



<b>FIRMS Technical Working Group Meeting</b>
<b>First Session</b>
<b>Rome, Italy, 05-08 December 2005</b>
<b>FIRMS INFORMATION MANAGEMENT POLICY: MARINE RESOURCES DATA DICTIONARY</b>
<b>Author: FSC Secretariat</b>

**Alternative title** (<dcterms:Alternative>):

**Aquatic resource** (<fi:AqRes>): *According to the FAO Fisheries Glossary, "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".*

**Aquatic resource identity** (<fi:AqResIdent>): *Topic element used to specify the identity of the aquatic resource. An aquatic resource is identified by a title, an association of references to Species and Water Areas, or a unique FIGIS system identifier.*

**Aquatic resource reference** (<fi:AqResRef>): *Element used to Refer to an aquatic resource. It contains species and water area domain elements which together enable positive referencing of an aquatic resource.*

**Assessment** (<fi:BioAssessment>): *Assessment is a container for elements describing the biological assessment of the aquatic resource, such as the description of data sources used for the assessment, the various assessment methods applied with their individual results, and the overall assessment results, including possibly scientific advice.*

**Assessment indicator** (<fi:AssessIndic>): *Assessment Indicator contains indicator data commonly generated using stock assessment methods (e.g. fishing mortality, biomass, recruitment, abundance index). According to the FAO Fisheries Glossary, an indicator is "a variable, pointer, or index. Its fluctuation reveals the variations in key elements of a system. The position and trend of the indicator in relation to reference points or values indicate the present state and dynamics of the system. Indicators provide a bridge between objectives and action".*

**Assessment indicator type** (<fi:AssessType>): *a container for assessment indicator type values such as MSY, SSB, Fishing mortality, ...*

**Assessment method entry** (<fi:AssessMethodEntry>): *Use fi:AssessMethodEntry for each method used in performing a stock assessment. An assessment method is identified by its name, and ideally includes the description of available data, and a summary of the methodology.*

**Assessment methods** (<fi:AssessMethods>): *Assessment Methods contains the various methods used in performing a stock assessment. It enables the distinction of methods according to the two major classes "direct" and "indirect" assessment methods.*

**Assumption** (<fi:Assumption>): *Assumption is a description of the underlying assumptions upon which stock assessments, or results are based.*

**Bibliographic entry** (<fi:BiblioEntry>): *BiblioEntry is a container for elements that define a reference source. It is similar in spirit to the bibliographies found in traditional books. All the fields that would be expected in a Bibliographic Entry are included, as well as the possibility of tagging hyperlinks and adding free text.*

**Biological status/trend** (<fi:AqResStatusTrend>): *AqResStatusTrend is a container for Aquatic Resource Status and Trend information entries. This element includes a short statement (which should be understandable by the public) summarising the current observation made on the resource or stock considered, with a focus on the status of the fish population and the trends characterising its evolution, and possibly outlooks on its future. For resources units defined at aggregated level, this topic may consist of a general statement including a list of status and trends entries fitting each of the sub-units making up that aggregated resource.*

**Bottom environment** (<fi:BottomEnv>): *Type of bottom environment which the aquatic resource is distributed in.*

**Climate environment** (<fi:ClimateEnv>): *Type of climate prevailing in the area of distribution of the aquatic resource.*

**Collection reference** (<fi:CollectionRef>): *contains the elements necessary for positive referencing of a data collection.*

**Corporate author** (<ags:CreatorCorporate>): *Organization or agency primarily responsible for creating the intellectual content of the resource.*

**Corporate cover page** (<fi:CorporateCoverPage>): *Corporate Cover Page is a container for bibliographic elements commonly found on the cover or inset of a print publication, particularly title, corporate author, series, publisher. It is a mandatory element of fi:ObjectSource and contributes to build the citation of a domain object presented as FIGIS fact sheet or web site. The two required elements are: dc:Title - contributes part or entirety of the title of the web page, and the ags:CreatorCorporate tag.*

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**Cover page** (<fi:CoverPage>): *Cover Page is a container for bibliographic elements commonly found on the cover or inset of a print publication, and particularly personal author(s), publication date, and abstract or description. It is an optional element of fi:ObjectSource and contributes to build the citation of a domain object presented as FIGIS fact sheet or web. If there are multiple creators use the ags:CreatorPersonal. dc:Created - this is the date of the creation of the intellectual content of the information resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3CDTF] and follows the YYYY-MM-DD format.*

**Data** (<fi:Data>): *Data contains data, or information about data, used to generate the exploitation indicators, or presented to the scientific assessment for the calculation of assessment indicators.*

**Date of creation** (<dcterms:Created>): *Date of creation of the information resource's intellectual content.*

**Exploitation** (<fi:Exploit>): *Information about the exploitation of the aquatic resource, including typically the description of the various fisheries exploiting the stock, and exploitation indicators such as catches, effort parameters, size of fish caught. Use fi:FisheryRef to positively reference the fisheries exploiting this aquatic resource.*

**Exploitation status** (<fi:ExploitStatus>): *Contains one or more standard term (e.g. "overexploited", "fully exploited") describing the state of an aquatic resource.*

**FIGIS identifier** (<fi:FigisID>): *FigisID is the FIGIS generated identification number of the domain element which contains fi:FIGISId.*

**Fisheries reference** (<fi:FisheryRef>): *Element used to refer to a fishery domain element. It contains the various domain elements which altogether enable positive Referencing of a Fishery.*

**Fishery** (<fi: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.*

**Fishery resource** (<fi:AqRes>): *According to the FAO Fisheries Glossary, "In general, refers to elements of a natural aquatic resource (e.g. strains, species, populations, stocks, assemblages) which can be legally caught by fishing. It may sometimes be taken as including also the habitat of such resources."*

**Foreign identifier** (<fi:ForeignID>): *Identifier in an external system of the FIGIS domain element which contains fi:ForeignID. Contains two attributes: one is a reference to the foreign system (CodeSystem), one for the identifier in that system (Code).*

**Geographical distribution** (<fi:GeoDist>): *Information about the geographical distribution of an entity such as species, aquatic resource, ...*

**Habitat and biology** (<fi:HabitatBio>): *Habitat and Biology is a container for information on the biology and ecology of a species in the area of the aquatic resource.*

**History** (<fi:History>): *Historic information related to the element which contains fi:History. e.g. an historical review of the Stock or Resource exploitation, management regimes over time and their effect, and trends.*

**Image** (<fi:Image>): *Reference to an image, including its meta-data (title, image file name, legend, ...) formatting parameters. An image element may also includes a nested image element (e.g. link to high resolution version of the same image).*

**Jurisdictional distribution** (<fi:JurisdictionalDistribution>): *Jurisdictional qualifier (e.g. "shared", "shared - highly migratory") of the aquatic resource related with its spatial distribution.*

**Management** (<fi:Management>): *Information about the management of the fishery or the aquatic resource. According to the FAO Fisheries Glossary, "the art of taking measures affecting a resource and its exploitation with a view to achieving certain objectives, such as the maximisation of the production of that resource. Management includes, for example, fishery regulations such as catch quotas or closed seasons. Managers are those who practice management".*

**Management advice** (<fi:Advice>): *Management advice are those recommendations generally evolving from the assessment, addressed to management authorities. Advice may be proposed under different management options. This definition contrasts with scientific advice (found under assessment results) but evolves from it.*

**Management methods** (<fi:Methods>): *Management Methods describes the set of methods or measures affecting fisheries, and used to implement management strategies. Use one fi:MethodEntry for each instance of a measure.*

**Management objectives** (<fi:Objectives>): *are objectives related to missions, outputs, projects, etc. Use one fi:ObjectiveEntry for each instance of an objective. For management systems, description of main goals/objectives which the governing authority wishes to achieve within the system and strategies applied for that purpose. According to the FAO Fisheries Glossary, "a formally established, more or less quantitative target that is actively sought and provides a direction for management action".*

**Management resolutions** (<fi:Resolutions>): *It contains management resolutions decided upon by Management authorities.*

**Management strategies** (<fi:Strategies>): *Management Strategies are strategies related to missions, outputs, projects, etc. Use one instance of fi:Strategy for each instance of a Strategy.*

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**Management system reference** (<fi:ManageSystemRef>): *Element used to refer to a Management System domain element. It contains the domain elements such as Management authority, Jurisdiction, Fishery Management Unit, which altogether enable positive Referencing of a Management System.*

**Management unit** (<ManagementUnit>): *An aquatic resource or fishery is declared as [Fishery] Management Unit if it is effectively the focus for the application of selected management methods and measures, within the broader framework of a management system. According to the FAO Glossary for Responsible Fishing, "a Fishery Management Unit (FMU) is a fishery or a portion of a fishery identified in a Fishery Management Plan (FMP) relevant to the FMP's management objectives." FMU's may be organised around fisheries biological, geographic, economic, technical, social or ecological dimensions , and the makeup and attribute of a fishery management unit depends mainly on the FMP's management objectives.*

**Method entry** (<fi:MethodEntry>): *Use one fi:MethodEntry for each instance of a method. For management systems, description of measures and institutional arrangements applied to manage the system: management measures may be classified under the categories found in fi:MethodEntry (this section should, in addition, describe the performance of the selected measures, i.e. the extent to which goals/objectives have been obtained.)*

**Methodology** (<fi:Methodology>): *Methodology is the science behind the method.*

**Methods** (<fi:Methods>): *are the methods used to implement strategies. Use one fi:MethodEntry for each instance of a method. For management systems, description of measures and institutional arrangements applied to manage the system: management measures may be classified under the categories found in fi:MethodEntry (This section should, in addition, describe the performance of the selected measures, i.e. the extent to which goals/objectives have been obtained.)*

**Objective entry** (<fi:ObjectiveEntry>): *Use one fi:ObjectiveEntry for each instance of an objective. For management systems, description of main goals/objectives which the governing authority wishes to achieve within the system and strategies applied for that purpose.*

**Personal author** (<ags:CreatorPersonal>): *Person primarily responsible for creating the intellectual content of the resource.*

**Problem entry** (<fi:ProblemEntry>): *Use one fi:ProblemEntry for each instance of a problem.*

**Problems** (<fi:Problems>): *It contains information about management problems.*

**Projection** (<fi:Projection>): *Projection contains stock projections and policy options.*

**Publisher** (<dc:Publisher>): *An entity responsible for making the resource available, therefore likely to hold copyrights. Examples of a Publisher include a person, an organisation, or a service. Typically, the name of a Publisher should be used to indicate the entity.*

**Reference point** (<fi:RefPoint>): *Reference Point contains reference point data for a stock or a fishery. According to the FAO Fisheries Glossary, "a reference point indicates a particular state of a fishery indicator corresponding to a situation considered as desirable (Target reference point, TRP) or undesirable and requiring immediate action (Limit reference point, LRP, and Threshold reference point, ThRP)".*

**Related information** (<fi:RelatedResources>): *Literature of papers cited in the source text that may or may not have been used in the construction of the object, and/or are considered as 'suggested additional reading'. It is an element for entering literature info that has no direct relation with the origin of the data in the object: it can be considered as 'additional reading' information. fi:RelatedResources contains a list of fi:BiblioEntry elements, which ARE NOT COLLECTED in the fi:Bibliography element. There can be ONLY ONE fi:RelatedResources in a given object, located at its root (This includes FIGISDoc).*

**Reporting year** (<fi:ReportingYear>): *Year, eventually followed by an index (e.g. 1999a), attached to the observation reporting status and trends on a Marine resource or Fishery. Generally year of the latest data available, or for which the latest indicators can be supplied. It is used in the construction of the Title of the observation. Reporting Year should not be confused with the Year of Publication.*

**Resolution entry** (<fi:ResolutionEntry>): *Use one fi:ResolutionEntry for each instance of a resolution.*

**Resolutions** (<fi:Resolutions>): *contains information about management resolutions.*

**Resource structure** (<fi:AqResStruct>): *Information about structure of the aquatic resource. This element includes an attribute describing whether Yes or Not the aquatic resource is considered a biological Stock. It might as well introduce one or more subunit(s) of the aquatic resource under consideration (use fi:AqStockRef to positively refer a lower level of aggregation of an aquatic resource). Where possible, a short explanation should be provided to justify the existence of the sub-unit(s).*

**Results** (<fi:Results>): *Results is a description of the outputs of assessment, either at the level of each assessment method, or as an overall synthesis of the results different methods results. It provides quantitative and/or qualitative details for each of the noticeable assessment indicators generated during the assessment.*

**Scientific advice** (<fi:SciAdvice>): *Advice is a container for scientific advice provided by the scientists at completion of the assessment. The nature of the advice is of strictly scientific nature, ie clean of any management or political consideration. It may deal with the data to be provided, the assessment tools to be used, or the orientations that should be taken to allow a stock to recover, associated with types of measures, or results of simulation.*

**Series** (<fi:Series>): *Series contains the name of the series of which an information resource is a part.*

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**Source of information** (<fi:Sources>): *Sources is a container for biblio entry elements. It is used to identify the source of a piece of data within an object when it is not part of a bibliography. For example, an editor inserting a table of data from a FIDI dataset into the middle of an object might cite FIDI using fi:Sources. Use an instance of fi:BiblioEntry for each separate citation. Use fi:BiblioEntryLink to point a source citation to an existing fi:BiblioEntry anywhere in the FIGISDoc. fi:Sources contains a list of fi:BiblioEntry. fi:Sources can be found at any level where there is not an fi:ObjectSource.*

**Spatial scale** (<fi:SpatialScale>): *Spatial scale contains a standard term such as Global, Regional (e.g. for the whole Atlantic), sub-regional (e.g. for a part of the Atlantic), national, local (for sub-national levels).*

**Species environmental group** (<fi:EnvironGroup>): *Classification of the aquatic resource according to the environmental group (e.g. pelagic invertebrate, or demersal fish) to which the species belong.*

**Species reference** (<fi:SpeciesRef>): *Element used to refer to a Species domain element. It contains various species classification systems (taxonomic, ISSCAAP, ...) and codes (including scientific names) used for positive referencing of a species.*

**Statistics** (<fi:Statistics>): *Contains statistics and associated information related to the exploitation of the aquatic resource.*

**Status/trend entry** (<fi:AqResStatusTrendEntry>): *Use an fi:AqResStatusTrendEntry for each instance of a status or trend statement, in case distinct statements applying to different aquatic resources under review are included.*

**Strategies** (<fi:Strategies>): *are strategies related to missions, outputs, projects, etc. Use one fi:StrategyEntry for each instance of a strategy.*

**Strategy entry** (<fi:StrategyEntry>): *Use one fi:StrategyEntry for each instance of a strategy.*

**Table** (<fi:Table>): *Table formatted in HTML, including meta-data attribute (e.g. title) and formatting parameter.*

**Text block** (<fi:Text>): *Text container, which might include an optional Title, as well as HTML formatting tags within the CDATA text string element.*

**Title** (<dc:Title>): *Name given to the element which contains dc:Title. The title is sometimes used to search for a FIGIS reference. It is also used in some reports as a paragraph header for the presentation of the content of dc:Title's wrapping element.*

**Water area overview** (<fi:WaterAreaOverview>): *Description of the water area in which the aquatic resource is located. Water Area Overview might contain a reference list of areas in which a species or aquatic resource is found or employed.*

**Water area reference** (<fi:WaterAreaRef>): *Element used to refer to a Water Area domain element. It contains water geographic systems and codes (FAO Area, Five Degree Square, ISO country, regional/local codes, water competence zones and environments, ...) used for positive referencing of a water area.*

**Water environment** (<fi:WaterEnv>): *Describes, through the use of standard terms, the water environment in which an aquatic resource is distributed.*