Marine Resources Inventory: Method and Guidelines

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Date	**Author**	**Summary**
04 March 2005	A. Bensch E. Balestri	Approach and definitions of attributes describing a Marine Resources

This document describes the method and the template used to inventory marine resources in a specific area of the world. A spread sheet format is used, each row describing a marine resource.

Approach recommendations to the inventory

1. The identification of documents related to marine resources in the region is a preliminary task. It is recommended to compare different sources of information in order to establish a consistent inventory.

2. Marine resources: understood in context of FAO Fisheries Glossary as Aquatic resources, Marine resources are the "Biotic element of the aquatic ecosystem, including genetic resources, organisms or parts thereof, populations, etc. with actual or potential use or value (sensu lato) for humanity". Fishery resources are those aquatic resources of value to fisheries.

   A “Stock” is defined as a group of individuals in a species occupying a well defined spatial range independent of other stocks of the same species. It can be affected by random dispersal movements and directed migrations due to seasonal or reproductive activity.

3. The number of marine resource units being listed and properly described in the inventory regarding a given region or country is debatable, especially regarding the resources, which can be aggregation of biological stocks or sub-part of a biological stock. The basic principle is that a marine resource should be inventoried as long as it is a unit considered by scientists or fishery managers.

4. The inventory covers different scales, from local to national and regional. Hierarchies between the marine resources inventoried may be established, with one restriction imposed by the definition adopted for of a stock in FIGIS: a stock can’t be defined as a sub-marine resource of another stock.

Other important recommendations

- ✓ In order to facilitate the integration of the inventory in the FIGIS system, it is requested that the consultant follows the editing recommendations provided in the **Annex 1 Guidelines for the description of a Marine Resource.**

- ✓ For some attributes, standard terminology is used. Lists of terms are provided but new terms can be inserted if necessary.

- ✓ If the inventory of Fisheries in the same region has been done, ensure good cross-referencing between column **Exploiting fisheries** of the Marine resources inventory and column **Target marine resources** of the Fisheries inventory.

ANNEX 1

Guidelines for the description of a Marine Resource

The following table provides some instructions to describe each marine resource inventoried using the EXCEL form **FR_Templates.xls** (sheet **Marine Resources Inventory**). Cells filled in with **light grey font** are for FAO/FIGIS internal use.

ATTRIBUTE			DESCRIPTION
MARINE RESOURCE REFERENCE	**Inventory identifier**		A unique alphanumeric code must be assigned to any marine resource inserted in the inventory
	Parent marine resource		Inventory identifier of the parent marine resource. According to our definition, remember that a marine resource qualified as "stock" (see stock structure attribute) can't have as child a marine resource qualified as "stock"
MARINE RESOURCE TITLE	**FIRMS Marine Resource Title**		Name of the marine resource in English following the FIRMS naming convention (see annex 2). Marine resources titles may be indented to highlight the hierarchical relationships between the marine resources inventoried
	Local title	**Title**	Name locally given to the marine resource
		Language	Language in which the local title is expressed - see language codification in **Languages (ISO 639)** sheet
CONSIDERED A STOCK			"Yes" if the marine resource is considered a stock (see definition in the section "Approach recommendations to the inventory" of this document)
MANAGEMENT UNIT			"Yes" if the marine resource is considered a management unit
AREA OF DISTRIBUTION	**Primary Georeferencing System**	**Georeferencing System Name**	Primary classification system used to describe the area considered in the definition of the marine resource. Please give the system name and provide as annex all the information related to this system: codes, limits of the areas, map, etc
		Area Codes in this system	Specify the code of the area in this codification system. If more than one, use comma as separator
		Area Name	If relevant, name of the region covering the area considered in the definition of the marine resource
	Other Georeferencing System	**Georeferencing System Name**	Other classification system used to describe the area considered in the definition of the marine resource. Please give the system name and provide as annex all the information related to this system: codes, limits of the areas, map, etc
		Area Codes in this system	Specify the code of the area in this codification system. If more than one, use comma as separator
		Area Name	If relevant, name of the region covering the area considered in the definition of the marine resource
	Spatial scale		Spatial scale corresponding to the area considered in the definition of the marine resource. See standard terms in **Area of distribution** sheet
	Jurisdictional distribution		Typology of shared stocks considering how the stock distribution overlaps marine jurisdictions. See standard terms in **Area of distribution** sheet
SPECIES	**Order**		Taxonomic name for the order. If more than one use comma as separator. Not mandatory if Families are provided
	Family		Taxonomic name for the family. If more than one use comma as separator. Not mandatory if Scientific names are provided

ATTRIBUTE			DESCRIPTION
	Genus and species		Taxonomic name for genus and species. If species is unknown use <*Genus*> *sp*. To specify more than one species of the same Genus use <*Genus*> *spp*. If more than one, use comma as separator
	Marine habitat	Geoform	Marine habitat of the marine resource: Sea floor physiography. If possible use standard terms (see list **Geoform** in **ReferencedTerm**s sheet). If more than one use comma as separator.
		Depth zone	Marine habitat of the marine resource: Depth zone. Use a standard term (see list in **Fishing Ground – Marine Habitat** sheet)
		Horizontal distribution	Marine habitat of the marine resource: Horizontal distribution. Use a standard term (see list in **Fishing Ground – Marine Habitat** sheet)
		Vertical distribution	Marine habitat of the marine resource: Vertical distribution. Use a standard term (see list in **Fishing Ground – Marine Habitat** sheet)
		Bottom type	Marine habitat of the marine resource: Bottom type. Use a standard term (see list in **Fishing Ground – Marine Habitat** sheet)
		Climatic zone	Marine habitat of the marine resource: Climatic zone. Use a standard term (see list in **Fishing Ground – Marine Habitat** sheet)
EXPLOITING FISHERY			Fisheries exploiting this marine resource: use the inventory identifier of the fishery, as defined in the fisheries inventory. If more than one, use comma as separator
STATE OF MARINE RESOURCES	Exploitation rate		The proportion of a population at the beginning of a given time period that is caught during that time period (usually expressed on a yearly basis) (source: FAO Fisheries Glossary)
	Abundance level		Degree of plentiful ness. The total number of fish in a population or on a fishing ground. Can be measured in absolute or relative terms (source: FAO Fisheries Glossary)
	State		An appreciation of the situation of a stock (source: FAO Fisheries Glossary)
	Description		Description of the Status of the Marine Resource
REFERENCES	Bibliography		Bibliographic references of literature consulted and used for identifying and documenting the marine resources inventoried. For each bibliographic reference, a code must be defined and used in the inventory sheet. The code has to be explicit but short, 15 characters maximum, and should not include blank. The bibliographic reference has to be described in the sheet “Bibliographic References”. If more than one code, use a comma as separator between the codes. Sort the codes from the most relevant to the less relevant bibliographic reference
	Source		For internal use Bibliographic reference of the source publication for a specific sub-set of data included in the inventory
	Reference year		Reference year concerning the information provided for the marine resources inventoried. It corresponds to the year for which the status of the Marine Resource has been evaluated
	Reporting year		Reporting year attached to the information provided for the marine resource inventoried. It corresponds to the year in which the scientific meeting (or equivalent scientific validation process) reviewed the status of the Marine Resource inventoried
OWNERSHIP	Inventoried by		For internal use
	Collection identifier		For internal use
	Cover page identifier		For internal use
Reference observation			For internal use
Notes			Any comment regarding the inclusion of this resource in the inventory

ANNEX 2

Marine Resources - Rules for naming convention

General Rules

1. The name of a marine resource is established in English. It should show off both its biotic component and its area component.
2. The biotic component of the marine resource name should be based on common name used by international classifications (e.g. ASFIS for taxonomic names). If the biotic component includes more than one names, the comma (“,”) is used as separator.
3. The area component should be the name used for the area, which means that the use of codes or acronyms should be avoided, or put at the end in parenthesis. The name of the area should follow international or regional naming classifications and conventions (country names, Oceans and seas names, etc.). When the area component includes more than one name, they are separated by a comma (“,”).
4. The biotic component and the area component are separated by the symbol “-“.

Examples

Source	Local Name	FIRMS English name
CECAF	Sparidés dans la région nord ouest africaine	Seabreams - Northwest Africa
CECAF	Pageot (Pagellus bellottii) au Maroc, Mauritanie, Sénégal, Gambie 35° 45''-12°18''	Red pandora - Morocco, Mauritania, Senegal and Gambia
ICES	North-East Arctic haddock (Sub-areas I and II)	Haddock - Barents Sea, Norwegian Sea, Spitzbergen and Bear Island
ICES	Nephrops in Division IVa, West of 2°E, excluding Management Area F (Management Area G)	Norway lobster - North Sea (Fladen)

Some particular cases

1. Species for which there is only one stock

   When there is only one single stock for a species, the common name of the species includes sometimes the name of the area delimitating the stock (e.g. Pacific Bluefin tuna). In that case, when referring to the whole stock, it is useless to include in the name a specific component for the area. Or sometimes, the name of the species, even if not including the area name is used by authors to designate the whole stock (e.g. Southern Bluefin tuna).

   Example

Source	Local Name	FIRMS English name
IATC-SPC	Pacific bluefin tuna	Pacific bluefin tuna

2. Resources at global scale

When referring to all the stocks of a species (or a group of species), the term “global” is used as area component of the resource name.

Example:

Source	Local Name	FIRMS English name
FAO	All Bluefin tuna species	Bluefin tuna species - Global

3. Different stocks of the same species within the same area

Different populations of the same species may be located in the same area at different season. In that case, the biotic component must include an additional qualifier in order to make the name of each stock unique.

Examples:

Source	Local Name	FIRMS English name
ICES	Herring in Sub-divisions 22-24 and Division IIIa (spring spawners)	Spring Spawning Herring - Skagerrak and Kattegat
ICES	Herring in Sub-area IV Division VIId and Division IIIa (autumn spawners)	Autumn Spawning Herring - North Sea, Eastern Channel, Skagerrak

4. All species in one area

To name a resource representing all the species in one area, the term “Marine resources” is used as biotic component of the resource name.

Example:

Source	Local Name	FIRMS English name
FAO	All resources of the Mediterranean sea	Marine resources – Mediterranean Sea