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Definitions and concepts agreed at FIRMS FSC12 with relevance to CWP

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Executive Summary

The twelfth session of the FIRMS Steering Committee (FSC12) discussed and agreed upon definitions and concepts which are also relevant to CWP activities. In particular, the definitions for the jurisdictional distribution of fish stocks and maritime area type, the concept of fishing fleet and other standards and conventions for the Global Tuna Atlas which contribute to the reference harmonization framework.

The results of implementation of the CWP standard on reference harmonization for developing data exchange format are reported to CWP as an additional pilot use case to supplement the implementation guidelines of this CWP standard.

The CWP is invited to review these proposals and possibly incorporate within the CWP standards as deemed appropriate.

Background and overview

- **FIRMS Definitions on jurisdictional distribution of fish stocks and maritime area type.**

On September 2021, the FIRMS Secretariat launched an online consultation on FIRMS terminology. The objective was to agree among members of the FIRMS Technical Working Group on definitions for jurisdictional distribution of fish stocks and types of maritime areas relevant to the Marine Resource and Fishery information domains. The proposals were further discussed and agreed to at the twelfth session of the FIRMS Steering Committee (FSC12, 18-21 October 2021). Of particular relevance to CWP are the maritime area types and the concept of National Jurisdiction Area. See Annex 1 for the full list of definitions.

- **Fishing fleet definition for the Global Tuna Atlas**

The FIRMS Steering Committee endorsed the definition of the *fishing fleet* concept proposed by the FIRMS Global Tuna Atlas TWG, which is a requirement for the proper implementation of the harmonization process of tuna-RFMO (t-RFMO) data within the FIRMS Global Tuna Atlas (GTA). The agreed definition of this new concept (loosely based on ISO-3 country codes) is as follows:

Fishing fleet: *a group of fishing vessels authorized to operate in a t-RFMO convention area / area of competence, and whose fishing operations and catches of tuna and tuna-like species are responsibility of, and accounted for, by a political entity or sub-entity recognized by the corresponding t-RFMO.*

To be noted that the actual occurrences of the “Fishing fleet” concept do not necessarily refer or correspond to a recognized country (e.g.: EUR - European Union, FRAT – French territories), nor to a distinct member / contracting party / cooperating, non-contracting party of a t-RFMO (e.g.: EU,ESP - EU (Spain), TWN – Chinese Taipei / Taiwan province of China – for some t-RFMOs). The proposed list of fishing fleet codes also includes a generic reference that applies to fishing operations and catches from unidentified sources (e.g.: NEI - not elsewhere identified).

and is complemented by a list of currently accepted entries as per **Annex III** in the Report of the TWG7 on Tuna Atlas (document [FIRMS FSC12/2021/3](#)) presented at the 12th session of the FIRMS Steering Committee in October 2021.

- **Contribution of the Global Tuna Atlas to the CWP reference harmonization framework.**

Furthermore, the FIRMS Steering Committee endorsed the proposal of adopting the data format used by the Global Tuna Atlas workflow as the *ad-interim* format for harmonized data exchange between the t-RFMOs and the FIRMS GTA, recognizing that this format (which references the previously introduced *fishing fleet* concept) might be of interest to the work of the CWP ad-hoc task group on reference harmonization, and potentially be superseded by future CWP-endorsed standards with comparable purposes.

Development of data exchange structure was based on the alignment with the data structures of CWP standard on reference harmonization that was endorsed by CWP 26th session in 2019 ([Appendix 5 –](#)

[Annex1](#) of the CWP 26th session report). The results of hands-on implementation are reported to CWP in order to improve the implementation guidelines of the CWP standard on reference harmonization.

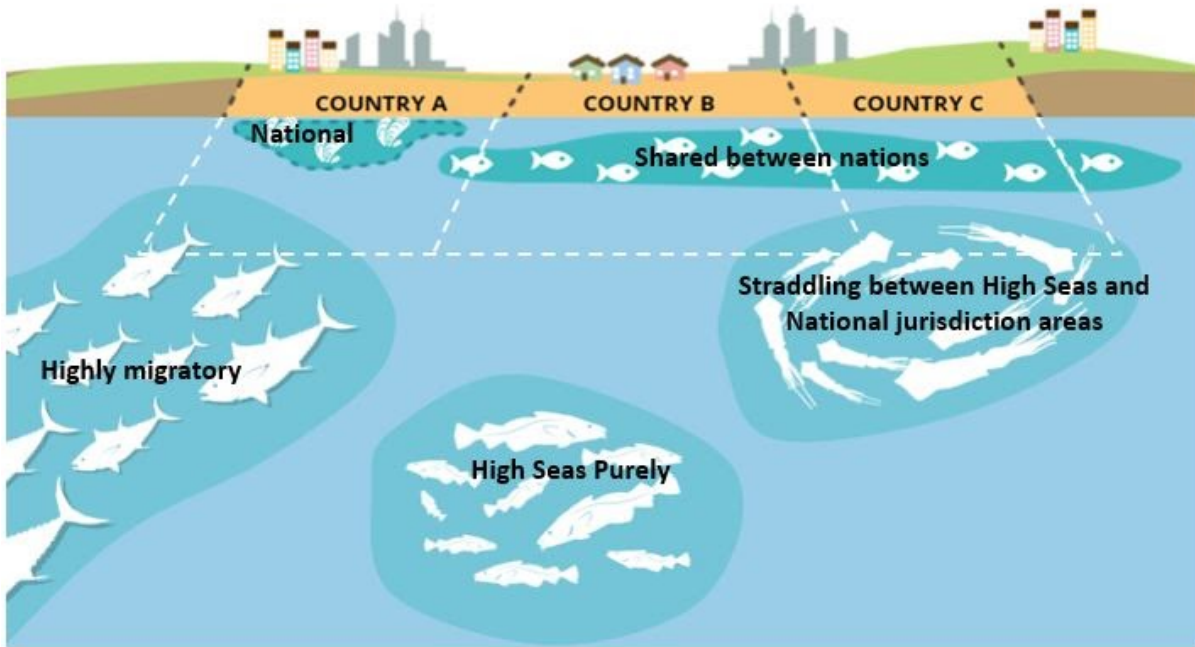
The proposed data exchange format consists of a data structure definition (see **Table 1**), a series of pre-agreed concepts (including the *fishing fleet* concept) and a container format for digital data exchange (CSV-based).

Column	Type	Definition	Target values
fishingfleet	string	Code of the fishing fleet	ISO3 code (uppercase), extended with ad hoc codes decided within the Tuna atlas working group.
gear	string	Code of the fishing gear	ISSCFG code
time_start	string	ISO 8601 format (YYYY-MM-DD)	Value should be lower than time_end
time_end	string	ISO 8601 format (YYYY-MM-DD)	Value should be greater than time_start
geographic_identifier	string	Code identifying the georeferencing unit	For gridded catches, use the CWP grid code
schooltype	string	Code of the school type	Values used in the Tuna atlas school type codelist .
species	string	Code of the species	ASFIS codes
catchtype	string		For catches, this can be used to store the type of catch values used in the Tuna atlas catchtype codelist . NA if not applicable
measurement_value	number	Measured value	
measurement_unit	string	Code of the unit	Values authorized are: <ul style="list-style-type: none"> for catches: "t" (Metric tons), "no" (Number of fishes) - until a full unit harmonization is operated for effort: use of Tuna atlas effort codelist
measurement_obs	string	Value observations	Best practice in statistical series handling, required in case notes must be set for specific series values (e.g., estimation / assumption made)

Table 1: the FIRMS-endorsed Data Structure Definition (DSD) for data exchange purposes within the Global Tuna Atlas.

ANNEX 1

Jurisdiction Distribution and Marine area types terms and definitions adopted for FIRMS reporting.



Jurisdiction Distribution map. Source: FIRMS FSC12 elaboration based on the FAO, 2020. eLearning course on SDG14.4.1. e-learning Academy.

Jurisdiction Distribution terms and definitions

Jurisdictional Distribution of fish stocks
Adopted definition for FIRMS reporting
"Jurisdictional qualifier" (e.g. "national", "shared", "highly migratory", "high seas") of the marine resource or fish stock that describes to which extent and where its spatial distribution overlaps one or more maritime jurisdiction."

National

Adopted definition for FIRMS reporting

"Marine resource whose distribution is exclusively within National jurisdiction* areas."

Shared between nations

Adopted definition for FIRMS reporting

"Marine resource whose distribution overlaps the National jurisdiction* areas of two or more adjacent nations."

Highly migratory

Adopted definition for FIRMS reporting

"Marine Resource capable of migrating relatively long distances, which is likely to occur both within National jurisdiction* areas and High Seas. These are technically straddling stocks but given their peculiar characteristics they are often managed by specific management bodies, and are here kept as a separate category."

High Seas purely

Adopted definition for FIRMS reporting

"Marine resource purely in Areas Beyond National Jurisdiction"

Straddling between High Seas and National jurisdiction areas

Adopted definition for FIRMS reporting

"Marine Resource whose distribution overlaps [National jurisdiction](#)* areas and Areas Beyond National Jurisdiction".

*Under UNCLOS with regards to the sea, National jurisdiction includes internal waters, the territorial sea, archipelagic waters of an archipelagic State, the continental shelf, the 200 nautical mile Exclusive Economic Zone (EEZ).

Maritime area types terms and definitions

Maritime area type
Adopted definition for FIRMS reporting
"Typology of maritime areas according to the type of rights and jurisdiction exerted by States in or over these areas"

High Seas
Adopted definition for FIRMS reporting
"All parts of the sea that are not included within the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State" (UNCLOS)

National waters
Adopted definition for FIRMS reporting
"The waters under the sovereignty or National jurisdiction* of a coastal State (internal waters, territorial sea, archipelagic waters, continental shelf, exclusive economic zone)**"

**Under UNCLOS with regards to the sea, National jurisdiction includes internal waters, the territorial sea, archipelagic waters of an archipelagic State, the continental shelf, the 200 nautical mile Exclusive Economic Zone (EEZ)*

***According to UNCLOS definitions*

EEZ

Adopted definition for FIRMS reporting

"Exclusive Economic Zone 200M from the territorial sea baseline and adjacent to the 12M territorial sea" (UNCLOS)

Territorial sea

Adopted definition for FIRMS reporting

"The zone of coastal waters extending at most 12 nautical miles from the baseline (usually the mean low-water mark) of a coastal state (UNCLOS)"

Archipelagic zone

Adopted definition for FIRMS reporting

"The waters enclosed by the archipelagic baselines drawn by an archipelagic State, upon which that State exerts its sovereignty, which extends to the air space and to the bed and subsoil and their resources (UNCLOS)"

National jurisdiction area

Adopted definition for FIRMS reporting

"All waters under National jurisdiction. Under UNCLOS with regards to the sea, National jurisdiction includes internal waters, the territorial sea, archipelagic waters of an archipelagic State, the continental shelf, the 200 nautical mile Exclusive Economic Zone (EEZ)."