COORDINATING WORKING PARTY ON FISHERY STATISTICS

SIXTH MEETING OF THE AQUACULTURE SUBJECT GROUP (AS)
AND
TWENTY-SEVENTH MEETING OF THE FISHERIES SUBJECT GROUP (FS)

FAO HQ – ROME, ITALY
15-16 MAY 2019

COORDINATING WORKING PARTY ON FISHERY STATISTICS

Sixth Meeting of the Aquaculture Subject Group (AS) and Twenty-seventh meeting of the Fisheries Subject Group (FS)

CWP ad-hoc Task Group on reference harmonization for capture fisheries and aquaculture

Aymen CHAREF (FAO)

Setting the scene

- The CWP is a forum and mechanism, functional since 1960, to **streamline statistical activities** among the relevant RFBs and **create standard** concepts, definitions, classifications and methodologies for the collection and collation of fishery and aquaculture statistics.
- CWP work demonstrated its usefulness at early stages, for instance, the **STATLANT reporting system of questionnaires** based on the CWP international classification system (e.g. ISSCFG, ISSCFV)
- In recent years, under numerous policy demands more international statistical organizations were established and initiated the restructure and statistical production process.
- More data is available under increasing requirement of producing statistics led to **multireporting** for many countries.

Setting the scene

- The incessant increase of diversification of information systems among fisheries institutions produced various definitions, encoding systems and dissemination structures.
- IT diversity, and **computer based data collection** vs paper based made the data diverse and difficult to discover and interoperable.
- In the last decade, interest and incentive of CWP parties on solving these matters have been raised and discussed during several preceding meetings.
- To get back to its essential mission, it is necessary to establish a harmonization between differing classification systems or terminology sets to make datasets compatible and integrable for different purposes under different collection regimes.
- Guidelines should be provided to mainstream these developments.

ad-hoc Task Group Activities

- CWP meeting February 2015 in Namibia highlighted the need of a unified, coherent and **harmonized** fisheries data structure

- The ad-hoc Task Group on reference harmonization for capture fisheries and aquaculture was established at the CWP 25th session in 2016 in Rome. Teleconference for kick-off was in 23rd March 2017.

- **14 CWP members** participated in the activities: **CCSBT, EUROSTAT, FAO, GFCM, IATTC, ICCAT, ICES, IOTC, NACA, NAFO, OECD, SEAFO SPC and WCPFC**

ad-hoc Task Group Activities

- Main objectives of the ad-hoc Task Group are:
  - improve the multilateral exchange between CWP parties and reduce the burden of multiple reporting from the data producers
  - build a CWP standard for global reference data harmonization that compiles minimum data requirements of the aquaculture production and capture datasets, based on common set of statistical concepts and a standard terminology
  - disseminate Standard of global data structure and related metadata, and provide guidelines for the implementation.

Activities

- 20 June 2017: First proposal of global DSD presented at the CWP-Intersessional meeting.

- 2 November 2017: Draft Version 2.0 of working document and global data structure

- 19 March 2018: Sub-group of tuna RFMOs to thoroughly review the global data structure and their components (statistical concepts).

- 2 more rounds of remote feedback on version 3.0 and 4.0

- 15 May 2019: Version 5.0 of the proposal is submitted to the CWP 26th Session

CWP Tuna RFMOs Workshop

The sub-group was a cluster of Tuna bodies CWP members (CCSBT, **IATTC, ICCAT, IOTC, and WCPFC)** to **reflect and boost** the TG activities

The main objective was to review the proposals of CWP standard for global data structure and terminology used to define its structural elements and related codification.

Outputs

- Validation of mainly two data structures relevant to t-RFMOs statistics (Nominal catch, catch and effort) and related data.
- Use case of data provision, based on the harmonized data structure
- Proposal of a standard for fishing effort

Harmonization Process

General principles:

- Harmonisation towards standardization: that it does not impose a single norm, but rather start with harmonizing and "an agreeable effect" of integration from various types, levels of granularity and sources of data

- Pillars of the data structure are CWP statistical concepts, classifications and also international classifications (FAO, UNSD, ISO)

Harmonization Process

Bottom Up Approach for knowledge ordering to recognize regional standards in global context: Inventory of CWP members definitions, codelists, data questionnaire/structures

Common denominator: requirement/attribute that is common to all CWP parties

Minimum requirements

Extra requirements for implementation at individual level

Expanding conceptual scope and enriching the statistical concepts

To build data structure **independently from any IT** syntactic implementation (syntax, encoding)

Harmonization Process

SCOPE

Conceptual Proposal for the Standard for reference data harmonization

Concept	COUNTRY	FISHING AREA	AQUATIC SPECIES	TIME UNIT	QUANTITY	OBS_STATUS	UNIT	FISHING GEAR	FISHERY VESSEL	VALUE	OBS_STATUS
Concept_Type	Dimension	Geographic Dimension	Dimension	Time Dimension	Primary measure/observation	Attribute	Attribute	Dimension	Dimension	Primary measure/observation	Attribute
Classification system	UN Standard country or area codes for statistical use (M49)	FAO Major Fishing Areas for statistical purpose; Areal grid coding system	ASFIS List of Species for Fishery Statistics Purposes	Calendar year		FAO statistical standard for Observation status flags	UCUM Unified Code for Units of Measure	ISSCFG International Standard Classification of Fishing Gears	ISSCFV International Standard Statistical Classification of Fishery Vessels by Categories		FAO statistical standard for Observation status flags
Aggregation/ granularity level (Sub_classification)	Aggregated codes (e.g Aggregated member states of EU)	Breakdowns: Subarea, Division (e.g ICES subareas, GFCM GSAs); Areal grid coding system (e.g IOTC 5 degree grid system)	ISSCAAP; Aggregated species (e.g IOTC Group species list)	e.g yearly; monthly; bi-annual				Detailed list of gears; or Aggregated gears (e.g IOTC Fishing gear group)	Detailed list of vessels; or Aggregated vessels (e.g GFCM Vessel Group, OECD Fleet segments)		FAO standard symbols
Code List	UN code	FAO Fishing Areas; ICES subareas;	Inter-agency 3-alpha code	Calendar Year	Quantity	Observation Status Flag	Units of measure	Gear Category	Fishery Vessel Type	Value	Observation Status Flag
Codelist_id	UN_CODE	FAO_AREAS; GRID_SYSTEM	3ALPHA_CODE	YEAR	QUANTITY	STATUS_FLAG	UNIT	GEAR_CATEGORY	VESSEL_TYPE	VALUE	STATUS_FLAG
Description	List of countries or areas (three digits code)	FAO major fishing areas; codes for Statistical quadrangles, and for quadrants	Species reference	Reference year	Quantity of production	FAO Observation status codes (e.g "E"Estimate value, "R"Revised)	Unit of measure (e.g tonnes or number of animals)			Value of production	FAO Observation status codes (e.g "O" Missing value)

A classification system is named, owned and maintained by an institution, including the coding, set of aggregations, hierarchies. The CWP international standard statistical **classification system** is primarily used (e.g. ASFIS, ISSCFG, Areal grid system,..).

OUTPUTS

Outputs

Data structures

- Global Capture production
- Catch
- Catch and effort
- Logbooks

- Aquaculture Production: to further elaborate the structure with minimum data requirements and taking in consideration outputs of the CWP 26th session (e.g, List of farmings)

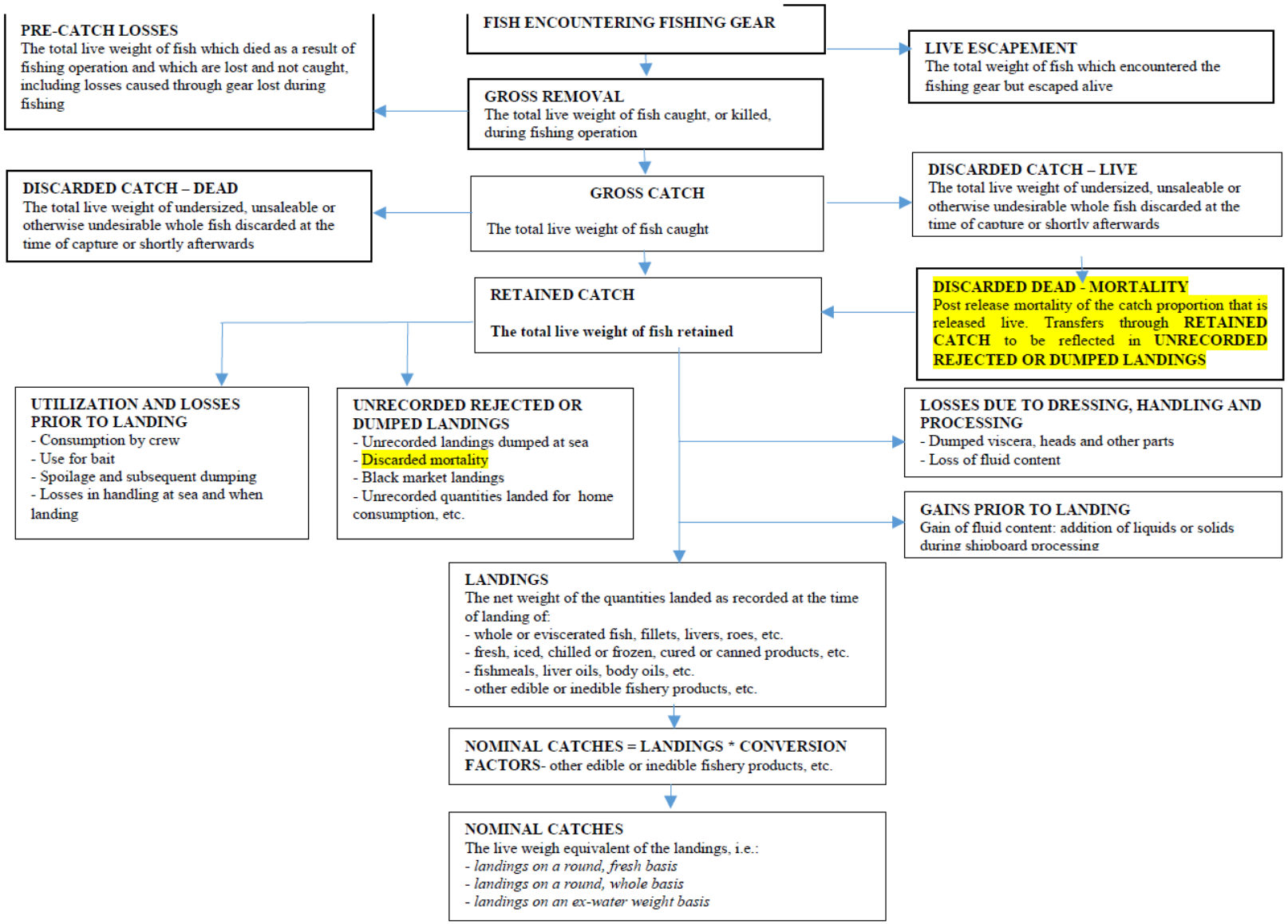
Outputs

Catch concept diagram to be further reviewed and elaborated to accommodate variant definitions:

- by catch
- nominal landings
- Catch to be transferred to other utilization (tuna caught for fattening)

Establish new ad-hoc task group or extend the ad-hoc TG on reference data harmonization

APPENDIX 7: PROPOSALS FOR REVISION OF CATCH CONCEPT DIAGRAM. Proposed changes are highlighted in yellow.



Potential standard for Fishing effort

Gear	Fishing mode	Potential CWP standard		
		Recommended	Alternate1	Alternate 2
Longline		Hooks		
Purse seine	All	Days fishing	Sets	Fishing/Searching Hours
	Free schools	Sets	Days fishing	Fishing/Searching Hours
	Associated	Sets	Days fishing	
Pole-and-line		Days fishing	No. of poles used	Sets
Troll		Days fishing	No. lines set	
Handline		Days fishing	Hooks set	
Drift Gillnet		Days fishing	Net length set	
Ring-net		Days fishing	Sets	Trips
Harpoon		Days fishing		
Recreational (sport)		Days fishing		
Trawl		Days fishing	Fishing hours	
Traps		Days fishing		

Implementation guidelines

Guidelines on the operational implementation of CWP standard for reference harmonization (CWP-IS/2019/7)

Focus on the implementation of three data structures (uniqueness of constraints, codelists)

1- Capture production, 2- Catch and 3- Catch and effort) for data exchange at regional level (i.e. tuna RFMOs).

CWP catalog to disseminate various CWP global data structures, CWP classifications and codelists, and the specific reference data made available by CWP parties (with codelists mappings).

Proof of concept catalogue

Based on CKAN, a free open source catalogue

To have one-stop shop , as a data discovery hub to easily pull and use:

- CWP international standard classifications and codelists
- CWP members classifications and their codelists

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Coordinating Working Party on Fishery Statistics (CWP)

Background | CWP Handbook | Meetings | Publications

History
Achievements

Mission

The **Coordinating Working Party on Fishery Statistics (CWP)** provides a mechanism programmes conducted by regional fishery bodies and other intergovernmental orga statistics.

Shoal of Mackarel scad (*Decapterus macarellus*)

Main function

Functional since 1960, the purpos

- continually review fishery research, policy-making a
- agree on standard concep methodologies for the co statistics;
- submit proposals for the statistical activities amon organizations.

Legal framework

The Working Party was established in 1959 under resolution 23/59 of the Tenth

Follow

Organisation

CWP_Secretariat

This Virtual Research Environment is conceived to support the development and maintenance of the Catalog of the Coordinating Working Parties on Fisheries Statitics, a catalog... read more

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ASFIS List of Species for Fishery Statistics Purposes

Tags

Catch | Periodicity-Annual | Species | codelist | species

Data and Resources

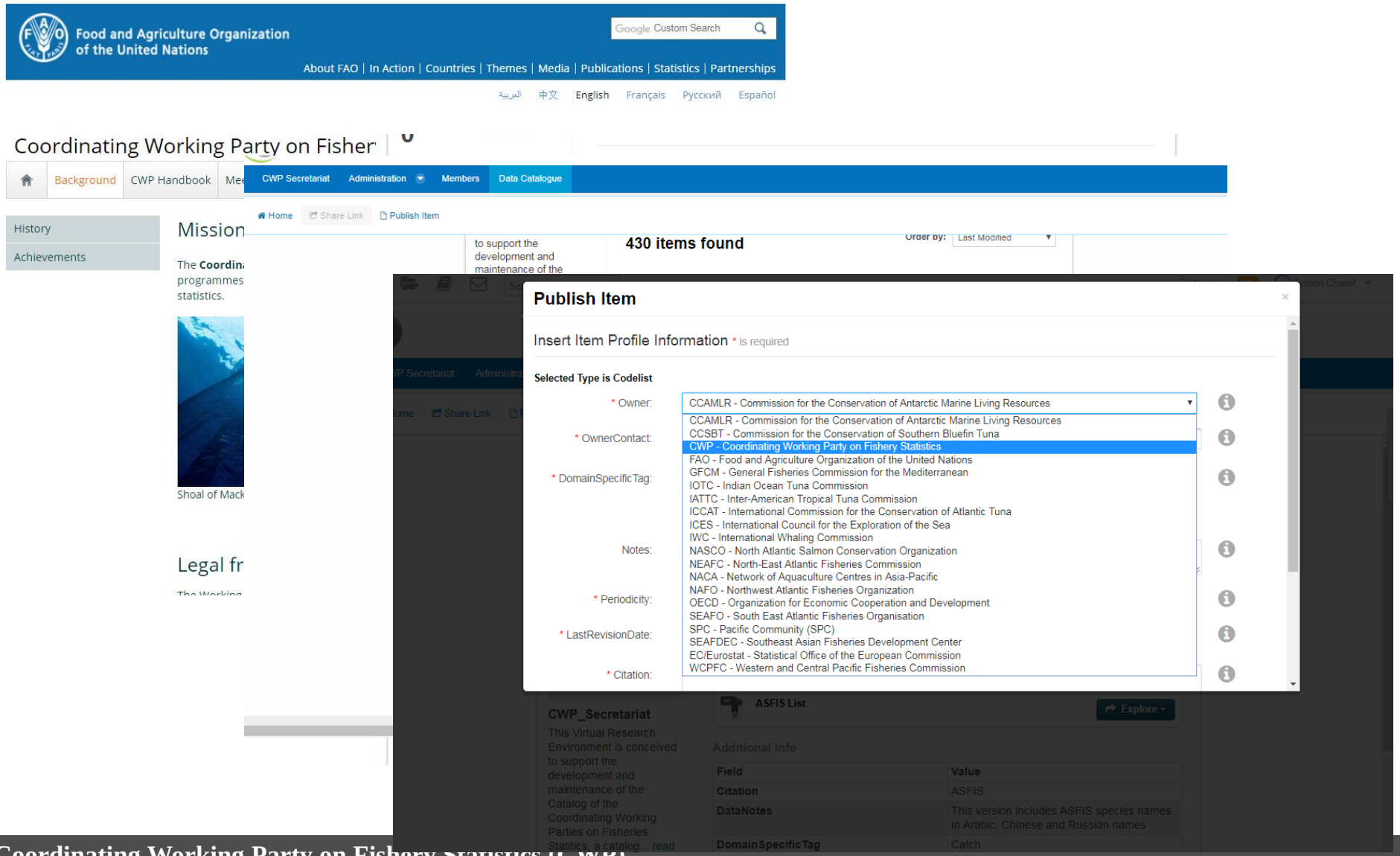
ASFIS 6 languages_2017.xlsx Explore

ASFIS List Explore

Additional Info

Field	Value
Citation	ASFIS
DataNotes	This version includes ASFIS species names in Arabic, Chinese and Russian names
DomainSpecificTag	Catch
DomainSpecificTag	Species
Item URL	http://data.d4science.org/ctlg/CWP_Secretariat/asfis_list
LastRevisionDate	2017-12-15
Periodicity	Annual

Food and Agriculture Organization of the United Nations



FOR ENDORSMENT

Data structures

- Global Capture production
- Catch
- Catch and effort
- Logbooks

IMPLEMENTATION

- To confirm the mandate of further develop **CWP registry and catalogue** through case studies, as FAO task

- To provide guidelines for implementation of three data structures (1- Capture production, 2- Catch and 3- Catch and effort) for data exchange (i.e. tuna RFMOs).

THANK YOU