	WCA	II, III
EEO	*Etelis oculatus*	Queen snapper				Vivaneau royal	Pargo cachucho	4	WCA	II, III
SNC	*Lutjanus purpureus*	Red snapper			Southern red snapper	Vivaneau rouge	Pargo colorado	4	WCA	II, III
Parrotfishes										
USU	*Scarus coeruleus*	Blue parrotfish						4	WCA	II, III
n/a	*Scarus coelestinus*	Midnight parrotfish						4	WCA	II, III

USN	*Scarus taeniopterus*	Princess parrotfish				Perroquet princesse		4	WCA	II, III
UVT	*Scarus vetula*	Queen parrotfish				Perroquet périco		4	WCA	II, III
n/a	Scarus guacamaia	Rainbow parrotfish						4	WCA	II, III
QZV	*Sparisoma rubripinne*	Redfin parrotfish				Perroquet basto	Loro basto	4	WCA	II, III
RSY	*Sparisoma chrysopterum*	Redtail parrotfish						4	WCA	II, III
n/a	*Sparisoma viride*	Stoplight parrotfish			Stoplight parrotfish			4	WCA	II, III
RMF	*Sparisoma aurofrenatum*	Redband parrotfish			Redband parrotfish	Perroquet tacheté		4	WCA	II, III

USS	*Scarus iserti*	Striped parrotfish				Perroquet rayé		4	WCA	II, III
Surgeon fishes										
AQO	*Acanthurus coeruleus*	Blue tang surgeonfish				Chirurgien bayolle		4	WCA	II, III
	Acanthurus bahianus	Ocean surgeonfish						4	WCA	II, III
	Acanthurus chirurgus	Doctorfish						4	WCA	II, III
Triggerfishes										
CZT	*Canthidermis sufflamen*	Ocean triggerfish					Sobaco lija	4	WCA	II, III
BLV	*Balistes vetula*	Queen triggerfish				Baliste royal		4	WCA	II, III

n/a	*Balistes capriscus*	Gray triggerfish						4	WCA	II, III
Wrasses										
LCX	*Lachnolaimus maximus*	Hogfish				Labre capitaine	Doncella de pluma	4	WCA	II, III
n/a	*Halichoeres radiatus*	Puddingwife						4	WCA	II, III
BDR	*Bodianus rufus*	Spanish hogfish				Pourceau espagnol		4	WCA	II, III
Angelfishes										
n/a	*Holacanthus ciliaris*	Queen angelfish						4	WCA	II, III
n/a	*Pomacanthus arcuatus*	Gray angelfish						4	WCA	II, III
n/a	*Pomacanthus paru*	French angelfish						4	WCA	II, III

Shrimp species										
ABS	*Penaeus aztecus*	Northern brown shrimp	Crevette royale grise	Camarón café norteño	Northern brown shrimp	Crevette royale grise	Camarón café norteño	4	WCA	II, III
APS	*Penaeus duorarum*	Northern pink shrimp	Crevette rodché du nord	Camarón rosado norteño	Northern pink shrimp	Crevette rose du Nord	Camarón rosado norteño	4	WCA	II, III
SOP	*Farfantepenaeus notialis*	Southern pink shrimp	Crevette rodché du sud	Camarón rosado sureño	Southern pink shrimp	Crevette rose du Sud	Camarón rosado sureño	4	WCA	II, III
PNT	*Litopenaeus schmitti*	Southern white shrimp	Crevette ligubam du sud	Camarón blanco sureño	Southern white shrimp	Crevette ligubam du Sud	Langostino blanco sureño	4	WCA	II, III
PST	*Penaeus setiferus*	Northern white shrimp	Crevette ligubam du nord	Camarón blanco norteño	Northern white shrimp	Crevette ligubam du Nord	Camarón blanco norteño	4	WCA	II, III
PNU	*Farfantepenaeus subtilis*	Southern brown shrimp	Crevette café	Camarón café sureño	Southern brown shrimp	Crevette grise du Sud	Camarón café sureño	4	WCA	II, III

n/a	*Farfantepenaeus brasiliensis*	Pink spotted shrimp							WCA	II, III
RRS	*Pleoticus robustus*	Royal red shrimp	Crevette salicoque	Camarón rojo real	Royal red shrimp	Salicoque royale rouge	Camarón rojo real	4	WCA	II, III
SSH	*Plesiopenaeus edwardsianus*	Imperial red shrimp		Gamba carabinero	Scarlet shrimp	Gambon écarlate	Gamba carabinero	4	WCA	II, III
PNB	*Penaeus brasiliensis*	Redspotted shrimp	Crevette royale rose	Camarón rosado con manchos	Redspotted shrimp	Crevette royale rose	Camarón rosado con manchas	4	WCA	II, III
BOB	*Xiphopenaeus kroyeri*	Atlantic seabob	Cevette seabob	Camarón siete barbas	Atlantic seabob	Crevette seabob atlantique	Camarón siete barbas	4	WCA	II, III
RSH	*Sicyonia brevirostris*	Rock shrimp	Crevette ovetgernade	Camarón de piedra	Rock shrimp	Boucot ovetgernade	Camarón de piedra	4	WCA	II, III

Question for reviewers:

Identify any key species for the region that should be elevated to the main reference species list (Appendix 3.1c).

iDCRF_Appendix 3.1d: Other WECAFC listed species derived from the WECAFC Working Party on Fishery Statistic workshop (1978, Panama), including species of high commercial interest, and/or in respect of possible interest for certain countries and/or for regional biodiversity considerations.

ASFIS CODE	Scientific Name	Reg En Name	Reg Fr Name	Reg Sp Name	ASFIS en Name	ASFIS Fr Name	ASFIS En Name	Subgroup Basis	WECAFC Sub-area of Reporting	DCRF Task
SCC	*Argopecten gibbus*	Calico scallop	Peigne calicot	Peine percal	Calico scallop	Peigne calicot	Peine percal	4	WCA	II, III
RQZ	*Arca zebra*	Turkey wing	Arche zèbre	Arca zebra	Turkey wing	Arche zèbre	Arca cebra	4	WCA	II, III
BIH	*Bairdiella ronchus*	Ground croaker	Mamselle rouio	Corvinata ruyo	Ground croaker	Mamselle rouio		4	WCA	II, III
MHG	*Brevoortia patronus*	Gulf menhaden	Menhaden écailleux	Lacha escarnuda	Gulf menhaden	Menhaden écailleux	Lacha escamuda	4	WCA	II, III

MHA	*Brevoortia tyrannus*	Atlantic menhaden	enhaden tyran	Laoha tirana	Atlantic menhaden	Menhaden tyran	Lacha tirana	4	WCA	II, III
CRB	*Callinectes sapidus*	Blue crab	Crabe bleu	Cangrejo azul	Blue crab	Crabe bleu	Cangrejo azul	4	WCA	II, III
NBR	*Caranx bartholomaei*	Yellow jack	Carangue grasse	Cojinua amarilla	Yellow jack	Carangue grasse	Cojinua amarilla	4	WCA	II, III
CVJ	*Caranx hippos*	Crevalle jack	Carangue crevalle	Jurel comùn	Crevalle jack	Carangue crevalle	Jurel común	4	WCA	II, III
CXR	*Caranx ruber*	Bar jack	Carangue comade	Cojinua carbonera	Bar jack	Carangue comade	Cojinúa carbonera	4	WCA	II, III
OYM	*Crassostrea rhizophorae*	Mangrove cupped oyster	Huître creuse des Caraibes	Ostión de mangle	Mangrove cupped oyster	Huître creuse des Caraïbes	Ostión de mangle	4	WCA	II, III
OYA	*Crassostrea virginica*	American cupped oyster	Huître creuse américaine	Ostión americano	American cupped oyster	Huître creuse/ américaine	Ostión virgínico	4	WCA	II, III

KUI	*Cittarium pica*	West Indian Top Shell			West Indian top shell	Troque des Antilles	Burgado antillano	4	WCA	II, III
SWF	*Cynoscion nebulosus*	Spotted weakfish	Acoupa pintade	Corvinata pintada	Spotted weakfish	Acoupa pintade	Corvinata pintada	4	WCA	II, III
STG	*Cynoscion regalis*	Gray weakfish	Acoupa royal	Corvinata real	Squeteague(=Gray weakfish)	Acoupa royal	Corvinata real	4	WCA	II, III
n/a	*Cynoscion jamaicensus*	Jamaican weakfish						4	WCA	II, III
	Centropomus undecimalis	Common Snook (brochet)								
	Cynoscion leiarchus (considered Main Species for Trinidad)	*Smooth weakfish (White Salmon)*								
YNV	*Cynoscion virescens*	Green weakfish	Acoupa cambucu	Corvinata cambucú	Green weakfish	Acoupa cambucu	Corvinata cambucú	4	WCA	II, III

n/a	*Sciades proops*	Crucifix sea catfish						4	WCA	II, III
AWX	*Arius sp.*	Sea catfish						4	WCA	II, III
SPT	*Leiostomus xanthurus*	Spot croaker	Tambour croca	Verrugato croca	Spot croaker	Tambour croca	Verrugato croca	4	WCA	II, III
WKK	*Macrodon ancylodon*	King weakfish	Acoupa chasseur	Pescadilla real	King weakfish	Acoupa chasseur	Pescadilla real	4	WCA	II, III
CKM	*Micropogonias furnieri*	Whitemouth croaker	Tambour rayé	Corvinón rayado	Whitemouth croaker	Tambour rayé	Corvinón rayado	4	WCA	II, III
CKA	*Micropogonias undulatus*	Atlantic croaker	Tambour brésilien	Corvinón brasileño	Atlantic croaker	Tambour brésilien	Corvinón brasileño	4	WCA	II, III
MUF	*Mugil cephalus*	Striped mullet	Mulet cabot	Lisa pardete	Flathead grey mullet	Mulet à grosse tête	Pardete	4	WCA	II, III
MGU	*Mugil curema*	White mulet	Mulet blanc	Lisa criolla	White mullet	Mulet blanc	Lisa blanca	4	WCA	II, III

MUB	*Mugil liza*	Lebranche mullet	Millet lebranche	Leba.nche	Lebranche mullet	Mulet lebranche	Lebranche	4	WCA	II, III
THA	*Opisthonema oglinum*	Atlantic thread herring	Chardin fil	Machuelo hebra atlántico	Atlantic thread herring	Chardin fil	Machuelo hebra atlántico	4	WCA	II, III
NLG	*Panulirus guttatus*	Spotted spiny lobster	Langouste brésilienne	Langosta moteada	Spotted spiny lobster	Langouste brésilienne	Langosta moteada	4	WCA	II, III
NUL	*Panulirus laevicauda*	Smoothtail spiny lobster	Langouste indienne	Langosta verde	Smoothtail spiny lobster	Langouste indienne	Langosta verde	4	WCA	II, III
MSL	*Perna perna*	South American rock mussel	Moule roche sud américaine	Mejillón de roca sudamericano	South American rock mussel	Moule de roche sudaméricaine	Mejillón de roca sudamericano	4	WCA	II, III
BDM	*Pogonias cromis*	Black drum	Grand tambour	Corvinón negro	Black drum	Grand tambour	Corvinón negro	4	WCA	II, III

BLU	*Pomatomus saltatrix*	Bluefish	Tassergal	Anchova de banco	Bluefish	Tassergal	Anjova	4	WCA	II, III
RDM	*Sciaenops ocellatus*	Red drum	Tambour rouge	Corvinón ocelado	Red drum	Tambour rouge	Corvinón ocelado	4	WCA	II, III
BIS	*Selar crumenophthalmus*	Bigeye scad	Selar coulisou	Chic harro ojón	Bigeye scad	Sélar coulisou	Chicharro ojón	4	WCA	II, III
MOA	*Selene setapinnis*	Atlantic moonfish	Musso atlantique	Jorobado lamparosa	Atlantic moonfish	Musso atlantique	Jorobado lamparosa	4	WCA	II, III
GBA	*Sphyraena barracuda*	Great Barracuda						4	WCA	II, III
BAR	*Sphyraena spp*	Barracuda			Barracudas nei	Bécunes nca	Picudas nep	4	WCA	II, III
	Selene vomer	Lookdown (Moonshine)						4		

	Chloroscombrus chrysurus	Atlantic Bumper (Plateau)						4		
	Cardisoma guanhumi	Blue crab						4		
	Hoplosternum littorale	cascadura						4		
	Pomacea urceus	black river conch /river conch						4		

Question for reviewer:

Identify any key species for the region that should be elevated to the main species list (Appendix 3.1c). Do we need to keep Appendix 3.1.d and enrich it ? Or only a mention is needed indicated that any other species of interest to the country can be reported according to the ASFIS classification ?

- ***Appendix 3.2a**: Species of importance to other regional or sub regional fishery bodies and/or mandatory reporting required by an RFMO (e.g., ICCAT) (**Group 2,** Subgroup basis 5)*

Tunas										
ASFIS code	***Scientific name***	**Reg En Name**	**Reg Fr Name**	**Reg Sp Name**	**ASFIS en Name**	**ASFIS Fr Name**	**ASFIS En Name**	**Subgroup Basis**	**WECAFC Sub-area of Reporting**	**DCRF Task**
BFT	*Thunnus thynnus*	Northern bluefin tuna	Thon rouge	Atún	Atlantic bluefin tuna	Thon rouge de l'Atlantique	Atún rojo del Atlántico	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
YFT	*Thunnus albacares*	Yellowfin tuna	Thon albacore	Rabil	Yellowfin tuna	Albacore	Rabil	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
ALB	*Thunnus alalunga*	Albacore	Germon	Atún blanco	Albacore	Germon	Atún blanco	5	To be reported according	To be reported according

									to ICCAT procedures	to ICCAT procedures
BET	*Thunnus obesus*	Bigeye tuna	Patudo	Patudo	Bigeye tuna	Thon obèse(=Patudo)	Patudo	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
SKJ	*Katsuwonus pelamis*	Skipjack tuna	Listao	Listado	Skipjack tuna	Listao	Listado	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
BLF	*Thunnus atlanticus*	Blackfin tuna	Thon à nageoire noire	Atún aleta negra	Blackfin tuna	Thon à nageoires noires	Atún aleta negra	5	WCA	II, III
LTA	*Euthynnus alletteratus*	Little tunny	Thonine	Bacoreta	Little tunny(=Atl.black skipj)	Thonine commune	Bacoreta	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures

BON	*Sarda sarda*	Atlantic bonito	Pélamide	Bonito atlántico	Atlantic bonito	Bonite à dos rayé	Bonito del Atlántico	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
FRI	*Auxis thazard*	Frigate tuna	Auxide	Melva	Frigate tuna	Auxide	Melva	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
BOP	*Orcynopsis unicolor*	Plain bonito	Palomette	Tasarte	Plain bonito			5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
WAH	*Acanthocybium solandri*	Wahoo	Thazard-bâtard	Peto	Wahoo	Thazard-bâtard	Peto	5	WCA	II, III
SSM	*Scomberomorus maculatus*	Spotted Spanish mackerel	Thazard tacheté	Carite pintado	Atlantic Spanish mackerel	Thazard atlantique	Carite atlántico	5	To be reported according to ICCAT	To be reported according to ICCAT

									procedures	procedures
KGM	*Scomberomorus cavalla*	King mackerel	Thazard barré	Carite lucio	King mackerel	Thazard barré	Carite lucio	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
CER	*Scomberomorus regalis*	Cero mackerel	Thazard franc	Carite chinigua	Cero	Thazard franc	Carite chinigua	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
BLT	*Auxis rochei*	Bullet tuna	Auxide	Melva	Bullet tuna	Bonitou	Melva(=Melvera)	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
BRS	*Scomberomorus brasiliensis*	Serra Spanish mackerel	Serra Spanish mackerel	Thazard serra	Serra Spanish mackerel	Thazard serra	Serra	5	WCA	To be reported according to ICCAT

										procedures
DOL	*Coryphaena hippurus*	Mahi Mahi/ Common dolphinfish	Coryphène commune	Lampuga	Common Dolphin fish	Coryphène commune	Lampuga	5	WCA	II, III
CFW	*Coryphaena equiselis*	Pompano dolphinfish			Pompano dolphinfish			5	WCA	To be reported according to ICCAT procedures
KGX	*Scomberomorus Spp*	Seerfishes nei	Thazards nca	Carites nep				5		
Billfishes										
SAI	*Istiophorus albicans*	Atlantic sailfish	Voilier de l'Atlantique	Pez vela del Atlántico	Atlantic sailfish	Voilier de l'Atlantique	Pez vela del Atlántico	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures

BUM	*Makaira nigricans*	Blue Marlin			Blue Marlin	Makaire bleu	Aguja azul	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
WHM	*Kajikia albida*	Atlantic white marlin			White Marlin	Makaire blanc de l'Atlantique	Aguja blanca del Atlántico	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
SWO	*Xiphias gladius*	Swordfish			Swordfish	Espadon	Pez espada	5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures
SPF	*Tetrapturus pfluegeri*	Longbill spearfish			Longbill spearfish			5	To be reported according to ICCAT procedures	To be reported according to ICCAT procedures

RSP	*Tetrapturus georgii*	Roundscale spearfish			Roundscale spearfish			5	To be reported according to ICCAT procedure	To be reported according to ICCAT procedures

4.3.2 Appendix 3.2 - List of national fisheries in the WECAFC competence area

Under the WECAFC-FIRMS partnership, the WECAFC Member States are contributing to the FIRMS inventories with their national data and information on fisheries. Here follows the list of national fisheries inventoried and published in the FIRMS website (Updated, October 2020). The full list of stocks and fisheries fact sheets reported for the WECAFC region is available at: http://firms.fao.org/firms/search/institution/wecafc/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
Saint Lucia Shark fishery	2016	2014	eez:LCA	31	*Carcharhinus limbatus; Carcharhinus longimanus; Galeocerdo cuvier; Carcharhinus plumbeus; Carcharhinus perezi; Negaprion brevirostris; Ginglymostoma cirratum; Sphyrna mokarran; Sphyrna lewini; Carcharias taurus*		Commercial, Artisanal	Other fishing vessels	LCA	LCA05 http://firms.fao.org/firms/fishery/977/en
Saint Lucia Whelk fishery	2016	2012	eez:LCA	31	*Cittarium pica*	*Cancridae; Palinuridae; Octopus briareus; Octopus vulgaris*	Subsistence, Commercial, Artisanal	Other fishing vessels	LCA	LCA06 http://firms.fao.org/firms/fishery/978/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
Trinidad and Tobago Dolphinfish fishery - Tobago	2016	2014	eez:TTO	31	*Coryphaena hippurus*	*Thunnus spp; Elasmobranchii; Acanthocybium solandri*	Artisanal, Semi-industrial	Multipurpose vessels	TTO	TTO02 http://firms.fao.org/firms/fishery/974/en
Saint Vincent and the Grenadines Large pelagics fishery	2016	2014	eez:VCT	31	*Coryphaena hippurus; Scomberomorus cavalla; Thunnus albacares*	*Makaira nigricans; Istiophorus albicans; Xiphias gladius*	Artisanal	Other fishing vessels	VCT	VCT03 http://firms.fao.org/firms/fishery/994/en
French Guiana Coastal fish small scale fishery	2019	2018	eez:GUF	31, 41	*Cynoscion acoupa; Cynoscion virescens; Arius proops; Lobotes surinamensis*		Artisanal	Gillnetters	GUF	GUF03 http://firms.fao.org/firms/fishery/1018/en
Bahamas Nassau Grouper fishery	2016	2015	eez:BHS	31	*Epinephelus striatus*	*Lutjanus spp; Haemulon spp*		Fishing vessels not specified	BHS	BHS03 http://firms.fao.org/firms/fishery/971/en
Saint Lucia Flyingfish fishery	2016	2014	eez:LCA	31	*Hirundichthys affinis*	*Cheilopogon cyanopterus*	Artisanal	Other fishing vessels	LCA	LCA01 http://firms.fao.org/firms/fishery/906/en
Trinidad and Tobago Gillnet and line flyingfish and associated pelagics	2016	2014	eez:TTO	31	*Hirundichthys affinis*	*Thunnus spp; Elasmobranchii; Coryphaena hippurus; Acanthocyb*	Artisanal, Semi-industrial	Multipurpose vessels	TTO	TTO01 http://firms.fao.org/firms/fishery/973/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
fishery - Tobago						*ium solandri*				
Saint Kitts and Nevis Coral reef and demersal fishery	2020	2018	eez:KNA	31	*Holocentrus adscensionis; Epinephelus striatus; Cephalopholis fulva; Epinephelus guttatus; Heteropriacanthus cruentatus; Lutjanus campechanus; Ocyurus chrysurus; Haemulon flavolineatum; Haemulon plumierii; Mulloidichthys martinicus; Scarus vetula; Scarus taeniopterus; Acanthurus chirurgus; Balistes vetula; Lutjanidae; Scaridae; Serranidae; Balistidae*		Artisanal, Commercial, Subsistence	Multipurpose vessels nei	KNA	KNA04 http://firms.fao.org/firms/fishery/1039/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
French Guiana Handlines red snapper fishery	2019	2018	eez:GUF	31, 41	*Lutjanus purpureus; Rhomboplites aurorubens; Lutjanus synagris*		Industrial	Handliners	VEN	GUF02 http://firms.fao.org/firms/fishery/1012/en
Saint Lucia Large pelagic fishery	2020	2019	eez:LCA	31	*Makaira nigricans; Tetrapturus albidus; Xiphias gladius; Istiophorus albicans*		Commercial, Artisanal	Other fishing vessels	LCA	LCA04 http://firms.fao.org/firms/fishery/976/en
Turks and Caicos Islands Lobster fishery	2016	2015	eez:TCA	31	*Panulirus argus*	*Mithrax spinosissimus; Scyllarides aequinoctialis; Charonia tritonis; Strombus gigas; Cassis flammea; Lutjanus analis; Epinephelus striatus; Epinephelus guttatus; Balistes vetula; Haemulon album; Anisotremus*	Commercial, Subsistence, Recreational	Other fishing vessels, Pot vessels	TCA	TCA02 http://firms.fao.org/firms/fishery/986/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
						surinamensis				
Saint Vincent and the Grenadines L obster fishery	2016	2014	eez:VCT	31	*Panulirus argus*	*Epinephelus guttatus; Scaridae*	Artisanal	Fishing vessels not specified	VCT	VCT02 http://firms.fao.org/firms/fishery/993/en
Saint Lucia Lobster fishery	2016	2014	eez:LCA	31	*Panulirus argus*		Commercial, Artisanal	Other fishing vessels	LCA	LCA02 http://firms.fao.org/firms/fishery/907/en
Jamaica Artisanal spiny lobster - Island shelf and proximal banks	2016	2015	eez:JAM	31	*Panulirus argus*		Subsistence, Artisanal	Fishing vessels not specified	JAM	JAM02 http://firms.fao.org/firms/fishery/989/en
Bahamas Lobster fishery	2016	2015	eez:BHS	31	*Panulirus argus*	*Haemulon album*	Commercial	Trap setters, Mothership s	BHS	BHS02 http://firms.fao.org/firms/fishery/970/en
Jamaica Industrial spiny lobster - Offshore banks	2016	2015	eez:JAM	31	*Panulirus argus*		Industrial, Exploratory_fishery	Fishing vessels not specified	JAM	JAM03 http://firms.fao.org/firms/fishery/990/en
Belize Lobster fishery	2017	2014	eez:BLZ	31	*Panulirus argus*		Artisanal		BLZ	BLZ02 http://firms.fao.org/firms/fishery/1005/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
Saint Kitts and Nevis Caribbean spiny lobster fishery	2020	2018	eez:KNA	31	*Panulirus argus*		Artisanal, Commercial	Multipurpose vessels nei	KNA	KNA03 http://firms.fao.org/firms/fishery/983/en
French Guiana Bottom trawl shrimp fishery	2019	2018	eez:GUF	31, 41	*Penaeus subtilis; Penaeus brasiliensis; Xiphopenaeus kroyeri; Solenocera acuminata*	*Cynoscion virescens; Lutjanus synagris; Lutjanus purpureus; Notarius grandicassis*	Industrial	Trawlers	GUF	GUF01 http://firms.fao.org/firms/fishery/1011/en
Saint Kitts and Nevis Oceanic pelagic fishery	2020	2018	eez:KNA	31	*Scombridae; Istiophoridae; Coryphaena hippurus; Xiphias gladius*		Artisanal, Commercial, Subsistence	Multipurpose vessels nei	KNA	KNA02 http://firms.fao.org/firms/fishery/982/en
Saint Kitts and Nevis Coastal pelagic fishery	2020	2018	eez:KNA	31	*Selar crumenophthalmus; Sarda sarda; Belone belone; Hemiramphus brasiliensis; Carangidae; Hemiramphus spp; Belonidae; Scombridae*		Artisanal, Commercial, Subsistence	Multipurpose vessels nei	KNA	KNA05 http://firms.fao.org/firms/fishery/1038/en
Bahamas Queen Conch fishery	2016	2015	eez:BHS	31	*Strombus gigas*		Artisanal	Fishing vessels not specified	BHS	BHS01 http://firms.fao.org/firms/fishery/969/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
Turks and Caicos Islands Queen conch fishery	2016	2015	eez:TCA	31	*Strombus gigas*	*Strombus costatus; Cassis flammea; Charonia tritonis*	Artisanal, Commercial	Other fishing vessels	TCA	TCA01 http://firms.fao.org/firms/fishery/985/en
Jamaica Queen conch fishery	2016	2015	eez:JAM	31	*Strombus gigas*		Commercial	Other fishing vessels	JAM	JAM01 http://firms.fao.org/firms/fishery/988/en
Saint Lucia Queen conch fishery	2016	2014	eez:LCA	31	*Strombus gigas*		Commercial, Artisanal, Subsistence	Other fishing vessels	LCA	LCA03 http://firms.fao.org/firms/fishery/975/en
Saint Vincent and the Grenadines Queen conch fishery	2016	2014	eez:VCT	31	*Strombus gigas*		Artisanal	Fishing vessels not specified	VCT	VCT01 http://firms.fao.org/firms/fishery/992/en
Belize Queen conch fishery	2017	2013	eez:BLZ	31	*Strombus gigas*		Artisanal	Fishing vessels not specified	BLZ	BLZ01 http://firms.fao.org/firms/fishery/1004/en
Saint Kitts and Nevis Queen conch fishery	2020	2018	eez:KNA	31	*Strombus gigas*		Artisanal, Commercial	Multipurpose vessels nei	KNA	KNA01 http://firms.fao.org/firms/fishery/981/en
Dominica Large pelagic handline and trolling fishery	2020	2018	eez:DMA	31	*Thunnus albacares; Katsuwonus pelamis; Istiophoridae*	*Acanthocybium solandri; Canthidermis sufflamen;*	Artisanal, Commercial	Handliners	DMA	DMA01 http://firms.fao.org/firms/fishery/1035/en

Fishery Name	Reporting Year	Reference Year	Water Area(s)	Intersect FAO Area(s)	Target Species Scientific Name(s)	Associated Species Scientific Name(s)	Production System Type	Vessel(s)	Flag State(s)	Inventory Identifier URL HTML
					; Coryphaena hippurus	*Elagatis bipinnulata ; Hirundichthys affinis; Thunnus atlanticus*				
Saint Lucia Sea urchin fishery	2016	2004	eez:LCA	31	*Tripneustes ventricosus*		Commercial, Artisanal	Other fishing vessels	LCA	LCA07 http://firms.fao.org/firms/fishery/979/en

4.3.3 Appendix 3.3 - List of stocks - national and shared - in the WECAFC competence area

This appendix 3.3 provides the list of stocks inventoried and published in the FIRMS website (Updated, April 2021). A first phase of this inventory concerned stocks or the northern shelf of South America which was validated by FAO and published in 2006. A second phase concerned stocks for priority WECAFC species reviewed by SAG third phase concerned stocks status reports reviewed by SAG and WECAFC Commission in 2019 which mostly concerned USA and Mexico stocks of the Gulf of Mexico, as well as few other stocks for priority WECAFC species.

Note :

- the FIRMS ID is in the last part of the FIRMS URL, in example « 11801 » in FIRMS URL http://firms.fao.org/firms/resource/11801/en ;
- the GRSF Unique Identifier is the code of the last part of the GRSF machine readable URL ; in example, the GRSF *Universally Unique Identifier* (UUID) the UUID is « 529ba70e-c663-3f5f-a8c0-5262a5e17e75 » in GRSF URL http://data.d4science.org/ctlg/GRSF/529ba70e-c663-3f5f-a8c0-5262a5e17e75

Stock Name	Reporting Year	Reference Year	Water Area(s)	Intersecting FAO Area(s)	Species Scientific Name(s)	FIRMS URL GRSF URL
Gulf menhaden - Gulf of Mexico USA waters	2019	2016	lme:5	31	*Brevoortia patronus*	http://firms.fao.org/firms/resource/11801/en http://data.d4science.org/ctlg/GRSF/529ba70e-c663-3f5f-a8c0-5262a5e17e75
Blue crab - USA Louisiana	2019	2017	lme:5	31	*Callinectes sapidus*	http://firms.fao.org/firms/resource/13909/en http://data.d4science.org/ctlg/GRSF/ec06f75d-3eb6-3ceb-bc37-6b975c31866e
Blacktip shark - Coast of French Guiana to the Orinoco delta	1999	1997	eez:GUF, eez:GUY	31, 41	*Carcharhinus limbatus*	http://firms.fao.org/firms/resource/13273/en http://data.d4science.org/ctlg/GRSF/82e3da87-da99-3aeb-bd39-441ca89b6466
Blacktip shark - Coastal areas of Trinidad and Tobago	1999	1997	eez:TTO	31	*Carcharhinus limbatus*	http://firms.fao.org/firms/resource/13199/en http://data.d4science.org/ctlg/GRSF/fe5a426c-8ae7-3a5c-8f3b-a4c98e39ce64

Smalltail shark - Coast of French Guiana to the Orinoco delta	1999	1997	eez:VEN, eez:GUY, eez:GUF, eez:SUR	31, 41	*Carcharhinus porosus*	http://firms.fao.org/firms/resource/13274/en http://data.d4science.org/ctlg/GRSF/ce91545d-c570-3ac8-a73b-24bf3e00df3d
Smalltail shark - Coastal areas of Trinidad and Tobago	1999	1997	eez:TTO	31	*Carcharhinus porosus*	http://firms.fao.org/firms/resource/13198/en http://data.d4science.org/ctlg/GRSF/69878a28-317c-32b8-a085-c3dbf6954ed0
Black seabass - Southeastern Atlantic coast of USA	2019	2016	lme:6		*Centropristis striata*	http://firms.fao.org/firms/resource/13903/en http://data.d4science.org/ctlg/GRSF/8aafb06b-881c-32bb-a88b-a267758fad91
American cupped oyster - USA Louisiana	2019	2014	lme:5	31	*Crassostrea virginica*	http://firms.fao.org/firms/resource/13913/en This record will be added in the next GRSF data harvest
Jamaica weakfish - Gulf of Paria to Orinoco Delta	2004	1999	eez:VEN, eez:TTO	31	*Cynoscion jamaicensis*	http://firms.fao.org/firms/resource/13215/en http://data.d4science.org/ctlg/GRSF/03e0da9f-0280-3cf4-b6a9-d689b920e181
Spotted weakfish - USA Louisiana	2019	2013	lme:5	31	*Cynoscion nebulosus*	http://firms.fao.org/firms/resource/13905/en http://data.d4science.org/ctlg/GRSF/a8ca7b7a-0911-38d8-a77b-48f46194085c
Spotted weakfish - USA Mississippi	2019	2014	lme:5	31	*Cynoscion nebulosus*	http://firms.fao.org/firms/resource/13906/en http://data.d4science.org/ctlg/GRSF/ebfd68d3-f7e6-34c9-9596-cef02f882ba1

Squeteague - Southeastern Atlantic coast of USA	2019	2014	lme:6	21, 31	*Cynoscion regalis*	http://firms.fao.org/firms/resource/13907/en http://data.d4science.org/ctlg/GRSF/7d36c467-81fd-3db3-85d6-01ff2d096234
Green weakfish - Coast of French Guiana to the Orinoco delta	2001	1995	eez:GUY, eez:GUF	31, 41	*Cynoscion virescens*	http://firms.fao.org/firms/resource/13258/en http://data.d4science.org/ctlg/GRSF/eedc2166-63f1-3331-9802-2304cf2d9952
Yellowedge grouper - Continental slope of French Guiana to Northeastern Venezuela	1996	1992	eez:TTO, eez:VEN, eez:GUY, eez:SUR, eez:GUF	31, 41	*Epinephelus flavolimbatus*	http://firms.fao.org/firms/resource/13284/en http://data.d4science.org/ctlg/GRSF/7c897832-0267-3524-82f7-b6f3ecd02637
Red grouper - Gulf of Mexico USA waters	2019	2013	lme:5	31	*Epinephelus morio*	http://firms.fao.org/firms/resource/11028/en http://data.d4science.org/ctlg/GRSF/02fecfff-caa0-37b7-8f60-b1c9d21650a7
Red grouper - Southeastern Atlantic coast of USA	2019	2015	lme:6	21, 31	*Epinephelus morio*	http://firms.fao.org/firms/resource/13901/en http://data.d4science.org/ctlg/GRSF/7d576ee5-0c48-33c0-8997-1dc9f1bd2441
Fourwing flyingfish - West Coast of Tobago between Charlotteville to Pigeon Point	2004	1997	eez:TTO	31	*Hirundichthys affinis*	http://firms.fao.org/firms/resource/13184/en http://data.d4science.org/ctlg/GRSF/cd64230f-78d0-3544-9f24-d08ff44b23f1

Fourwing flyingfish - Eastern Caribbean	2008	2007	eez:BRB, eez:DMA, eez:TTO, eez:GRD, eez:LCA, eez:VCT	31	*Hirundichthys affinis*	http://firms.fao.org/firms/resource/13753/en http://data.d4science.org/ctlg/GRSF/69add940-f18a-3825-8fc8-56f499f2a114
Deep slope groundfishes - Antigua and Barbuda	2004	2003	eez:ATG	31	*Lutjanidae; Serranidae*	http://firms.fao.org/firms/resource/13060/en http://data.d4science.org/ctlg/GRSF/bfcc2a6c-c42a-386e-b218-528419c4ac84
Mutton snapper - Southeastern Atlantic coast of the USA and Gulf of Mexico USA waters	2019	2013	lme:5, lme:6	21, 31	*Lutjanus analis*	http://firms.fao.org/firms/resource/10937/en http://data.d4science.org/ctlg/GRSF/eba7d7c9-6669-3379-8c0f-9259ab14bbf4
Northern red snapper - Southeastern Atlantic coast of USA	2019	2014	lme:6	21, 31	*Lutjanus campechanus*	http://firms.fao.org/firms/resource/10928/en http://data.d4science.org/ctlg/GRSF/eba7d7c9-6669-3379-8c0f-9259ab14bbf4
Northern red snapper - Gulf of Mexico USA waters	2019	2016	lme:5	31	*Lutjanus campechanus*	http://firms.fao.org/firms/resource/11027/en http://data.d4science.org/ctlg/GRSF/e4b52c95-133b-372e-b367-725aff8d8279
Grey snapper - Gulf of Mexico USA waters	2019	2015	lme:5	31	*Lutjanus griseus*	http://firms.fao.org/firms/resource/13908/en http://data.d4science.org/ctlg/GRSF/ed6ca098-34c3-3ccc-b27b-b29cb6e57dd4

Southern red snapper - Continental slope of French Guiana to Northeastern Venezuela	2001	1998	eez:TTO, eez:VEN, eez:GUY, eez:SUR, eez:GUF	31, 41	*Lutjanus purpureus*	http://firms.fao.org/firms/resource/13281/en http://data.d4science.org/ctlg/GRSF/9ea1ecf4-be35-36f7-a39c-c2910ef37214
King weakfish - Coast of French Guiana to the Orinoco delta	2001	1996	eez:GUY, eez:GUF	31, 41	*Macrodon ancylodon*	http://firms.fao.org/firms/resource/13254/en http://data.d4science.org/ctlg/GRSF/37c06b43-9179-329f-b6d7-2991688a776d
Whitemouth croaker - Gulf of Paria to Orinoco Delta	2004	1999	eez:VEN, eez:TTO	31	*Micropogonias furnieri*	http://firms.fao.org/firms/resource/13212/en http://data.d4science.org/ctlg/GRSF/d69e5be7-77a3-3a43-963b-78969ca507e5
Flathead grey mullet - East coast of USA Florida	2019	2013	lme:6	21, 31	*Mugil cephalus*	http://firms.fao.org/firms/resource/13898/en http://data.d4science.org/ctlg/GRSF/4cb9df0e-db64-3ce7-8e06-50779bfd035d
Flathead grey mullet - West coast of USA Florida	2019	2013	lme:5	31	*Mugil cephalus*	http://firms.fao.org/firms/resource/13914/en http://data.d4science.org/ctlg/GRSF/9abb0318-a741-3946-8fe9-008c96d5dde9
Flathead grey mullet - USA Louisiana	2019	2014	lme:5	31	*Mugil cephalus*	http://firms.fao.org/firms/resource/13899/en http://data.d4science.org/ctlg/GRSF/7adc12b8-f93b-37a8-902e-6cdaee7c8ae4
Smalleye smoothhound - Coast of French Guiana to the Orinoco delta	1999	1997	eez:VEN, eez:GUY, eez:GUF	31, 41	*Mustelus higmani*	http://firms.fao.org/firms/resource/13275/en http://data.d4science.org/ctlg/GRSF/635d4de6-d982-374b-8fa9-48dd4ba3f71e

			, eez:SUR			
Smalleye smoothhound - Coastal areas of Trinidad and Tobago	1999	1997	eez:TTO	31	*Mustelus higmani*	http://firms.fao.org/firms/resource/13201/en http://data.d4science.org/ctlg/GRSF/af77a199-df34-340f-9ab1-e0c8e4550dda
Smalleye smoothhound - Gulf of Paria to Orinoco Delta	2004	1997	eez:TTO , eez:VEN	31	*Mustelus higmani*	http://firms.fao.org/firms/resource/13241/en http://data.d4science.org/ctlg/GRSF/25803e74-7568-364c-bfb5-80cc8d345686
Yellowmouth grouper - Continental slope of French Guiana to Northeastern Venezuela	1992	1992	eez:TTO , eez:GUF	31	*Mycteroperca interstitialis*	http://firms.fao.org/firms/resource/13285/en http://data.d4science.org/ctlg/GRSF/9cb7f93b-3fbc-34c9-b53b-bc9f0a50560d
Gag - Southeastern Atlantic coast of the USA	2019	2012	lme:6	21, 31	*Mycteroperca microlepis*	http://firms.fao.org/firms/resource/10927/en http://data.d4science.org/ctlg/GRSF/ae52ce45-8597-3065-8c70-3325694ad26c
Gag - Gulf of Mexico USA waters	2019	2015	lme:5	31	*Mycteroperca microlepis*	http://firms.fao.org/firms/resource/11031/en http://data.d4science.org/ctlg/GRSF/905d901b-232c-3a7e-83d2-a39e833f637d
Smalleye croaker - Coast of French Guiana to the Orinoco delta	2001	1995	eez:GUY, eez:GUF	31, 41	*Nebris microps*	http://firms.fao.org/firms/resource/13256/en http://data.d4science.org/ctlg/GRSF/77c954d1-a8e4-3360-a6a7-61fbef3bd4b1
Caribbean spiny lobster - Los Testigos and La Blanquilla islands, Margarita island	2001	1992	eez:VEN	31	*Panulirus argus*	http://firms.fao.org/firms/resource/13287/en http://data.d4science.org/ctlg/GRSF/352651cb-5ea7-3718-8d7a-4b76b71c0191

Spiny lobster - Antigua	2004	2003	eez:ATG		*Panulirus argus*	http://firms.fao.org/firms/resource/13092/en http://data.d4science.org/ctlg/GRSF/0925eb89-7a43-30d0-a206-ca1de7c3709f
Caribbean spiny lobster - Jamaica shelf and offshore Pedro, Formigas y Morant banks	2009	2007	eez:JAM	31	*Panulirus argus*	http://firms.fao.org/firms/resource/13081/en http://data.d4science.org/ctlg/GRSF/f6babbbf-5865-3b39-80e0-07f72c932afb
Caribbean spiny lobster - USA Florida	2019	2009	lme:5, lme:6	21, 31	*Panulirus argus*	http://firms.fao.org/firms/resource/11013/en http://data.d4science.org/ctlg/GRSF/cd6408ce-46a8-3efc-abc2-17cf35b6d616
Caribbean spiny lobster - Belize	2016	2015	eez:BLZ	31	*Panulirus argus*	http://firms.fao.org/firms/resource/13773/en http://data.d4science.org/ctlg/GRSF/13f505cf-0b3e-3cb1-b7f5-090e51e78ca5
Caribbean spiny lobster - Colombia	2019	2016	eez:COL	31, 87	*Panulirus argus*	http://firms.fao.org/firms/resource/13897/en http://data.d4science.org/ctlg/GRSF/40b2ca1e-7286-3561-bab8-cbb82d40df15
Caribbean spiny lobster - Cuba	2019	2017	eez:CUB	31	*Panulirus argus*	http://firms.fao.org/firms/resource/13891/en http://data.d4science.org/ctlg/GRSF/dfa060a1-acf1-3095-96c5-4fed8ea5ed4e
Caribbean spiny lobster - Gulf of Mexico Mexican waters	2019	2017	lme:5		*Panulirus argus*	http://firms.fao.org/firms/resource/13311/en http://data.d4science.org/ctlg/GRSF/da05a3e7-fa31-35fc-b5a5-ece933ac89e8
Caribbean spiny lobster - Brazil	2019	2016	eez:BRA	31, 34, 41	*Panulirus argus; Panulirus laevicauda*	http://firms.fao.org/firms/resource/13896/en http://data.d4science.org/ctlg/GRSF/19904016-483d-3dba-a9c2-39675c417860

Northern brown shrimp - Gulf of Mexico USA waters	2016	2015	lme:5	31	*Penaeus aztecus*	http://firms.fao.org/firms/resource/13893/en http://data.d4science.org/ctlg/GRSF/b780d833-a46e-3347-be15-63a04e7b279b
Northern pink shrimp - Gulf of Mexico USA waters	2019	2016	lme:5	31	*Penaeus duorarum*	http://firms.fao.org/firms/resource/11004/en http://data.d4science.org/ctlg/GRSF/59402281-cb8f-388e-873d-4e8348926f9c
Pink shrimp - Gulf of Paria to Orinoco Delta	2004	2004	eez:VEN, eez:TTO	31	*Penaeus notialis*	http://firms.fao.org/firms/resource/13206/en http://data.d4science.org/ctlg/GRSF/419e21eb-d343-3017-982c-8f32e09e4400
White shrimp - Gulf of Paria to Orinoco Delta	2004	1997	eez:VEN, eez:TTO	31	*Penaeus schmitti*	http://firms.fao.org/firms/resource/13208/en http://data.d4science.org/ctlg/GRSF/1098a01a-03b7-3bf5-ae51-bb5847989e7d
White shrimp - North Coast of Trinidad	1999	1997	eez:VEN	31	*Penaeus schmitti*	http://firms.fao.org/firms/resource/13179/en http://data.d4science.org/ctlg/GRSF/76ee8cc0-b30b-3ebf-aa73-b66818cdcc57
Northern white shrimp - Gulf of Mexico USA waters	2016	2015	lme:5	31	*Penaeus setiferus*	http://firms.fao.org/firms/resource/13895/en http://data.d4science.org/ctlg/GRSF/883d533a-adc9-3973-9143-70122353af16
Brown shrimp - Coast of French Guiana to the Orinoco delta	2001	1996	eez:GUY, eez:SUR, eez:GUF	31, 41	*Penaeus subtilis*	http://firms.fao.org/firms/resource/13245/en http://data.d4science.org/ctlg/GRSF/41a5eb43-4330-39b4-8adf-f6629388c849
Brown shrimp - Gulf of Paria to Orinoco Delta	2004	1996	eez:VEN, eez:TTO		*Penaeus subtilis*	http://firms.fao.org/firms/resource/13205/en http://data.d4science.org/ctlg/GRSF/b0a05604-e033-3f28-94cd-54667ffe478c

Brown shrimp - North Coast of Trinidad	1999	1997	eez:VEN	31	*Penaeus subtilis*	http://firms.fao.org/firms/resource/13177/en http://data.d4science.org/ctlg/GRSF/78889470-abbb-3607-8ee1-afe12f4d837e
Brazillian sharpnose shark - Coast of French Guiana to the Orinoco delta	1999	1997	eez:VEN, eez:GUY, eez:GUF, eez:SUR	31, 41	*Rhizoprionodon lalandii*	http://firms.fao.org/firms/resource/13276/en http://data.d4science.org/ctlg/GRSF/b519959a-0c41-3542-8a62-824ad156cbdb
Brazillian sharpnose shark - Coastal areas of Trinidad and Tobago	1999	1997	eez:TTO	31	*Rhizoprionodon lalandii*	http://firms.fao.org/firms/resource/13200/en http://data.d4science.org/ctlg/GRSF/aea33efd-7fb0-3be0-b42a-8d537a1d97ed
Caribbean sharpnose shark - Coast of French Guiana to the Orinoco delta	1999	1997	eez:VEN, eez:GUY, eez:GUF, eez:SUR	31, 41	*Rhizoprionodon porosus*	http://firms.fao.org/firms/resource/13277/en http://data.d4science.org/ctlg/GRSF/d3c47f5b-899c-36d1-b223-39ee6f1ff028
Caribbean sharpnose shark - Coastal areas of Trinidad and Tobago	1999	1997	eez:TTO	31	*Rhizoprionodon porosus*	http://firms.fao.org/firms/resource/13197/en http://data.d4science.org/ctlg/GRSF/f460d1e7-cfd9-37dc-b518-5a86885c5943
Caribbean sharpnose shark - Gulf of Paria to Orinoco Delta	2004	1997	eez:TTO, eez:VEN	31	*Rhizoprionodon porosus*	http://firms.fao.org/firms/resource/13242/en http://data.d4science.org/ctlg/GRSF/374d25ec-b36b-3d1a-87c4-0dcd0c1cc7c2
Vermilion snapper - Continental slope of French Guiana to Northeastern Venezuela	2001	1999	eez:TTO, eez:VEN, eez:GUY,	31, 41	*Rhomboplites aurorubens*	http://firms.fao.org/firms/resource/13283/en http://data.d4science.org/ctlg/GRSF/44fb2225-a6be-380a-8736-5770d32abb34

			eez:SUR, eez:GUF			
Vermillion snapper - Gulf of Mexico USA waters	2019	2014	lme:5	31	*Rhomboplites aurorubens*	http://firms.fao.org/firms/resource/11032/en http://data.d4science.org/ctlg/GRSF/968e7295-3466-3085-98ea-108951167c06
Vermillion snapper - Southeastern Atlantic coast of the USA	2019	2016	lme:6	21, 31	*Rhomboplites aurorubens*	http://firms.fao.org/firms/resource/10925/en http://data.d4science.org/ctlg/GRSF/747a8885-ca82-31fa-b73d-fdcba90fa9e5
Coastal groundfishes - Antigua and Barbuda	2004	2003	eez:ATG	31	*Scaridae; Holocentridae; Haemulidae (=Pomadasyidae); Acanthuridae*	http://firms.fao.org/firms/resource/13059/en http://data.d4science.org/ctlg/GRSF/4eecdee9-6b35-31fb-bdbd-d3ae9fc2a2fa
Serra spanish mackerel - Coastal areas of Trinidad	2004	1997	fao_major:31	31	*Scomberomorus brasiliensis*	http://firms.fao.org/firms/resource/13185/en http://data.d4science.org/ctlg/GRSF/7f1a265f-a973-3e97-bb41-cc4f4da7315b
King mackerel - Inshore and offshore areas of Trinidad and Tobago	2004	1997	eez:TTO	31	*Scomberomorus cavalla*	http://firms.fao.org/firms/resource/13186/en http://data.d4science.org/ctlg/GRSF/23c04949-280f-3d34-b7aa-dae9548c8c15
Oceanic pelagic fishes - Antigua and Barbuda	2004	2003	eez:ATG	31	*Scombridae; Istiophoridae; Xiphias gladius*	http://firms.fao.org/firms/resource/13028/en http://data.d4science.org/ctlg/GRSF/b7c82a35-2846-3337-86a5-aada129db3e4

Scalloped hammerhead - Coast of French Guiana to the Orinoco delta	1999	1997	eez:GUF, eez:GUY	31, 41	*Sphyrna lewini*	http://firms.fao.org/firms/resource/13278/en http://data.d4science.org/ctlg/GRSF/c8bb3161-efad-3313-80f3-029dcdbb0d93
Scalloped hammerhead - Coastal areas of Trinidad and Tobago	1999	1997	eez:TTO	31	*Sphyrna lewini*	http://firms.fao.org/firms/resource/13203/en http://data.d4science.org/ctlg/GRSF/ce70c761-bc5b-33df-a5bf-8ebe75fb863f
Smalleye hammerhead - Coast of French Guiana to the Orinoco delta	1999	1997	eez:VEN, eez:GUY, eez:GUF, eez:SUR	31, 41	*Sphyrna tudes*	http://firms.fao.org/firms/resource/13279/en http://data.d4science.org/ctlg/GRSF/20f2a519-b764-34ff-a7d5-b12be13afb29
Smalleye hammerhead - Coastal areas of Trinidad and Tobago	1999	1997	eez:TTO	31	*Sphyrna tudes*	http://firms.fao.org/firms/resource/13202/en http://data.d4science.org/ctlg/GRSF/3e4663e0-0f89-3e06-9603-1d1f040290c0
Smalleye hammerhead - Gulf of Paria to Orinoco Delta	2004	1997	eez:TTO, eez:VEN	31	*Sphyrna tudes*	http://firms.fao.org/firms/resource/13240/en http://data.d4science.org/ctlg/GRSF/3e80fcd0-33c0-30aa-b497-cc14b612f37e
Queen conch - Antigua	2004	2003	eez:ATG	31	*Strombus gigas*	http://firms.fao.org/firms/resource/13107/en http://data.d4science.org/ctlg/GRSF/a2c753e5-a5ee-338a-af77-51e1c14c20a3
Queen conch - Saint Lucia	2009	2008	eez:LCA	31	*Strombus gigas*	http://firms.fao.org/firms/resource/13109/en http://data.d4science.org/ctlg/GRSF/6953f9a9-c0e2-3d48-b370-98a7b44a65a5

Queen conch - Turks and Caicos	2014	2012	eez:TCA	31	*Strombus gigas*	http://firms.fao.org/firms/resource/13772/en http://data.d4science.org/ctlg/GRSF/b1161c0d-b6d9-322e-908d-cbd36f65cc6c
Queen conch - Belize	2016	2015	eez:BLZ	31	*Strombus gigas*	http://firms.fao.org/firms/resource/13774/en http://data.d4science.org/ctlg/GRSF/25562779-372e-38c3-92f8-344b438f9507
Sea urchins - Grenada	2004	2003	eez:GRD		*Strongylocentrotus spp*	http://firms.fao.org/firms/resource/13120/en http://data.d4science.org/ctlg/GRSF/15bf4765-f609-32b6-8e57-6a929a67b2a3
Sea urchins - Barbados	2004	2003	eez:BRB	31	*Tripneustes ventricosus*	http://firms.fao.org/firms/resource/13118/en http://data.d4science.org/ctlg/GRSF/64b48e49-2094-3241-aa84-ab8f925580ad
Seabob - Coast of French Guiana to the Orinoco delta	2019	2017	eez:GUY, eez:SUR	31	*Xiphopenaeus kroyeri*	http://firms.fao.org/firms/resource/13249/en http://data.d4science.org/ctlg/GRSF/82e0e154-b4f8-3fc2-8df7-5b8ed71df76d

4.4 Appendix 4 - Fleet segment - vessel type / length class

4.4.1 Introduction

We recall here the conclusion on vessel type of the first Working Party on Statistics meeting (1978):

> " The Working Party examined the International Standard Statistical Classification of Fishing Vessels (ISSCFV) by GRT categories and by HP categories. It was felt that while these categories would be helpful for classification of larger vessels, they may not be practicable for smaller vessels engaged in artisanal fishery which were very important in this area. It was, therefore recommended by the Working Party that the vessels of 5 tons or less should be classified by length instead of tonnage indicating the hp if the vessels are motorized."

The challenge is to define the small-scale vessel type given the diversity of type of vessels. The goal here is to be able to give a standard reference to collect data to compute CPUE with comparable unit of effort at regional level.

If we refer to the definition proposed by Haughton, 2005, to define small-scale fisheries in the Caribbean, *"fisheries involving individuals, households, small fishing companies, or fisherfolk organisations using relatively small, unsophisticated fishing vessels, if any, under 20 m LOA, powered by engines not exceeding 300 hp, operating relatively close to shore, and producing fish for local consumption and/or for export*.", it should provide some indications on a tentative classification.

All vessels above 20m should be considered industrial as per the above definition, in line with ICCAT vessel class definition[11]. The international classification defines a size class 12-18 and 18-24m and thus must also be considered.

For industrial fleet, as all Caribbean countries report to FAO for their fleet, the ISSCFV can be used. Two classifications exist:

- one per gross tonnage class (http://www.fao.org/3/a-bt982e.pdf)
- and one per vessel type (based on the gear type used: http://www.fao.org/3/a-bt983e.pdf)

To accommodate both regional and international fisheries organizations classifications, WECAFC has adopted a «Fleet segment » classification and coding system. The WECAFC Fleet segment classification is defined as the combination of a Vessel type classification derived from the ISSCFV (with minor modifications) and length classes derived from International and ICCAT classifications.

[11] http://www.iccat.int/Documents/Comply/vessels_ENG.pdf

For the purpose of mapping national vessels to the Vessel type classification, the notions of either using gear exclusively, or using gear predominantly, or using gear with no-predominance, will apply.

4.4.2 Appendix 4.1 Fleet segment - vessel types by length classes

(the codes for the fleet segments are in the greyed out cell range)

VESSEL TYPE			LENGTH CLASS				
CODE	**STAND. ABB.**	NAME	<6m (18.9 ft.)	6 m – 11.9 m (19 – 38.9 ft.)	12 - 19.9 m (39 – 64.9 ft.)	20 - 24 m (65 – 78.4 ft.)	>24 m (78.5 ft.)
1	TO	Trawlers	TO-1	TO-2	TO-3	TO-4	TO-5
2	SP	Purse seiners	SP-1	SP-2	SP-3	SP-4	SP-5
3	SO	Other seiners	SO-1	SO-2	SO-3	SO-4	SO-5
4	DO	Dredgers	DO-1	DO-2	DO-3	DO-4	DO-5
6	GO	Gill netters	GO-1	GO-2	GO-3	GO-4	GO-5
7	WO	Trap setters	WO-1	WO-2	WO-3	WO-4	WO-5
8	LL	Long liners	LL-1	LL-2	LL-3	LL-4	LL-5
9	LO	Line vessels (other)	LO-1	LO-2	LO-3	LO-4	LO-5
9.2	LP	Pole and line vessels	LP-1	LP-2	LP-3	LP-4	LP-5
9.3	LT	Trollers	LT-1	LT-2	LT-3	LT-4	LT-5
9.4	LH	Hand liner vessels	LH-1	LH-2	LH-3	LH-4	LH-5
10.2	MTW	Multigear (or Multipurpose) trawlers (in combination with longline, trap, gillnet, dredge)	MTW-1	MTW-2	MTW-3	MTW-4	MTW-5
10.3	MLG	Multigear (or Multipurpose) non trawlers (longline, gillnet, trap)	MLG-1	MLG-2	MLG-3	MLG-4	MLG-5
19	OV	Other fishing vessels	OV-1	OV-2	OV-3	OV-4	OV-5
20	HO	Motherships	HO-1	HO-2	HO-3	HO-4	HO-5
19.9.1 (1)	OVN (1)	Non-motorized Vessels	OVN -1	OVN -2	OVN -3	OVN -4	OVN -5

99	NOV	No vessel (fishing from shore)	-	-	-	-	-

(1) Not in the FAO classification – needed for regional classification. Will be considered as FX if needed

4.5 Appendix 5 - Fishing Practice

4.5.1 Appendix 5.1 - Fishing Gear

We recall here the conclusion on geartype of the first Working Party on Statistics meeting (1978):

"The Working Party reviewed the International Standard Statistical Classification of Fishing Gear (ISSCFG). While the classification looked to be exhaustive, the Working Party felt that it should be examined in detail to evaluate its scope in the WECAFC area."

3 main gear type families are used in the Caribbean with main sub gears.

- Traps (Including pots)
- Nets (gill, seine, cast nets, trammel nets)
- Lines (long lines, pole line, hand line, trot lines, deep water buoy lines, manual lines - known as hand line, rod and reel)

The revised ISSCFG classification (Rev 1, 2016) is available here:

The WECAFC geartype classification version 1.-1 can be the following from the proposed list above.

Gear Categories	**Standard abbreviations**	**ISSCFG code**
Beach seines	SB	02.1
Boat seines	SV	02.2
Gillnet		07
Cast nets	FCN	06.-1
Traps		08
Pots	FPO	08.2

Hooks and lines		09
Handlines and hand-operated pole-and-lines	LHP	09.1
Mechanized lines and pole-and-lines	LHM	09.2
Drifting longlines	LLD	09.32
Longlines	LL	09.39
Trolling lines	LTL	09.5
Harpoons	HAR	10.1
Hand implements	MHI	10.2
Electric fishing	MEL	10.4
Diving	MDV	10.8
Gears nei	MIS	10.9
Gear not known	NK	99.9

Question for the CWP and reviewers:

Why no abbreviation for main categories gillnets, traps, hooks and line and longlines?

Does WECAFC need to define one?

4.5.2 Appendix 5.2 - Fishing Mode

Fishing mode classification will complement the Geartype for enhanced fishing effort definition, e.g., to consider the use of FAD in tuna line fishing, or certain fishing techniques like diving or hand collection from shore. The proposal for FAD is taken from the recommendation of the March 2018 tuna RFMOs meeting in Rome[12].

The proposed classification is the following.

Code	**Name**	**Description**
N/A	**n-a**	Not applicable
ALL	All	All fishing modes reported together
FREE	Free	Fishing on free school, no FAD use
ASSO	Associated	Fishing on FAD associated school
DIVE	Diving	Fishing with one or more divers

[12] Add link to report – not yet published.

4.5.3 Appendix 5.3 - Fishing Effort

The amount of fishing effort expended aids in quantifyng fishing pressure and in understanding trends in catch per unit of effort (CPUE). Standard measures of effort are identified for unique classes of fishing gear. The Report of technical workshop on global harmonization of Tuna fisheries statistics, March 2018, Session 6.2 provide definitions of standard measures.

Fishing gear category **(ISSCFG, 2016)**	**Standard measures of effort** **Haul-by-haul data**	**Aggregated data**
Surrounding net (01)	Soak time	Number of sets Number of days fished
Seine (02)	Soak time	Number of sets Number of days fished
Trawl (03)	Tow duration	Number of tows Tow duration Number of days fished
Dredge (04)	Tow duration	Number of tow Tow duration Number of days fished
Lift net (05)	Soak time	Number of sets Soak time Number of days fished
Falling gear (06)	Soak time	Number of sets Soak time Number of days fished
Gillnet and Entangling net (07)	Soak time Length of net set	Number of sets Length of net set Number of days fished
Trap (08)	Soak time	Number of sets Soak time

		Number of days fished
Hook and line (09)	Soak time Number of hooks set Length of line	Number of hooks set Number of lines set Length of line set
Dive (10.8)	Dive time	Number of hours dived Number of days fished

4.5.4 Appendix 5.4 - Effort measurement by fleet segment

The quantification of fishing effort using standard measures in the context of vesseltype further aids in understanding fishing pressure.

STANDARD ABBREVIATION	VESSEL TYPE	LOA	Unit of capacity	Unit of Activity	Nominal Effort
TO	Trawlers	All	GT	Fishing days	GT x fishing days
SP	Purse seiners	All	GT	Number of fishing sets	GT x fishing days
SO	Other seiners	All			
GO	Gill netters	All	Net length	Fishing days	Net Length x fishing days
WO	Trap setters	All	Number of traps / pots	Fishing days	Number of traps / pots x Fishing days
LL	Long liners	All	Number of hooks	Fishing days	Number of hooks x fishing days
LO	Line vessels (other)				
DO	Dredgers	All	GT	Fishing days	GT x fishing days
MTW	Multi-gear trawler vessels	All	Net Length (1)	Fishing days	Net Length(1) x fishing days
MLG	Multi-gear non-trawler vessels		Number of traps/pots	Fishing days	Number of traps / pots x Fishing days
OV	Other fishing vessels		Number of lines	Fishing days	Number of lines x fishing days
OVN	Non-motorized Vessels				

Note for the reviewers: the CWP has instituted a Fishing effort Task group which will refine and extend the interim proposal made by the tuna group on an harmonized fishing effort standard, in particular to take into consideration context of small scale fisheries. The WECAFC experience and participation in this CWP Task Group will be important for a full-fledge CWP standard on Fishing effort. These Appendices (5.3, 5.4) as adopted by FDS-WG2 will constitute an important contribution to this CWP work, and might be revised according to its outcome.

4.6 Appendix 6 - Biological references – work in progress

Note for the reviewers: With the DCRF version presented at the FDS-WG2 October 2020 meeting, the need for biological references was identified. The status of this appendix is that of **a first draft** which goal it to introduce required sections and table structures based on references for biological parameters identified with WECAFC, GFCM, ICCAT or other authoritative sources.

The objective of the DCRF framework is to provide a single WECAFC reference for relevant data/statistics standards, and it is here proposed that this frameworks includes biological parameters formally reviewed/provided/adopted/revised by the WECAFC species working groups.

Question for reviewers:

Reviewers and members of WECAFC Species WGs are invited to submit relevant biological references

4.6.1 Appendix 6.1 - Fish length measurement standards

The preferred length class unit for bony fishes and elasmobranchs is total length (TL). TL is measured as lower half centimeter, from tip of snout to the end of the caudal fin. In elasmobranchs, fork length (FL) may be recorded when the caudal fins is damaged and total length cannot be taken. Length units may also be recorded as standard length (SL) or fork length (FL). SL is defined as the measurement taken from the tip of the lower jaw to the posterior end of the hypural bone. Fork length is defined as tip of the jaw or tip of the snout with closed mouth to the center of the fork in the tail.

Illustration showing measurement of total (TL) and standard length (SL) in bony fish. TL = Total Length (source: GFCM DCRF)

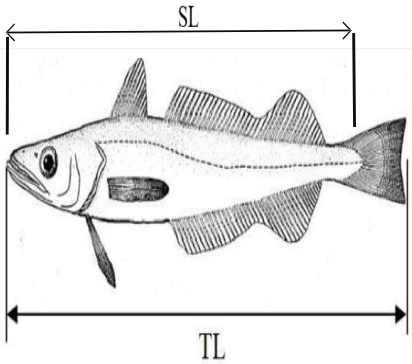


Illustration showing the measurement of total length (TL) sd standard length (SL) in bony fish. TL = Total Length (photo by Carpentieri P.).

Length classes should be reported in centimetres (cm), as a wholde 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 millimetres (e.g., 1, 2, 3, 4 mm, etc.)

Convention for length type and interval identity to be further specified.

4.6.2 Appendix 6.2 - Scales of maturity stages

- **6.2.1 Maturity classification system** (based upon Hunter et al. (1986)

- **6.2.2 Caribbean spiny lobster** (Source: Caribbean Spiny Lobster FisheryRegional Management Plan (MARPLESCA plan). http://www.fao.org/fi/static-media/MeetingDocuments/WECAFC/WECAFC2019/17/10e.pdf

Female reproductive status identified (from Form 6 of the MARPLESCA Plan):

Category	Definition
Ov - ovigerous	With eggs
Ce	with spermatheca
Cre	With traces of spermatheca
Cre + ov	With traces of spermathecal and eggs
Mu	In moulting period

- **6.2.3 Bony fishes** (Source: GFCM)

Stages	Maturation state	Reproductive apparatus aspect	
0	UNDETERMINED	Sex not distinguished by naked eye. Gonads very small and translucent, almost transparent. Sex undetermined.	
		Females	*Males*
1	IMMATURE-VIRGIN	Small pinkish and translucent ovary shorter than 1/3 of body cavity. Eggs not visible to naked eye.	Thin and whitish testis shorter than 1/3 of body cavity.
2a	VIRGIN-DEVELOPING	Small pinkish/reddish ovary shorter than 1/2 of body cavity. Eggs not visible to naked eye.	Thin whitish testis shorter than 1/2 of body cavity.
2b	RECOVERING	Pinkish-reddish/reddish-orange and translucent ovary; length about 1/2 of body cavity. Blood vessels visible. Eggs not visible to naked eye.	Whitish/pinkish testis, more or less symmetrical; length about 1/2 of body cavity.

2c	MATURING	Ovary pinkish-yellow in colour withgranular appearance; length about 2/3 of body cavity. Eggs are visibleto naked eye through the *ovaric tunica*, which is not yet translucent. Under light pressure, eggs are not expelled.	Whitish to creamy testis; length about 2/3 of body cavity. Underlight pressure, sperm is not expelled.
3	MATURE/SPAWNER	Ovary orange-pink in colour, with conspicuous superficial blood vessels; length from 2/3 to full length of body cavity. Large transparent, ripe eggs are clearly visible and could be expelled underlight pressure. In more advanced conditions, eggs escape freely.	Whitish-creamy soft testis; length from 2/3 to full length of body cavity. Under light pressure, sperm could be expelled. In more advanced conditions, sperm escapes freely.
4a	SPENT	Reddish ovary shrunk to about 1/2 length of body cavity. Flaccid ovaric walls; ovary may contain remnants of disintegrating opaque and/or translucent eggs.	Bloodshot and flabby testis shrunk to about 1/2 length of body cavity.
4b	RESTING	Pinkish and translucent ovary; length about 1/3 of body cavity. Eggs not visible to naked eye.	Whitish/pinkish testis, more or less symmetrical; length about 1/3 of body cavity.

6.2.4 Maturity stages for visual examination of large pelagic gonads

(source : https://www.iccat.int/Documents/SCRS/Manual/CH4/CH4_8-ENG.pdf)

Stage	**Criteria** **Males**	**Females**
Immature	Gonads small ribbon-like, not possible to determine sex by gross examination	Gonads small ribbon-like, not possible to determine sex by gross examination
1	Immature; testes extremely thin, flattened and ribbon-like, but sex determinable by gross examination	Immature; gonads elongated, slender, but sex determinable by gross examination
2	Enlarged testes, triangular in cross section, no milt in central canal	Early maturing; gonads enlarged but individual ova not visible to the naked eye
3	Maturing; milt flows freely if testes pinched or pressed	Late maturing; gonads enlarged, individual ova visible to the naked eye
4	Ripe; testes large, milt flows freely from testes	Ripe; ovary greatly enlarged, ova translucent, easily dislodged from follicles or loose in lumen of ovary
5	Spent; testes flabby, bloodshot, surface dull red, little or no milt in central canal	Spawned; includes recently spawned and post-spawning fish, mature ova remnants in various stages of resorption, and mature ova remnants about 1.0mm in diameter

6.2.5 Cephalopods *(Source: GFCM)*

Stages	Maturation state	Reproductive apparatus aspect	Sex
0	Undetermined	Sex not distinguished by naked eye. Sex undetermined.	U
1	Immature-Virgin	Small and translucent Nidamental glands (NG)/Oviducal glands (OG). Ovary is semi-transparent, stringy and lacking granular structure. Small semi-transparent NG/OG. Oviduct meandernot visible. Total absence of spermatophores.	F
		Testis small. Spermatophoric complex (SC) semi-transparent; Vas deferens not visible. Penisappears as a small prominence of SC.	M
2a	Developing	NG/OVG enlarged. NG covering some internal organs. Whitish ovary with granular structure clearly visible, not reaching the posterior half of the mantle cavity. Oviduct meander clearly visible. Eggs very small. Absence of spermatophores.	F
		Enlarged testis with structure not clearly visible. Vas deferens is whitish or white and thespermatophoric organ has white streak.	M
2b	Maturing	Large NG covering the viscera below. Ovary occupies the whole posterior half of mantle cavity, containing reticulated oocytes of all sizes tightly packed and probably a few ripe ova at its proximalpart. Oviducts fully developed but empty. Maturing eggs visible to naked eye. Few spermatophores.	F
		Vas deferens is white, meandering, enlarged. Needham's sac (SS) with structure less whitish particles inside. Normally the Needham's sac is without functional spermatophores, but sometimessome immature/abortive ones could occur. Testis tight, crispy, with visible structure.	M
3a	Mature	Large NG as previously. Ovary containing higher percentage of large reticulated eggs and some largeripe ova with smooth surface. In Teuthoidea ripe ova in oviducts. Eggs medium and big, and visible both in oviducts and in the ovary. Well-developed spermatophores.	F
		Testis as before. Spermatophores packed in the Needham's sac	M
3b	Spent	NG/OG large but soft and running. Ovary shrunk and flaccid, with only immature oocytes attachedto the central tissue and a few loose large ova in the coelom. In Teuthoidea, oviduct may containsome mature ova but are no longer packed.	F
		Disintegrating spermatophores in the Needham's sac and the penis.	M

6.2.6 Crustaceans *(Source: GFCM)*

Stages	Maturation state	Reproductive apparatus aspect				
		Colouring of fresh ovary	*Parapenaeus longirostris*	*Aristaeomorpha foliacea*	*Aristeus antennatus*	*Nephrops norvegicus*
1	Immature	whitish or translucid	Ovaries not visible without dissection. The ovaries are thin and translucent with a tubular appearanceadherent to the dorsal portion of the stomach, not extending to the abdomen.	Ovaries not visible without dissection.The ovaries are thin and translucent with a tubular appearance adherent to the laterals of the stomach, not extending to the abdomen.	Ovaries not visible without dissection. The ovaries are thin and translucent with a tubular appearance adherent to the laterals of the stomach, not extending to the abdomen.	Ovaries not visible without dissection. The ovaries are translucent, thin and threadlike.
2	Developing	*A. foliacea*: flesh coloured; *A. antennatus:* ivory coloured with orange pink-violet dotting; *N. norvegicus*: cream; *P. longirostris*: cream orange;	Ovaries are barely visible without dissection. The cephalic lobes start tocover the sides while the abdominal extensions occupy all somites.	Ovaries barely visible without dissection. Cephalic lobes small but distinguishable. The gonad generally extends up to 3rd abdominal somite.	Ovaries barely visible without dissection. Cephalic lobes small but distinguishable. The gonad extends to the full length ofthe abdomen.	Ovaries barely visible without dissection. The gonads extends up to the 1stsomite of the abdomen and have a granular appearance.
3	Maturing	*A. foliacea*: light and dark grey; *A. antennatus:* lilla; *N. norvegicus*: light green; *P. longirostris*: light green or grey green;	Ovaries are clearly visible through integument. Ovaries developed and turgid, with cephalic lobes and abdominal extensions occupying the entirely the dorsal portion. The gonads appear granular.	Ovaries are clearly visible through integument. Ovaries developed andturgid, with evident cephalic lobes.The gonad generally extends to the4th abdominal somite	Ovaries are clearly visible through integument. Cephalic and abdominal extensions are well developed and turgid.	Ovaries are clearly visible through integument. The gonad occupies one third ofthe cephalotoracic space. The gonads extend up to the1st somite of the abdomen.
4	Mature	*A. foliacea:* black; *A. antennatus:* violet; *N. norvegicus*: dark grey; *P. longirostris*: brightgreen or olive green;	Turgid ovaries extending to the whole dorsal area. Lobes and extensions well developed. Eggs well visible.	Turgid ovaries extending to the wholedorsal area. Lobes well developed andabdominal extensions may reach the 5th somite. Eggs well visible.	Turgid ovaries occupying the whole dorsal area. Lobes and abdominal extensions well developed. Eggs well visible.	Turgid ovaries occupying the whole dorsal cephalotoracic space and extending up to the 2nd somite. Eggs visible.
5	Spent/Resting /Recovering	uncoloured	Ovaries after spawning are fully extended but loose turgidity becoming flaccid.	Ovaries large but flaccid with blackish spots.	Ovaries large but flaccid with purple spots.	Ovaries flaccid with green spots. Re-absorption of ovarian material. Most likely with green eggs on pleopods.

6.2.7 Elasmobranchs viviparous *(Source: GFCM)*

Viviparous elasmobranchs		Females			Males	
MATURATION STATE	STAGES	MATURATION STATE	REPRODUCTIVE APPARATUS ASPECT	STAGES	MATURATION STATE	REPRODUCTIVE APPARATUS ASPECT
IMMATURE	1	IMMATURE	Ovaries: small and whitish; undistinguishable ovarian follicles. Oviducal gland: often not visible. In some species a thickening of theuteri where the gland will developmay be visible. Uteri: thread-like and narrow.	1	IMMATURE	Claspers: flexible, non-calcified and usually shorter than pelvic fins. Testes: small and undeveloped. Ducts: straight and thread-like.
	2	DEVELOPING	Ovaries: follicles of different stages of development. Some small and medium-sized yolked follicles may be present. Oviducal gland: distinguishable and developing. Uteri: enlarging.	2	DEVELOPING	Claspers: flexible, partially calcified and as long as or longer than pelvic fins. Testes: developing and may start to segment in sharks; in rays lobules clearly visible but do not occupy the whole surface. Ducts: developing and beginning to coil.
MATURE	3	CAPABLE OF REPRODUCTION	Ovaries: presence of large yolked follicles ready to be ovulated. Oviducal glands: fully developed Uteri: fully developed.	3a	CAPABLE OF REPRODUCTION	Claspers: rigid, fully calcified, and longer than pelvic fins. Testes: fully developed; for some shark species testes are fully segmented. Ducts: tightly coiled and filled with sperm.
				3b	ACTIVE	Claspers: similar to stage 3a, however with clasper glands dilated, sometimes swollen. Sperm may be present in clasper groove orglands. Testes: similar to stage 3a. Ducts: sperm observed inside after a cut or flowing out of the cloaca on pressure.
				4	REGRESSING	Claspers: fully formed, similar to stage 3. Testes shrunken and flaccid, (in skates, with few visible lobules). On pressure, sperm does not flow. Sperm ducts: empty and flaccid. Seminal vesicle developed but empty.

6.2.8 Stomatopods *(Source: GFCM)*

Maturation state	Stages	Reproductive apparatus aspect
IMMATURE	0	ovaries filamentous and hyaline; 6th-8th sternites hyaline
QUIESCENT	1	filamentous ovaries with evident brown dots (chromatophores),6th-8th sternites hyaline
EARLY MATURATION	2	narrow yellow ovaries, 6th-8th sternites whitish
MATURATION	3	yellow ovaries extending up to half of abdomen width, not visible through cutile on the ventral side of telson, 6th-8th sternites white.
RIPE	4	yellow ovaries extending over half abdominal width, visible through cutile on the ventral side of telson, 6th-8th sternites milky white.
SPENT	5	similar to quiescent ovaries, sometime with fewyellow dots, but6th-8th sternites still white.

Guidance for collection of maturity data

References

4.6.3 Appendix 6.3 - Growth models adopted by WECAFC for primary species

Species	Area/Sex	Parameters	Reference	Number observations	Length range	Method

Guidance for Age and growth data collections

References

4.6.4 Appendix 6.4 - Conversion factors adopted by WECAFC for primary species

- **6.4.1 Weight-Length**

Species	Area/Sex/Season	Relationship	Reference	Number observations	Length range	Method

Guidance for weight-length conversion data collections

References

NMFS Conversion Factors 1990.
https://www.gsmfc.org/pubs/FIN/Conversion_Factors/NMFS%20Conversion%20Factors%201990.pdf

6.4.2 Length-Length

Species	Area/Sex/Season	Relationship	Reference	Number observations	Length range	Method

6.4.3 Queen conch formulae for converting from dressed (dirty) weights to live weights

50% clean to dirty weight	CF 95% Confidence interval		
Country	**Average CF**	**Lower**	**Upper**
Martinique	1.53	1.33	1.80
Bahamas	2.05	1.78	2.43
Nicaragua	1.86	1.78	1.96
Dominican Republic	1.69	N.A.	N.A.

85% clean to dirty weight	CF 95% Confidence interval		
Country	**Average CF**	**Lower**	**Upper**
Barbados	1.86	1.42	2.69
Honduras	2.41	2.17	2.73
Dominican Republic	2.11	N.A.	N.A.

100% clean to dirty weight	CF 95% Confidence interval		
Country	**Average CF**	**Lower**	**Upper**
Honduras	2.73	2.46	3.05
Bahamas	2.76	2.37	3.30
Nicaragua	3.06	2.84	3.31
Martinique	2.66	2.30	3.15
Dominican Republic	3.19	N.A.	N.A.

Dirty weight to whole weight	CF 95% Confidence interval		
Country	**Average CF**	**Lower**	**Upper**
Nicaragua	2.73	2.46	3.05
Honduras	2.76	2.37	3.30
Bahamas	3.06	2.84	3.31
Average	5.36	4.69	6.26
Dominican Republic	3.89	Samples with sub-adults only	

Guidance for conversion data collections

References

6.4.4 Lobster conversion formulae for converting from tail weight to whole weights

Guidance for conversion data collections

References

4.7 Appendix 7 - Socio-economics (Age groups, Currency, …)

4.7.1 Appendix 7.1 - Age groups

The age groups adopted for WECAFC employment statistics follow the ILO guidelines "Decent work indicators : guidelines for producers and users of statistical and legal framework indicators".

The categories are :

<15 years old (for child labor considerations)

15 - 24 years old (for youth employment considerations)

24 – 65 years old

>65 years old

Source : https://www.ilo.org/wcmsp5/groups/public/---dgreports/---integration/documents/publication/wcms_229374.pdf

Manual: second version / International Labour Office. - Geneva: ILO, 2013

4.7.2 Appendix 7.2 - Currency

The International Standard for currency codes ISO 4217 (e.g., USD for US dollar):

	Country	Currency	ISO 4217 currency code
1	Antigua and Barbuda	East Caribbean Dollar	XCD
2	Bahamas	Bahamian Dollar	BSD
3	Barbados	Barbados Dollar	BBD
4	Belize	Belize Dollar	BZD
5	Brazil	Brazilian Real	BRL
6	Colombia	Colombian Peso	COP
7	Costa Rica	Costa Rican Colon	CRC
8	Cuba	Cuban Peso	CUP
9	Dominica	East Caribbean Dollar	XCD
10	Dominican Republic	Dominican Peso	DOP
11	European Union	Euro	EUR
12	France	Euro	EUR
13	Grenada	East Caribbean Dollar	XCD
14	Guatemala	Quetzal	GTQ
15	Guinea	Guinean Franc	GNF
16	Guyana	Guyana Dollar	GYD
17	Haiti	Gourde	HTG
18	Honduras	Lempira	HNL
19	Jamaica	Jamaican Dollar	JMD
20	Japan	Yen	JPY
21	Mexico	Mexican Peso	MXN
22	Netherlands	Euro	EUR
23	Nicaragua	Cordoba Oro	NIO
24	Panama	Balboa	PAB
25	Republic of Korea	Won	KRW
26	Saint Kitts and Nevis	East Caribbean Dollar	XCD
27	Saint Lucia	East Caribbean Dollar	XCD
28	Saint Vincent/Grenadines	East Caribbean Dollar	XCD
29	Spain	Euro	EUR
30	Suriname	Surinam Dollar	SRD
31	Trinidad and Tobago	Trinidad and Tobago Dollar	TTD
32	United Kingdom	Pound Sterling	GBP
33	United States of America	US Dollar	USD
34	Boliv. Rep. of Venezuela	Bolívar Soberano	VES

https://www.iso.org/iso-4217-currency-codes.html

4.8 Appendix 8: Questionnaires and data submission schedule

4.9 Appendix 9 - Glossary

Note for reviewers: definitions added post FDS-WG2 October session for focuses review: Decked vessels, Undecked vessels, Fleet segment, multigear vessels, Predominant gear, Vessel type

(Note: this glossary is under development and currently does not include all terms used in the guidelines – definition in blue are draft definition i.e. not CWP definitions)

Active Vessel: vessels that have been engaged in any fishing operation (one day or more) during a calendar year. A vessel that has not been engaged in fishing operations during a year is considered 'inactive'.

Biological data: The term 'biological data' refers to the collection of data on biological characteristics of target species, bycatch and incidental catches associated with fishing (e.g., length, weight, age).

Bycatch (FAO): Part of a catch taken incidentally in addition to the target species towards which fishing effort is directed. Some or all of the bycatch may be returned to the sea as discards, usually dead or dying (i.e. injured).

Catch fraction: a part of the total catch, such as the part of the catch landed above the minimum conservation reference size, the part landed below the minimum conservation reference size, the part discarded below the minimum conservation reference size, *de minimis* discards or discards.

Catch and landings: These guidelines follow the advice of the CWP on catch and landings[13]. The CWP advises that the overall aim for statistics on catch and landings is to report on fisheries contribution to the national economy, to the provision of food (subsistence) and on the total removal of fish and other organisms from the sea. Catch statistics are internationally reported as "*nominal*" catch (see definition below) which refers to the landings converted to a live weight basis. However, fisheries impact on the ecosystem extends beyond the landed fish and other organisms and further includes species impacted by the gear. Some of these organisms are brought on deck and later discarded. The various components of the catch are described in the CWP catch concept diagram (Figure 1). There are fisheries where the number of individuals caught is also required to be reported.

National and Regional fisheries organizations annually publish catch statistics in different forms. These statistics are available from the websites of these organizations and/or other published bulletins. FAO publishes global fisheries statistics as in "FAO Statistical Yearbooks" and are available in more details from the FAO Fisheries and Aquaculture Statistics website (http://www.fao.org/fishery/statistics/en). When using published catch and landing statistics it is to be recognized that non-reporting and mis-reporting of landings is a major concern in some fisheries.

[13] http://www.fao.org/cwp-on-fishery-statistics/handbook/capture-fisheries-statistics/catch-and-landings/en/

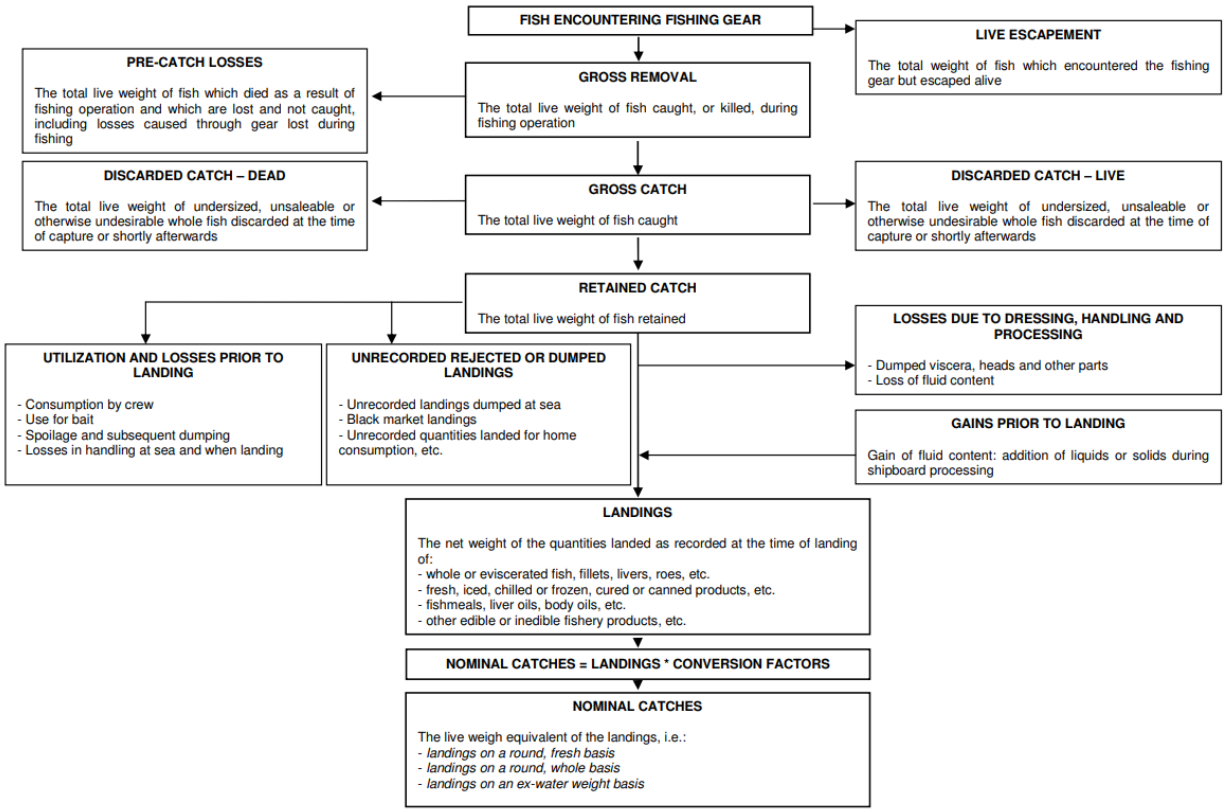


Figure 1: CWP diagrammatic representation of catch concepts. From CWP Handbook[14]

Days at sea: any continuous period of 24 hours (or part thereof) during which a vessel is present within an area and absent from port.

Decked vessel (FAO/IMO)[15]**:** a vessel having a fixed watertight deck covering the entire hull above the deepest operating waterline. Where open wells or cockpits are fitted in this deck the vessel is considered a decked vessel if flooding of the well or cockpit will not endanger the vessel. Decked ship is an alternative also used in some IMO documents: a ship with a continuous watertight weather deck that extends from stem to stern with positive freeboard throughout.

Discarded catch (CWP[11]): The term 'discarded catch' (or discards) refers to the component of the catch which is discarded overboard (refer to the catch concept diagram, Fig. 1). The discarded catch is the total live weight of undersized, unsaleable or otherwise undesirable whole fish discarded at the time of the capture or shortly afterwards. Discarded fish and other organisms may be discarded dead or alive, and may include species taken as bycatch.

[14] http://www.fao.org/3/bt981t/bt981t.pdf

[15] FAO, "Safety Recommendations for Decked Fishing Vessels of Less than 12 meters in Length and Undecked Fishing Vessels, FAO/ILO/IMO" approved by the IMO, the overall responsible agency for vessel safety

Fishing days: any calendar day at sea in which a fishing operation takes place, without prejudice to the international obligations of the Union and its Member States. One fishing trip can contribute to both the sum of the fishing days for passive gears and the sum of the fishing days for active gears on that trip.

Fishing effort (CWP[16]): The term 'fishing effort' refers to the amount of fishing gear of a specific type used on the fishing grounds over a specified unit of time e.g. number of hours trawled per day, number of hooks set per day, or number of hauls of a beach seine per day. The impact of an effort unit on the fish populations and the ecosystem in general differs with the vessel that deploys the gear and effort statistics need to be qualified by vessel type and size/motor power.

The CWP advised that fishing effort should be reported at three levels of resolution (i.e., precision):

- Category A refers to a detailed unit of measure, e.g. hours fished or number of sets, etc. These units of measure will vary with the gear used;
- Category B refers to "number of days fished", i.e., the number of days on which fishing took place. For those fisheries in which searching is a substantial part of the fishing operation, days in which searching but no fishing took place should be included in "days fished" data;
- Category C refers to "number of days on ground" in addition to days fishing and searching also all other days while the vessel was on the ground should be indicated.

The fishing effort may be nominal, reflecting the simple total of effort units exerted on a stock in a given defined or specified time period. It may also be standardized effort (i.e, developed using an accepted model) or effective effort when corrected to take account of differences in fishing power and efficiency and ensure direct proportionality with fishing mortality and this relates usually to a specific fishery and gear. If more than one gear is considered, standardization of the raw effort statistics in relation to one of them is necessary. For biologists, a good measure of fishing effort should be proportional to fishing mortality. For economists it should be proportional to the cost of fishing.

Fishing ground: (group of) geographical units where fishing takes place. These units shall be agreed at marine region level on the basis of existing areas defined by regional fisheries management organizations or scientific bodies.

Fish Product (draft): the term 'fish product' refers to any part of a fish which is handled and processed for food, agricultural, industrial or other uses. Products include whole fish, fillets, trunks, heads, roe and oils. Processing may involve heading, heading and gutting, filleting and mincing.

Fish product conversion factor (draft): the term 'conversion factor' (CF) refers to the ratio of the live weight of a fish to its product weight, i.e. CF = live weight / product weight. A conversion factor applies to a specific product type.

Fish Product Type (draft): the term 'fish product type' refers to the type of product which results from processing the fish. Product types include whole fish, fillets, headed and tailed trunks, headed and gutted trunks, heads, roe, meal and oil.

[16] http://www.fao.org/cwp-on-fishery-statistics/handbook/capture-fisheries-statistics/fishing-effort/en/

Fisher (CWP, refer also ISCO-08): a fisher is a worker operating from fishing vessels but also operating land-based fishing gears and/or from shore foot-fishing without the use of boats.

Fishery: A Fishery is an activity leading to the harvesting of fish, within the boundaries of a defined area. The fishery concept fundamentally gathers indication of human fishing activity, including from economic, management, biological/ environmental and technological viewpoints (FIRMS 2006, modified from FAO glossary of fisheries)"

Fishery (FIRMS): A Fishery is an activity leading to the harvesting of fish, within the boundaries of a defined area. The fishery concept fundamentally gathers indication of human fishing activity, including from economic, management, biological/ environmental and technological viewpoints. (FIRMS 2006, modified from FAO glossary of fisheries http://firms.fao.org/firms/concepts/en)

Fishery Inventory (FIRMS): "A Fishery Inventory is a comprehensive list of fishery units identified at an agreed scale and within a defined scope, including consideration of Geographic reference, thematic approach, and purpose". Geographic reference, thematic approach, and purpose are the main criteria driving the identification of fishery units in an inventory.

Fishery fleet (CWP[17]): The term "fishery fleet" or "fishery vessels" refers to mobile floating objects of any kind and size, operating in freshwater, brackish water and marine waters which are used for catching, harvesting, searching, transporting, landing, preserving and/or processing fish, shellfish and other aquatic organisms, residues and plants.

Fishery sector (draft): The term' fishery sector' refers to a subset of a fishery which shares similar technical, regional or socio-economic characteristics, such as a fishing fleet comprised of artisanal, commercial or subsistence fishers, or a fleet operating in domestic/EEZ waters or in the high seas

Fishing gear (draft, based on FAO[18]**):** The term 'fishing gear' refers to specialized equipment used for catching fish and defined according to the international standard classification revised version (ISSCFG Rev1, 2010[19]). Each gear can have multiple configurations.

Fishing Gear Specific effort measure: to be defined

Fishing trip (draft, based on NOAA): The term 'fishing trip' refers to a period of time that begins when a fishing vessel departs from a dock, berth, beach, seawall, ramp, or port to carry out fishing activities and that terminates when the vessel returns to a dock, berth, beach, seawall, ramp, or port.

Fishing Unit (FAO, GRSF for unique identification and traceability): A fishing unit is a fishery targeting a single species (or group of species) conducted by a single flag state using a single fishing gear operating in a water area, which is possibly managed by a single empowered management authority or treaty under a unique set of management measures.

Fishing vessel (CWP[8]): The term "fishing vessel" refers to a vessel which is engaged only in catching operations.

---

[17] http://www.fao.org/cwp-on-fishery-statistics/handbook/capture-fisheries-statistics/fishery-fleet/en/

[18] http://www.fao.org/cwp-on-fishery-statistics/handbook/capture-fisheries-statistics/fishing-gear-classification/en/

[19]

Fleet Capacity (draft): the term 'fleet capacity' refers to a nominal measure of the capacity of a fishery fleet to conduct fishing activities. For statistical purposes, fleet capacity may be summarized by fishing vessel tonnage or vessel type based on two international classifications adopted by the CWP:

1. The "International Standard Statistical Classification of Fishery Vessels by GRT Categories" (ISSCFV), based on the Gross Register Tonnage of the vessels, approved by the CWP in 1977. See ISSCFV GRT classification [20]
2. The 'International Standard Statistical Classification of Fishery Vessels by Vessel Types' (ISSCFV), based on the type of gear used by the vessels, approved by the CWP in 1984[21].

Fleet segment: group of vessels with the same length class (LOA, length overall) and vessel type based on predominant fishing gear during the year.

Fish Aggregating Device (FAD**)** (draft, based on FAO): The term 'FAD' refers to a permanent, semi-permanent or temporary structure or device made from any material and used to lure fish.

Incidental catch (draft): The term 'incidental catch' refers to a subset of the bycatch which interacts incidentally with the fishing gear and becomes hooked, netted or entangled, such as incidental catch of marine mammals, seabirds and turtles

Full-time fishers (CWP): workers who receive at least 90% of their livelihood from fishing or spend at least 90% of their working time in that occupation (for full-time / Part-time employment, see also classification of occupations in the CWP handbook).

Landing (CWP[11]): The net weight of the quantities landed as recorded at the time of landing, including:

- Whole or eviscerated fish, fillet, livers, roes, etc.
- Fresh, iced, chilled or frozen, cured or canned products etc
- Fishmeals, liver oils, body oils etc
- Other edibles or inedibles fishery products, etc.

Landed weight (CWP[11]): The term 'landed weight' refers to the mass (often referred to as weight) of a product at the time of landing, regardless of the state in which it is landed. That is, the fish may be whole, or gutted or filleted. Consequently this measure is of limited use for further analysis except where it is known that the product is homogenous in nature. Where more detailed analysis of the data is required, the landed weight is generally converted to a more meaningful measure, the most frequently used being the "nominal catch" (see below).

Live weight: The term 'live weight' refers to the weight of fish or other organisms when brought on board alive and prior to processing.

Length class: to be defined

Maturity: to be defined

Metier: a group of fishing operations targeting a similar (assemblage of) species, using similar gear (4), during the same period of the year and/or within the same area and which are characterised by a similar exploitation pattern.

Mothership: to be defined

[20] http://www.fao.org/3/a-bt982e.pdf

[21] http://www.fao.org/3/a-bt983e.pdf

Multigear vessel: vessels which physical structure make them non specialized in the operation of one – sometimes two - particular fishing geartypes, and make them able to operate different geartypes in the day or over the year.

According to FAO[22]: "Vessels which are equipped for alternative use of two or more different fishing gear without major modifications to the vessels' outfit and equipment"

Nationality of catch and landings (CWP[1123]**):** For the purpose of reporting national fishery statistics, the catch and landings is generally assigned to the country of the flag flown by the fishing vessel. However, the CWP recommended that this may be over-ridden only when one of the following arrangements between a foreign flag vessel and the host country exists: the vessel is chartered by the host country to augment its fishing fleet; or the vessel fishes for the country by joint venture contracts or similar agreements (as opposed to the ad-hoc practice of a vessel selling catches to a foreign vessel or landing catches at a foreign port) and the operation of such vessel is an integral part of the economy of the host country. In either case, the assignment of nationality to catch and landings data should be specified in the charter or joint-venture agreements.

Nominal catch (CWP[37]): The term 'nominal catch' refers to the landings converted to a live weight basis. Nominal catch is often referred to as the "Live weight equivalent of the landings" or shortened to the "Live weight", and in some national publications it is also referred to as "Landings on a round, fresh basis", "Landings on a round, whole basis" or "Landings on an ex-water basis". Care should be taken when referring to the nominal catch as the 'catch' since in many situations the catch includes components which are not landed (refer to the catch concept diagram, Fig. 1).

Nominal Effort: to be defined

Non-fishing vessel (CWP[824]): The term "non-fishing vessel" applies to vessels performing other functions related to fisheries, such as supplying, protecting, rendering assistance or conducting research or training.

Occasional fishers (CWP) : workers who receive under 30% of their livelihood from fishing, or spend under 30% of their working time in that occupation.

Part-time fishers (CWP): workers who receive at least 30% but less than 90% of their livelihood from fishing or spend at least 30% but less than 90% of their working time in that occupation (for full-time / Part-time employment, see also classification of occupations in the CWP handbook).

Post Release Mortality (FAO): This term refers to the quantity (commonly an average expected percentage) of the catch which is discarded alive, but will die in the immediate or long term due to various harmful effects of the capture and/or discarding processes.

Predominant fishing gear: the geartype used by a fishing vessel more than 50% of its time at sea using the same gear during the year. This percentage may be based on the vessel's attributed fishing license(s), on measures of fishing days by geartype, or on vessel owner's empirical knowledge. The predominant fishing gear characterizes the allocation of a fishing vessel to a Vessel type in the

[22] FAO Technical Paper 267

[23] http://www.fao.org/cwp-on-fishery-statistics/handbook/capture-fisheries-statistics/catch-and-landings/en/

[24] http://www.fao.org/cwp-on-fishery-statistics/handbook/capture-fisheries-statistics/fishery-fleet/en/

fleet segments classification, on a yearly basis. In absence of a predominant fishing gear, the vessel shall be allocated to the multi-gear vessel type.

Primary Gear (draft): the term 'primary gear' refers to the fishing gear which is used in greater than or equal to 50% of the fishing activities during a fishing trip.

Reference year: The term "**reference year**" refers to the calendar year (1 January to 31 December) for which statistics are reported as recommended by CWP for standard reporting timelines.

Research surveys at sea: trips carried out on a research vessel, or a vessel dedicated to scientific research for stock and ecosystem monitoring, and designated for this task by the body in charge of the implementation of the national work plan established in accordance with Article 21 of Regulation (EU) No 508/2014.

Retained catch (CWP[37]): The term 'retained catch' refers to the component of the catch which is retained on board the fishing vessel (refer to the catch concept diagram, Fig. 1). The retained catch is reported as total live weight of fish and other organisms retained and in some fisheries the number of individuals retained is also required to be reported.

Sample design: to be defined

Socio-economic data (draft): the term 'socio-economic data' refers to the collection of data on social and economic characteristics of fishers, communities and businesses associated with fishing.

Source of data: to be defined

Undecked vessel[25]**:** Undecked vessels do not have a fixed watertight deck and will therefore not have the watertight and weathertight integrity of decked vessels. (FAO/IMO)[26]: an undecked vessel is a vessel which is not a decked vessel

Vessel Beam (draft): is the width of the hull

Vessel Construction location (draft): Location of the vessel shipyard

Vessel Draft (or draught) (draft): Is the vertical distance from the bottom of the keel to the waterline.

Vessel Hull type (draft): type of the watertight body of the vessel (steel, aluminum, fiber glass, wood, etc..)

Vessel IMO number (draft): International Maritime Organization Number

Vessel IRCS (draft): International Radio Call Sign

Vessel Main Engine Power (draft): Power of the vessel main engine (in-board or outboard)

Vessel GRT (draft): Gross Registered Tonnage

Vessel GT (draft): Gross Tonnage

Vessel LOA (draft):**:** Length OverAll is the totallength from one end to the other

Vessel type: the 'International Standard Statistical Classification of Fishery Vessels by Vessel Types' (ISSCFV) was set-up by the CWP to classify fishery vessels by type, based on vessels structural

[25] FAO. 2009. Safety practices related to small fishing 16 vessel stability. http://www.fao.org/publications/card/en/c/f2107b62-edbd-59b3-a4ba-c9a2e4f1ede2

[26] FAO, "Safety Recommendations for Decked Fishing Vessels of Less than 12 meters in Length and Undecked Fishing Vessels, FAO/ILO/IMO" approved by the IMO, the overall responsible agency for vessel safety

characteristics that account inter alia for the type of fishing gear operated by the vessels. To be functional in the WECAFC small scale fisheries context, the Vessel type category is to be understood for local vessels according to their exclusive, predominant or non-predominant use of fishing gears.

Vessel Year of Construction (draft): Year of the original vessel construction