



## FIRMS Technical Working Group Meeting

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## FIRMS INFORMATION MANAGEMENT POLICY: FISHERIES PROPOSED NAMING CONVENTION STANDARDS (from FSC2)

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*For the sake of clarity in FIRMS system, in order to have a homogeneous presentation or to facilitate search, the naming of Aquatic Resources and Fisheries has to follow some conventions. At the same time, data owners have their own naming conventions, which they want to be reflected within FIRMS. Where the concept of Aquatic Resource is quite simple and always defined with the two same components, the concept of Fishery is broader, which makes more difficult the establishment of naming conventions.*

*The purpose of this document is to present the criteria to be used as FIRMS naming convention for **Fisheries**. It constitutes a substantial revision of the standards proposed at FSC2, based on a comprehensive review of the inventory of fisheries to date. Paragraphs 1.2, 2.1 and 2.2 are new, while paragraphs 1.1, 2.3 and 3 were just revised. In the revised sections, yellow background highlights the modifications as requested by FSC2, while purple background represent new changes in substance proposed with this new document.*

*The present guidelines are applied to a subset of the fishery inventory presented in annex 1.*

### **1. Concept, related issues and objectives of naming conventions**

#### 1.1 Concept

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.

#### 1.2 Issues and objectives of naming conventions

This multi-faceted and virtual concept raises issues of consistency in terms of information management. The concerns driving the development of naming conventions are:

## i. Ensuring consistency through:

- unequivocal identification of a fishery thanks to key naming identifiers, including title;
- sound partitioning and classifying of fisheries involved in the inventory;

## ii. Ensuring manageable/presentable titles.

**2. Proposed naming conventions****2.1 Unequivocal identification of a fishery: the Geo-reporting standpoint**

Inventories are carried out at different scales (from Global, through Regional, National or Sub-national), each time from a specific geographic standpoint. This [scale x geographic] standpoint is herewith defined as the Geo-reporting standpoint. Examples of Geo-reporting standpoint are Western Central Pacific Ocean (an SPC regional Geo-reporting standpoint), Senegal (a national Geo-reporting standpoint), or Provence-Alpes Cote d'Azur (a sub-national Geo-reporting standpoint). This Geo-reporting standpoint defines the space within which fisheries are identified.

i. As part of the naming convention for fisheries, the geo-reporting standpoint and its implied geo-reporting scale is critical and compulsory for the unequivocal identification of a fishery. This geographic information is one of the fishery identifiers stored in a distinct attribute, and is systematically presented together with the fishery title.

**2.2 Sound partitioning and classifying of fisheries involved in the inventory**

Within a given space, the elements that constitute fisheries (harvested resources, métiers -or practices-, vessels, households) might be partitioned into a set of discrete fishery segments. In an inventory, the fisheries identified are the result of a segmentation established following a set of criteria, each criteria being applied successively to decompose fisheries into sub-fisheries. The criteria chosen generally relate to a thematic approach or a series of approaches, and corresponding keywords reflect the underlying disciplinary viewpoint: fishery biology, fishing technology, socio-economy or fishery management.

Five thematic approaches are recognized. The following table describes, from a data management consideration, the type of input usually expected on a thematic approach from a disciplinary point of view. These are: define a fishery segment as reflected in the inventory; report on a fishery; establish a fishery segment as M.U. (Management Unit) .

Table 1 Thematic approach	Disciplinary view point			
	Fishery biology	Techno-logy	socio-economy	Fishery management
<p>a. <b>Resource:</b> for a fishery defined according to the resource(s) targeted Example: "Deep-sea shrimp fishery" <i>where reference is made to the resources of shrimps in deep-sea waters off Angola</i></p>	define report			establish as M.U. report
<p>b. <b>Metier:</b> for a fishery defined according to its fishing activity (fishing gear, type of vessel, target species) Example: "Morocco - Trolling line Albacore fishery" <i>where reference is made to the use of trolling lines targeting Albacore</i></p>	define report	define report	define report	establish as M.U. report
<p>c. <b>Fishing technique:</b> for a fishery defined according to the fishing technology practiced (fishing gear, type of vessel, target species) Example: "Semi-industrial Mediterranean purse seining fishery" <i>where reference is made to the Mediterranean purse seining fishing practice with medium size Mediterranean purse seiners</i></p>		define report		establish as M.U. report
<p>d. <b>Production system:</b> for a fishery defined from enterprise -for industrial / commercial fisheries- or household view point -for artisanal / subsistence fisheries-, ie primarily according to socio-economic parameters (exploitation form, vessel types, fishermen communities, etc.) Example: "Coastal trawlers based - Italian Adriatic coast"</p>			define report	establish as M.U. report
<p>e. <b>Management system:</b> for a group of fishery units subject to the same regulations within a recognized legal framework. Example: "Alaska fisheries" (USA) <i>where reference is made to the NPFMC management system for USA Alaskan fisheries</i> Example: "Municipal shrimp fishery - Philippines" <i>Where reference is made to fishing activities being carried out within a 15 miles coastal zone subject to specific fishing regulation</i></p>				define report

The segmentation resulting from such partitioning can be considered consistent if all together the fishery segments reconstitute the entire space of possible fisheries, with no overlapping. Furthermore, successive segmentations might usually be applied, each based on a distinct thematic approach, resulting in a set of fisheries organized in a tree-like way. Within this tree, a fishery has a meaningful identity if it can be associated with the thematic approach which prevailed for its identification. By extension, the enumeration of fisheries, or their counting, is meaningful if implemented together with the thematic approach.

Therefore the following convention is proposed:

- ii. It is important to indicate the thematic approach considered for the identification of each fishery of the inventory, as well as for the reporting of each subsequent fishery observation. For this purpose, the thematic approach is one of the fishery identifiers and is generally presented together with the fishery title.

Together, the geo-reporting standpoint and the thematic approach constitute the reporting perspective.

### 2.3 Manageable/presentable title

The identification of a fishery is the result of a segmentation usually operated according to a thematic approach. Depending on this thematic approach, the segmentation criteria will differ (see table 2) and consequently the keywords used to name a fishery are variable. Furthermore, when successive segmentations are applied for the identification of a fishery, the number of keywords necessary to define a meaningful name increases.

Table 2: key criteria which characterize a fishery according to the thematic approach.

<b>Thematic Approach</b>	<b>Resource</b>	<b>Metier and Fishing Technique</b>	<b>Production system</b>	<b>Management system</b>
<b>Corresponding criteria</b>	Environment Target Species Fishing Area	Vessel type and/or Fishing Gear and/or Fishing technique; Target Species	Exploitation form; Vessel type or Fishermen community, Country or Province	Attributes reflecting the mode of management, eg "co- managed"

Therefore following naming conventions are further proposed:

- iii. The FIRMS Title stricto sensu of a fishery is established as follow:

*<list of key words> Fishery – <Water area name>.*

where Water area name is optional (see point ix)

- iv. In order to avoid too long fishery names, the number of keywords for a fishery should be limited to the main criteria and should not exceed 3. This is possible if the Title of a fishery harmoniously complements the keyword(s) already used for the Title of the "parent" fishery, and if the "parent" fishery Title is systematically presented together with the fishery Title. For this purpose, the "parent" fishery's Title is one of the fishery identifiers. In addition when presenting a fishery, the software will provide a facility to display the name of the other related fisheries ("ancestor" fisheries, and "sub-fisheries").

- v. The set of keywords used generally reflect the thematic approach prevailing for the identification of a fishery. The keywords should follow an order **which is approach dependant**. The following order should apply:
- for a **Resource** approach:
- Sea environment
  - Water area
  - Target species (or group of species).
- for a **Metier or Production system** approach:
- Sea environment (habitat of the target species)
  - Production system: exploitation form, flag state, fisherman community, etc...
  - Fishing technique (vessel type, gear),
  - Target species (or group of species).
- vi. When an international **or regional** classification is available, the keyword selected for a criterion should be taken from this classification (e.g. The International Standard Statistical Classification of Fishing Gear for fishing gears).
- vii. When compatible, the keywords included in the local name should be kept in the FIRMS name.
- viii. The term Fishery is not compulsory; when more appropriate, it may be for example replaced by “Management Unit”, or “Operational unit”, etc...
- ix. **The Water area is optional since it may already be part of the geo-reporting standpoint. It is present if it complements this geo-reporting standpoint specifying further the location.** The water area should be a name, which means that the use of codes or acronyms should be avoided, or put at the end in parenthesis. The name of the **water** area should **refer to standard international or regional naming classifications and conventions, primarily from the ASFIS list of geographical terms or from CWP handbook.** Consistency with the naming convention would also imply that, for contributions from partners other than FAO, the statistical area used by the partner would take precedence over the reference to FAO statistical areas.
- x. Finally, the naming attributes proposed for a FIRMS fishery observation are:
- **Geo-reporting standpoint – FIRMS Parent fishery title - FIRMS fishery title**, in the 5 Official FAO languages: English, French, Spanish, Arabic and Chinese.
  - **Thematic approach**
  - Local name in different languages.

### 3. Fishery naming conventions for FIGIS fishery Reference Objects

In FIRMS system, each Fishery is represented by one FIGIS Reference Object, and by the FIRMS Observation object(s) attached to each Reference Object.

The naming attributes proposed for a fishery reference object are:

- Geo-reporting standpoint – FIRMS Parent fishery title - FIRMS fishery title - in English
- Geo-reporting standpoint – FIRMS Parent fishery title - FIRMS fishery title – in French
- Geo-reporting standpoint – FIRMS Parent fishery title - FIRMS fishery title – in Spanish
- A local name selected by the data owner. This local name should be in one of 5 FAO official languages .

## Annex 1: some examples

### Inventory of Fisheries – Jamaica (Source FAO)

	Original inventory	FIRMS standardisation		
	Local Name	Geo-reporting standpoint	FIRMS English name	Thematic approach
1	Coastal pelagic fisheries	Jamaica	Coastal small pelagic fishery	R
2	Large pelagic fishery	Jamaica	Large pelagic fishery	R
3	Coral reefs finfish fishery	Jamaica	Coral reefs finfish fishery	R
4	Crustacean fisheries			n/a (title)
5		Jamaica	<u>Spiny lobster</u> fisheries	R
6	Artisanal lobster fishery	Jamaica	Artisanal <u>spiny</u> lobster fishery	P or M
7	Industrial spiny Lobster Fishery	Jamaica	Industrial spiny lobster [pots] fishery	P or M
8	Shrimp fishery	Jamaica	Shrimp fishery	R
9	Industrial Queen Conch fishery	Jamaica	Industrial queen conch fishery	R

## Inventory of Fisheries – Mexico (Source FAO)

	Original inventory	FIRMS standardisation		
	Local Name	Geo-reporting standpoint	FIRMS English name	Thematic approach
1	Pacific Ocean Shrimp fishery	Mexico	Pacific Ocean Shrimp fishery	R
2	Industrial fishery	Mexico	Pacific Ocean Shrimp fishery Industrial fishery	P or M
3	Artisanal fishery	Mexico	Pacific Ocean Shrimp fishery Artisanal fishery	P or M
4	Purse Seine Anchovy fishery	Mexico	Purse Seine Anchovy fishery – <u>Pacific Ocean</u>	M
5	Artisanal abalone fishery	Mexico	Artisanal Abalone fishery – <u>Pacific Ocean</u>	M or P
6	Gulf of Mexico and Carribean Shrimp fishery	Mexico	Gulf of Mexico and Carribean Shrimp fishery	R
7	Gulf of Mexico Industrial Shrimp fishery	Mexico	Gulf of Mexico and Carribean Shrimp fishery Industrial fishery_ Gulf of Mexico	P or M
8	Gulf of Mexico Artisanal Shrimp fishery	Mexico	Gulf of Mexico and Carribean Shrimp fishery Artisanal fishery_ Gulf of Mexico	P or M
9	Carribean Sea Industrial Shrimp fishery	Mexico	Gulf of Mexico and Carribean Shrimp fishery Industrial fishery_ Carribean Sea	P or M

**Inventory of Fisheries – Western Central Pacific Ocean (WCPO) (Source SPC )**

	<b>Original inventory</b>		<b>FIRMS standardisation</b>	
	<b>Local Name</b>	<b>Geo-reporting standpoint</b>	<b>FIRMS English name</b>	<b>Thematic approach</b>
1	Western Central Pacific Tuna fishery	WCPO	Tuna fishery - Western Central Pacific <u>Ocean</u>	R
2	Albacore fishery	WCPO	Western Central Pacific Ocean Tuna fishery Albacore fishery	R
3	Distant waters fishery	WCPO	Albacore fishery - WCPO Distant waters fishery	P or MS
4a	Trolling line fishery	WCPO	Western Central Pacific Ocean Tuna fishery Albacore fishery Distant waters fishery Trolling line <u>Albacore</u> fishery	M
5a	Longline fishery	WCPO	Western Central Pacific Ocean Tuna fishery Albacore fishery Distant waters fishery Longline <u>Albacore</u> fishery	M
4b	Trolling line fishery	WCPO	Western Central Pacific Ocean Tuna fishery <u>Distant waters</u> Trolling line <u>Albacore</u> fishery	M
5b	Longline fishery	WCPO	Western Central Pacific Ocean Tuna fishery <u>Distant waters</u> Longline <u>Albacore</u> fishery	M
6	Offshore waters longline swordfish fishery	WCPO	Western Central Pacific Ocean Tuna fishery Offshore waters longline swordfish fishery	M

**Inventory of Fisheries – Brazil (Source FAO)**

	<b>Original inventory</b>	<b>FIRMS standardisation</b>		
	<b>Local Name</b>	<b>Geo-reporting standpoint</b>	<b>FIRMS English name</b>	<b>Thematic approach</b>
1	Northern fishery	Brazil		n/a (title)
2	Industrial fishery	Brazil	Northern fishery Industrial fishery	P
3	Artisanal fishery	Brazil	Northern fishery Artisanal fishery	P
4	Pelagic fish fishery	Brazil	Northern fishery Pelagic fish fishery	R
5	Artisanal nets and lines catfish and sciaenid fishery	Brazil	Northern fishery Artisanal nets and lines catfish and sciaenid fishery	M
6	Artisanal lines snapper and grouper fishery	Brazil	Northern fishery Artisanal lines snapper and grouper fishery	M
7	Trawl shrimp fishery	Brazil	Northern fishery Trawl shrimp fishery	M
8	Crab collection fishery	Brazil	Northern fishery Crab collection fishery	R
9	Pairtrawl catfish fishery	Brazil	Northern fishery Pairtrawl catfish fishery	M

**Inventory of Fisheries in the Adriatic Sea (Source FAO)**

	<b>Original inventory</b>	<b>FIRMS standardisation</b>		
	<b>Local Name</b>	<b>Geo-reporting standpoint</b>	<b>FIRMS English name</b>	<b>Thematic approach</b>
1	Italian pelagic fishery	Italy	Pelagic fishery – Adriatic Sea	R
2	Northern Adriatic midwater pair trawl fishery	Italy	Pelagic fishery – Adriatic Sea Mid water pair trawl fishery – Northern Adriatic	P or M
3	Northern Adriatic Purse seine fishery	Italy	Pelagic fishery – Adriatic Sea Purse seine fishery – Northern Adriatic	P or M
4	Italian demersal fishery	Italy	Demersal fishery – Adriatic Sea	R
5	Northern Adriatic Italian demersal fishery	Italy		n/a (title)
6	Hydraulic mec-dredge fishery	Italy	Demersal fishery – Adriatic Sea Hydraulic mec-dredge fishery - Northern Adriatic	M
7	Minor gear fishery	Italy	Demersal fishery – Adriatic Sea Minor gear fishery - Northern Adriatic	M
8	Bottom otter trawl fishery	Italy	Demersal fishery – Adriatic Sea Bottom otter trawl fishery - Northern Adriatic	M
9	Southern Adriatic Italian demersal fishery	Italy		n/a (title)
10	etc...	Italy	Demersal fishery - Southern Adriatic etc...	M

**Inventory of Fisheries in the Northern part of South America (Source FAO)**

	Original inventory	FIRMS standardisation		
	Local Name	Geo-reporting standpoint	FIRMS English name	Thematic approach
1	Demersal Resources of the Guianas-Brazil Continental Shelf	Trinid & Tobab		n/a (title)
2	Artisanal Trawl Fishery of the Gulf of Paria	Trinid & Tobab	Demersal Resources of the Guianas-Brazil Continental Shelf Artisanal Trawl <u>shrimp and groundfish</u> Fishery - Gulf of Paria	M
3	Semi-industrial Trawl Fishery of the Gulf of Paria	Trinid & Tobab	Demersal Resources of the Guianas-Brazil Continental Shelf Semi-industrial Trawl <u>shrimp and groundfish</u> Fishery - Gulf of Paria	M
4	Artisanal Gillnet Fishery of the Gulf of Paria and Columbus Channel	Trinid & Tobab	Demersal Resources of the Guianas-Brazil Continental Shelf Artisanal Gillnet <u>groundfish</u> Fishery - Gulf of Paria and Columbus Channel	M
5	Coastal Pelagic Resources of the Guianas-Brazil Continental Shelf	Trinid & Tobab		n/a (title)
6	Artisanal Gillnet and Line Fishery for Mackerels	Trinid & Tobab	Demersal Resources of the Guianas-Brazil Continental Shelf Artisanal Gillnet and Line <u>Mackerels</u> Fishery	M
7	etc....	Trinid & Tobab	etc...	
8	Demersal Resources of the Guianas-Brazil Continental Shelf	French Guyana		n/a (title)
9	Offshore Industrial (Trawl Fishery) - Japanese Trawlers Penaeid Shrimp Fishery	French Guyana	Demersal Resources of the Guianas-Brazil Continental Shelf Offshore Industrial Japanese Trawlers Penaeid Shrimp Fishery	M
10	Offshore Industrial (Trawl Fishery) - Local Trawlers Penaeid Shrimp Fishery	French Guyana	Demersal Resources of the Guianas-Brazil Continental Shelf Offshore Industrial <u>Domestic</u> Trawlers Penaeid Shrimp Fishery	M

11	Offshore Industrial (Trawl Fishery) - Seabob/Finfish Fishery	French Guyana	Demersal Resources of the Guianas-Brazil Continental Shelf Offshore Industrial <u>Domestic Trawlers</u> Seabob/Finfish Fishery	M
12	Inshore Artisanal (Trawl Fishery) - Pin Seine Fishery	French Guyana	Demersal Resources of the Guianas-Brazil Continental Shelf Inshore Artisanal Pin Seine Fishery	M
	etc...			
13	Demersal Resources of the Guianas-Brazil Continental Shelf	Venezuela		n/a (title)
14	Industrial Shrimp Trawl Fishery of the Atlantic Zone of Venezuela	Venezuela	Demersal Resources of the Guianas-Brazil Continental Shelf Industrial Shrimp Trawl Fishery - Atlantic Zone of Venezuela	M
15	Artisanal Shrimp Trawl Fishery of the Orinoco Delta	Venezuela	Demersal Resources of the Guianas-Brazil Continental Shelf Artisanal Shrimp Trawl Fishery - Orinoco Delta	M
16	Artisanal Beach Seine Fishery for Shrimp	Venezuela	Demersal Resources of the Guianas-Brazil Continental Shelf Artisanal Beach Seine Shrimp Fishery	M
17	Demersal Resources of Northern Venezuela	Venezuela		n/a (title)
18	Trawl Fishery of the western Zone of Venezuela	Venezuela	Demersal Resources of Northern Venezuela Trawl Fishery - Western Zone of Northern Venezuela	M
19	Trawl Fishery of the Eastern Zone of Northern Venezuela	Venezuela	Demersal Resources of Northern Venezuela Trawl Fishery of the Eastern Zone of Northern Venezuela	M
20	Inshore Artisanal (Trawl Fishery) - Pin Seine Fishery	Venezuela	Demersal Resources of Northern Venezuela Inshore Artisanal (Trawl Fishery) - Pin Seine	M

**Inventory of Fisheries in the Eastern-Central Atlantic (Source FAO)**

<b>Original inventory</b>		<b>FIRMS standardisation</b>		
	<b>Local Name</b>	<b>Geo-reporting standpoint</b>	<b>FIRMS English name</b>	<b>Thematic approach</b>
1	Maroc - Pêcherie de poissons démersaux	Morocco	Demersal fishery – Atlantic Ocean	R
2	Maroc - pêche artisanale de poissons démersaux à la palangre	Morocco	Demersal fishery – Atlantic Ocean Artisanal longline fishery	M
3	Mauritanie - Pêcherie pélagique côtière	Mauritania	Coastal pelagic fishery	R
4	Gambie - Pêcherie pélagique cotière	Gambia	Coastal pelagic fishery	R
5	Gambie - Pêche industrielle pélagique côtière	Gambia	Coastal pelagic fishery Coastal industrial pelagic fish fishery	M or P
6	Gambie - Pêche artisanale pélagique côtière	Gambia	Coastal pelagic fishery Coastal artisanal pelagic fish fishery	M or P
7	Gambie - Pêcherie de poissons démersaux	Gambia	Demersal fish fishery	R
8	Gambie - Pêche artisanale au filet maillant à sole	Gambia	Demersal fish fishery Artisanal driftnet sole fishery	M