



INVENTORY, ASSESSMENT AND MONITORING OF MEDITERRANEAN WETLANDS

THE CATCHMENT MODULE & THE SITE MODULE

**João Carlos Farinha, Elizabete Fonseca, Paula Rito Araújo, Sílvia Carvalho,
Carlota Lavinhas, Emília Paula Silva, Spyros Kouvelis,
Maria José Viñales Blasco and Maryland Morant.**

Nick J Riddiford scientific reviewer





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Inventory, assessment and monitoring of Mediterranean wetlands incorporates the following series of manuals:

- The Pan-Mediterranean Wetland Inventory Module (Tomàs-Vives, 2008)
- The Catchment Module & The Site Module (Farinha et al, 2008)
- The Water Framework Directive Module (Cenni & Tarsiero, 2008)
- The Surveillance Module (Farinha & Fonseca, 2008)
- The Indicators Module (Fitoka et al, 2008a)
- The MedWet Web Information System User Manual (Katsaros et al, 2008)
- The MedWet Inventory Data Sharing Protocol (Fitoka et al, 2008b)
- Mapping Wetlands Using Earth Observation Techniques (Fitoka & Keramitsoglou, 2008)

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ABOUT THIS MANUAL

The new MedWet series

The manual for **The Catchment Module & The Site Module** is part of the new series *Inventory, assessment and monitoring of Mediterranean wetlands* published under the auspices of the “MedWet information and knowledge network for the sustainable development of wetland ecosystems (MedWet CODDE)” project. Undertaken between 2005-2007, the MedWet CODDE addresses the urgent need for policy makers, wetland managers and researchers to have easy access to up-to-date and standardized data in order to assess and monitor the current status and trends of Mediterranean wetlands and their surroundings. The project was launched through the INTERREG IIIC programme.

The purpose of the new *MedWet publication Inventory, assessment and monitoring of Mediterranean wetlands* is to assist wetland managers and scientists to inventory their wetland resources, to facilitate the monitoring and assessment of these resources and to promote data harmonization and compatibility among various inventory efforts in the Mediterranean and beyond. It has its roots in the original MedWet wetland inventory work (Costa et al, 1996; Hecker et al, 1996; Farinha et al, 1996; Zalidis et al, 1996) developed during the MedWet 1 (ACNAT) project and presented in 1996 at the Conference on Mediterranean Wetlands in Venice as a standard inventory methodology for the countries of the Mediterranean region. The publication also draws on the outputs of the first upgrading effort done under the SUDOE project (INTERREG IIB).

Inventory, assessment and monitoring of Mediterranean wetlands introduces a Mediterranean -wide system which is based on: a web database, the MedWet Web Information System (MedWet/WIS) which provides the tool for the creation of a Mediterranean wetland databank; a data sharing protocol which supports data exchange and sharing between wetland stakeholders; and the use of Earth Observation techniques (EO) as enhanced means of mapping wetland features. *Inventory, assessment and monitoring of Mediterranean wetlands* guides the reader through the upgraded MedWet system incorporating the socioeconomic and cultural aspects of wetlands, the Water Framework Directive requirements, inventory based indicators, the Pan-Mediterranean Wetland Inventory and EO techniques. Most importantly, it provides a full description of and guidance through the new online MedWet/WIS - a system which offers an advanced and flexible way to provide or restrict access to data, supported by a relevant protocol.

Inventory, assessment and monitoring of Mediterranean wetlands incorporates the following series of manuals:

- The Pan-Mediterranean Wetland Inventory Module
- The Catchment Module & The Site Module
- The Water Framework Directive Module
- The Surveillance Module
- The Indicators Module
- The MedWet Web Information System User Manual
- The MedWet Inventory Data Sharing Protocol
- Mapping Wetlands Using Earth Observation Techniques

They set out to explain the background, the relevance and the benefits of the new MedWet system and to provide detailed guidance on how to apply it. Each manual can be used in two ways: as a stand-alone reference for its particular theme or subject; or as an integral part of a series of works which guide the reader through the entire process from the early pioneering work to joining, using and getting the best out of the system.

Purpose of the manual

The purpose of this manual is to describe and explain how to fill in the data fields of Data Forms devised specifically to record the relevant information for the wetland sites (Site Module) and their catchment areas (Catchment Module).

The manual guides the reader through a wide spectrum of wetland aspects recommended for inclusion in inventory, assessment and monitoring programmes serving the three main principles which had been set in the original MedWet wetland inventory work (Hecker et al, 1996). These principles are:

Compatibility: The module includes data fields required by existing international programmes such as the Ramsar Convention, CORINE Biotope and NATURA 2000 network (Habitat and Bird European Directives).

Uniformity: The module presents the required wetland data in a standard way to ensure uniformity in data recording and storage. This uniformity is a key element for comparisons and analysis of different inventory projects from different countries, or different regions within a country.

Flexibility: The module includes a large number of data fields, from which the user can choose those needed for their particular inventory project, whatever their technical and financial resources, thus allowing flexibility in the extent to which they make their data available to the public – in full or only partially.

Structure of the manual

This manual is structured as follows:

“**Introduction**” gives an overview of the Catchment Module and Site Module context and the levels of detail that users can choose to apply.

“**Catchment Module and Site Module Data Forms**” focuses directly on the 11 Data Forms included under these modules, describing and explaining how to fill in each of their data fields. The rationale behind the Data Forms is given along with some useful recommendations on best usage.

Who should use this manual

This manual is targeted at wetland scientists and technical staff of local, regional and national authorities, research institutes and Non Governmental Organisations (NGOs) who work on wetland management and conservation and wish to follow a standardized and widely promoted inventory methodology which allows for the assessment and monitoring of wetlands at different levels (from catchment and site to habitat) and scales (from local and regional to national or Mediterranean).

This manual is intended for users whether they record their wetland data on paper or store their data in the MedWet/WIS, the current upgrade of the MedWet database. In the latter case, users should familiarize themselves with the *MedWet Web Information System User Manual* (Katsaros et al, 2008) regarding the use of MedWet/WIS tools; and the *MedWet Inventory Data Sharing Protocol* (Fitoka et al, 2008b) for understanding the framework of defined procedures applied for data stored in the MedWet/WIS.

Users are also advised to refer to the other manuals in the new MedWet series which provide specific detail relating to the relevant wetland data recommended for wetland inventories. These manuals are of particular relevance to users contemplating or undertaking the following inventory approaches:

- (i) broad scale inventory – refer to *The Pan-Mediterranean Module* (Tomàs-Vives, 2008);
- (ii) integrating their wetland inventory with the European Water Framework Directive - refer to *The Water Framework Directive Module* (Cenni & Tarsiero, 2008);
- (iii) surveillance programmes for hydrochemistry and soil elements or for wetland birds - refer to *The Surveillance Module* (Farinha & Fonseca, 2008).

As an end product to these data recording exercises, users may wish to undertake statistical calculations and derive indicators for status and trends relating to wetland area, water quality, threats, bird populations and wetland extent covered by Ramsar designation. In such cases, they are advised to refer to *The Indicators Module* (Fitoka et al, 2008a).

The above manuals can be accessed through the present cdrom menu or by downloading from the ‘Downloads’ section of the MedWet/WIS (at <http://www.wetlandwis.net>).

INTRODUCTION

The new MedWet system *Inventory, assessment and monitoring of Mediterranean wetlands* introduces an inventory approach which permits the assessment and monitoring of wetlands at different levels (from catchment and site to habitat) and scales (from local and regional to national or Mediterranean).

The Catchment Module and the Site Module are two of six modules¹ designed for the new MedWet system. The Catchment Module is organised into two Data Form categories, with the headings: **Catchment area** and **References**. The Data Forms for the Site Module are organised into ten categories with the headings: **General, Complementary, Habitat, Flora, Fauna, Activities and Impacts, Cultural values, Socioeconomics, Meteorology** and **References**.

The Catchment Module appears exactly the same as initially designed in 1996. The Site Module has been revised in order to incorporate the cultural values and socioeconomic aspects of a wetland site and a more detailed description of the wetland site itself (Complementary Data Form).

The information for the Catchment Module and the Site Module is treated in a hierarchical manner with ascending levels of detail, from the basic information which is compiled without extensive field work and provision of maps or aerial photos, to the detailed description through the collection of additional specific information which complements the basic wetland site information. This treatment allows for efficient organizing and processing of the wetland data.

¹ The six modules are: i) Pan-Mediterranean, ii) Catchment, iii) Site, iv) Water Framework Directive, v) Surveillance and vi) Indicators.

CATCHMENT MODULE AND SITE MODULE DATA FORMS

Explanations and descriptions of how to use each of the Catchment and Site Data Forms are presented below. The Data Forms and the Appendices which provide the codes needed to complete the Data Forms, are appended to the end of this manual.

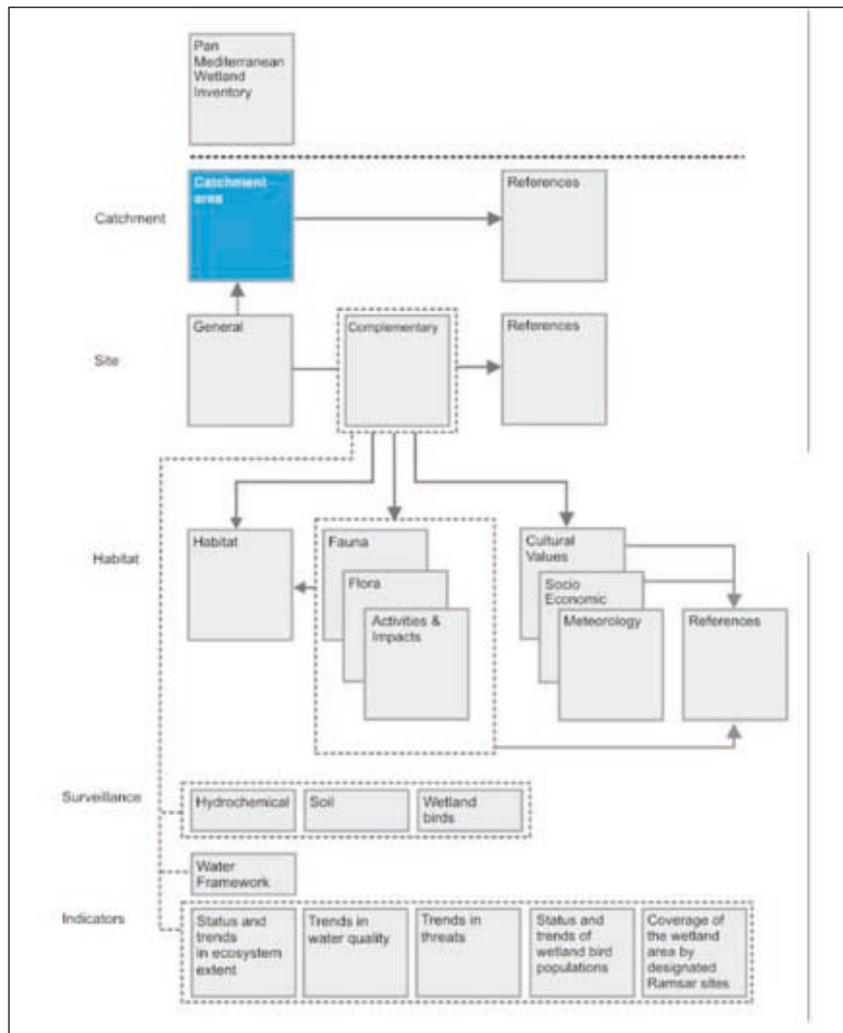
Users can access the Data Forms of the six modules, and the relevant Appendices, independently of the current manual through the cdrom menu.

A word of caution, for users who intent to store their data in the MedWet/WIS. Wetland sites have first to be stored through the General Data Form or the Pan-Mediterranean Wetland Inventory Data Form, at least by filling in the three obligatory fields which are the '**Site code**', '**Usual wetland name**' and '**Country**'. This means, that for a given wetland site, no other Data Form can be created until one of the above two is created first. In this way, the MedWet/WIS creates a list of the available wetland sites. The creation of the rest of the Data Forms requires a selection of the wetland site the Data Form refers to. This is accomplished by selecting the appropriate wetland site from the list when creating a new record².

The Catchment area Data Form also includes three obligatory fields. These are the 'Catchment area code', 'Name of the Catchment area', and 'Country'.

The rest of the fields in any of the Data Forms are not obligatory. The user can fill in the fields for which he/she has data and leave the rest of them blank.

Catchment area Data Form



The wetlands are parts of a catchment area and their physical and structural features are indispensably associated with it. Therefore wetlands cannot be considered as independent entities. This Data Form allows the collection of general information about the catchment area, which normally includes several sites. This helps to avoid duplicating information in the Site data forms.

It is important to collect data on the area which is directly related to the wetland site because, at this scale, any action may have an impact on the site. Therefore, in the case of very large catchment areas, it might be more convenient and useful to consider subdivisions of the catchment areas (ie sub-catchment areas). This choice will depend on the aim and scale of the inventory and will have to be defined by the team responsible for the inventory.

If the country or region where the inventory is carried out already has official delineations of the catchment areas (ie by the national water authorities), these should be used. For the member states of the European Community, it is recommended to adopt the division of the River Basin Districts which have been identified for the implementation of the Water Framework Directive (2000/60/EC).

The Catchment area Data Form includes data fields on:

1. Identification (of the Catchment area)
2. Location
3. Physiographic information (climate, hydrology and geology/geomorphology)
4. Population, landcover and impacts

Date of compilation/Date of update: The date on which the data form was created, updated or completed, in the format: day/month/year.

Country: The country of the compiler.

Compiler's name: The name of the individual who filled in the data form, including the name of the pertinent institution.

Address/telephone/fax/e-mail: The full address of the individual filling in the data form, including telephone, fax and e-mail numbers when available.

1. Identification

Catchment area code: The national code (up to four digits) assigned for this catchment area. A list of catchment areas and corresponding codes must be established at national level in the country where the inventory is carried out. For example, in Portugal, two letters are used to identify each catchment area (see example in Appendix A), and two extra digits may be used to subdivide the catchment area (eg secondary rivers or streams). *In the MedWet/WIS, this field is preceded by an asterisk (*) which denotes that the field is obligatory.*

Name of the catchment area: Name of the catchment area pertaining to the code. *In the MedWet/WIS, this field is preceded by an asterisk (*) which denotes that the field is obligatory.*

Country: Name of the country (or countries) related to the catchment area. *In the MedWet/WIS, this field is preceded by an asterisk (*) which denotes that the field is obligatory.*

Other codes: Specify other codes for this catchment area attributed by other archives or inventories.

2. Location

Latitude: Specify the northernmost and southernmost latitude limits of the catchment area. The coordinates are given in degrees, minutes and seconds (WGS 84 System).

Longitude: Specify the easternmost and westernmost longitude limits of the catchment area. The coordinates are given in degrees, minutes and seconds (WGS 84 System).

Other coordinates: Specify the coordinates that delimit the catchment area in a different coordinate system.

Cover (ha): Specify the surface of the catchment area in square km².

River length (km): When the catchment area includes a major river, complete this box with the length of this river within the national territory, in kilometres.

Exact value: If the values in the two previous fields are exact values, enter Y (yes); if the field values are approximated values, enter N (no).

Altitude (m): Specify the minimum and maximum altitudes of the catchment area, in metres, and the mean altitude calculated by a geographic system.

Catchment area boundaries - remarks: Specify any additional remarks about the catchment area boundaries.

3. Physiographic information

3.1 Climate

Rainfall (mm): Specify the minimum, mean and maximum annual rainfall, in millimetres, recorded within the catchment area.

Temperature (°C): Specify the minimum, mean and maximum daily temperature, in degrees Celsius, recorded within the catchment area.

Recording period (years): Specify the reference period (in years) used to calculate the annual values for rainfall and temperature.

Dominant bioclimates: Specify the bioclimatic classes present in the catchment area according to the Emberger bioclimatic system (Appendix B).

Cover (%): Specify the approximate percentage of the catchment area corresponding to each bioclimatic class.

Climate remarks: Specify any additional remarks on climate issues considered relevant by the compiler.

3.2 Hydrology

Hydrology: Supply a description of the main hydrological patterns observed in the catchment area.

Flow: Indicate an estimate flow for the catchment area in hm³ per year.

3.3 Geology/Geomorphology

Geology/Geomorphology: Supply a description of the main geological and geomorphological features of the catchment area.

4. Population, landcover and impacts

4.1 Population

Number of villages/towns: Number of villages and towns with up to 1,000 inhabitants, between 1,001 and 10,000 inhabitants, between 10,001 and 100,000 inhabitants, and with more than 100,000 inhabitants. If the exact numbers are not known, please include approximations. Add the year of recording.

Population remarks: Specify any information regarding the human population of the catchment area.

4.2 Corine Landcover types

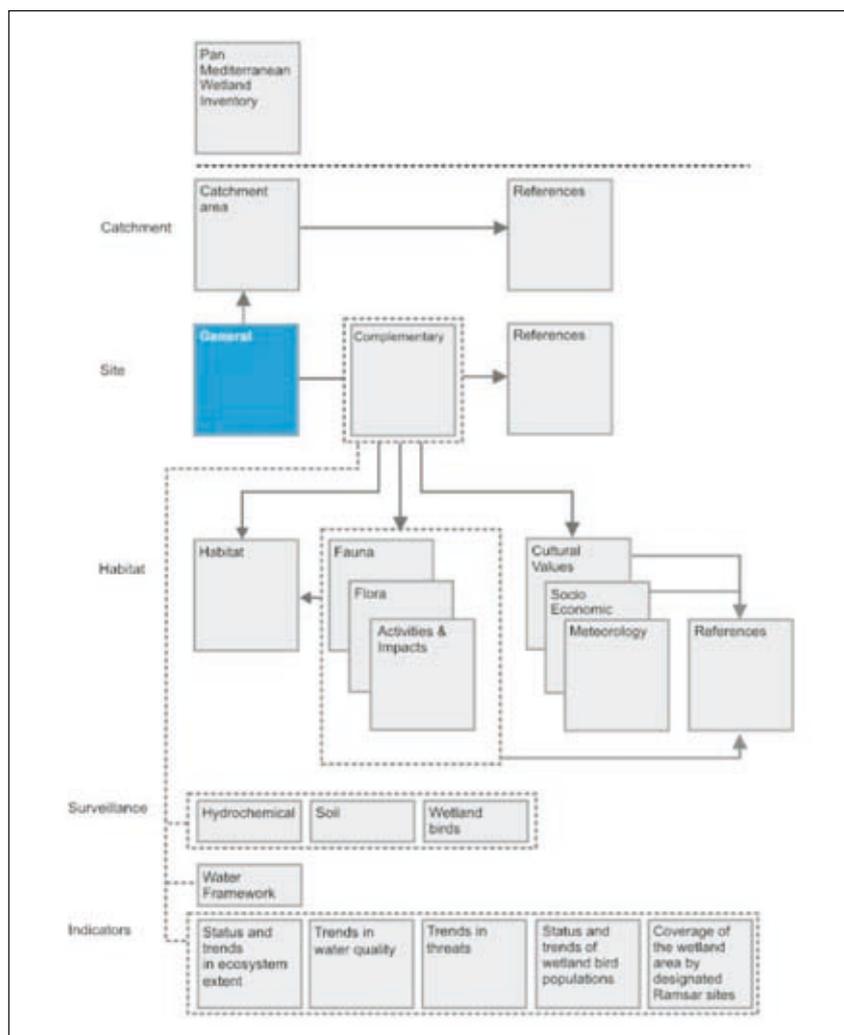
Corine Landcover types: Specify the approximate contribution (percentage) of each Corine landcover type present in the catchment area.

Landcover remarks: Provide any relevant information about the distribution of the most important land uses and human activities within the catchment area.

4.3 Global impacts and threats

Global impacts and threats: Include information concerning human activities and their impacts within the catchment area.

General Data Form



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The General Data Form collects baseline information on the wetland site and should not require extensive field work and maps or aerial photo interpretation. The majority of this information should be obtained from bibliographical references and key contacts and then updated by local experts, if necessary. Completion of the site General Data Form is mandatory.

It is strongly advisable to include an outline map of the site. The map should include the boundary of the site, scale, latitude and longitude, some basic topographical information, main roads, major landmarks and other notable features.

The site General Data Form includes data fields on:

1. Identification (of the site)
2. Location (geographic, administrative and hydrological)
3. Description
4. Condition
5. Protection status
6. Site tenure
7. Management
8. Cartography

Date of compilation/Date of update: The date on which the Data Form was created, updated or completed, in the format: day/month/year.

Compiler's country: The country of the compiler.

Compiler's name: The name of the person filling in the Data Form, including the name of the pertinent institution.

Address/telephone/fax/e-mail: The full address of the person filling in the Data Form, including telephone and fax numbers and e-mail address when available.

1. Identification

Site code: It is essential to allocate an identification code to each site. The code must be unique as this will allow all the information to be associated with the relevant site. The site codes must be established at national level, and the country should be identified by the first two digits following the ISO code rules (Appendix C). The site code is composed of a maximum of ten alphanumeric digits (Appendix D). In the MedWet/WIS, this field is preceded by an asterisk (*) which denotes that the field is obligatory.

Usual wetland name: Specify the commonly known denomination of each wetland or the name that identifies it more precisely, always giving preference to the vernacular or the officially designated name when it relates to a protected natural area. Whenever the wetland lacks an individual name, the name of the closest village or place-name should be used. In the MedWet/WIS, this field is preceded by an asterisk (*) which denotes that the field is obligatory.

Other names: Specify other names used to identify the site.

Country: Name the country to which the site belongs. In the MedWet/WIS, this field is preceded by an asterisk (*) which denotes that the field is obligatory.

Part of a complex: Type Y (yes) if the answer is affirmative and N (no) if the answer is negative. The answer is affirmative when the wetland is part of a larger complex of wetland sites with close affinities in hydrology, climate and human activities. The complex can be described in a site Data Form. In Appendix D the way of coding a complex is described.

Name of the complex: This field should be filled in if the previous answer is affirmative. In this case please identify the commonly known denomination of the complex or the one that identifies it in a more precise way, always giving preference to the vernacular or the officially designated name when it relates to a protected natural area.

Other codes: Quote any site codes and references to other inventories covering this site, eg Natura 2000, CORINE biotopes, Ramsar Convention, Barcelona Convention, International Waterfowl Census, Important Bird Areas.

Type of relation: Identify the type of relation (TR) between the boundaries of the site as classified in this inventory and the boundaries of the site as classified in other inventories, for each code typed in the previous field. The notation is:

(=) the sites coincide

(+) the wetland includes the entire site as classified in other inventories but extends beyond those previous boundaries

(-) the wetland is fully within but does not occupy the entire site as classified in other inventories

(*) the two sites overlap partially

Percentage (%): Specify the percentage area of the wetland site that is designated under other inventories.

2. Location

2.1 Geographic location

Site coordinates: Specify the site's latitude and longitude, expressed in degrees, minutes and seconds (WGS 84 system). The coordinates should pinpoint the central point of the wetland site.

Other coordinates: Specify the site coordinates in a different coordinate system if considered relevant or useful at a local/institutional level.

Coordinate system: Specify the coordinate system used in the preceding field.

Site area (ha): The surface area of the site, in hectares. If possible this should be calculated through algorithms supported by a digital Geographic Information System.

River length (km): This field is to be completed, in kilometres, when surface area measurements are not applicable (eg linear features such as streams, coasts, cliffs).

Exact value: If the values in the two previous fields are precise values, type Y (yes); if they are approximate, type N (no).

Wetland remarks: Specify any relevant annotations about the method used to delimit the wetland (digitalization of a topographic map, digitalization of a digital orthophotograph or digitalization based on GPS data), and the cartographic base used (ie topographic paper maps notating the series and scale, or orthophotography, indicating the source and spatial resolution).

Altitude (m): Specify the minimum and maximum altitudes registered within the wetland site and the mean altitude calculated by a Geographic Information System, in metres Above Sea Level.

Complex coordinates: Specify the latitude and longitude of the centre of the wetland complex, expressed in degrees, minutes and seconds (WGS 84 system). Only fill in this field if the site is part of a complex.

Other coordinates: Specify the coordinates of the complex in a different coordinate system if considered relevant or useful at a local/institutional level. The coordinate system should be the same as the one used in the "Other coordinates" field for the site.

2.2 Administrative location

Administrative divisions: Enter the code for the administrative division as given in the *Nomenclature of Territorial Units for Statistics* (NUTS) (Appendix E). If the wetland site is included in more than one administrative division, each should be indicated.

Cover (%): Specify the approximate percentage of the site's surface area that falls within each administrative division.

Subdivisions: Identify the administrative divisions at the lower administrative level that have immediate jurisdiction over the site management, eg "concelhos" in Portugal, "municipios" in Spain, "communes" in France etc. If the site falls in several subdivisions, all these should be listed, on separate lines, repeating the NUTS code and indicating the respective percentage cover.

Nearest town: Identify the human settlement (village, town or city) closest to the wetland site.

Access, landmarks: Information about the site location and how to get there. The essential information includes the name of, and distance to, the nearest towns; any roads and other ways to reach the site; and the names of all major rivers in the area.

2.3 Hydrographical location

Catchment area code: Identify the code of the catchment area in which the wetland site is included, as used in the Catchment area Data Form (Appendix A).

Name of catchment area: Identify the name of the catchment area in which the wetland site is included, as used in the Catchment area Data Form (Appendix A).

3. Description

3.1 General wetland description

General wetland description: Supply a brief description of the wetland site, based on a general overview of its features, physical and ecological components, and/or any other relevant information.

Category: Classify the wetland using the following options (if the site is complex, you can choose more than one option):

- 1 Marine/coastal (includes estuaries, deltas and coastal lagoons)
- 2 Inland (includes rivers, marshes and peatlands)
- 3 Artificial, when the wetland has been created or modified by human activities (includes ponds, wastewater treatment areas, salt exploitation sites and aquaculture plants)

Dominant salinity: Enter the dominant salinity class during summer (if the site is complex, you can choose more than one option):

- 1 No available information
- 1 Fresh, the salinity is less than 0.5 g/l
- 2 Fresh/brackish, the salinity is 0.5 to 5.0 g/l
- 3 Brackish, the salinity is >5.0 to 18.0 g/l
- 4 Brackish/salty, the salinity is >18.0 to 30.0 g/l
- 5 Salty, the salinity is higher than 30.0 g/l

Presence of water: Characterize the water residence in the wetland site as (if the site is complex, you can choose more than one option):

- 1 Permanent, the area is permanently flooded
- 2 Seasonal, the area is seasonally or periodically flooded
- 3 Temporary/intermittent, the flooding period does not follow a seasonal or regular pattern

3.2 National dominant type

Code: Identify the dominant type of the wetland (Appendix F). The selected typology is specific to each country.

Cover (%): Identify the approximate percentage area of the site pertaining to the dominant type recorded in the preceding field.

Ramsar code: List all the Ramsar wetland types present in the site, using the appropriate Ramsar classification code (Appendix G) for each wetland type present.

Ramsar cover (%): Indicate the percentage of the site's area covered by each Ramsar wetland type. Give an approximate estimate if no exact values are available.

4. Condition

Conservation status: Indicate the conservation status of the site in relation to its natural (undisturbed) state, using one of the following options:

- 0 unknown
- 1 undisturbed, no signs of man-made changes
- 2 original habitats/landform still predominant (>50%)
- 3 original habitats/landform partially modified (10-50% undisturbed)
- 4 original habitats/landform highly modified (<10% undisturbed)

5. Protection status

Code: List the site's designation codes indicating its protection status, as granted at national or international level (Appendix H).

Name of the designated site: Specify the actual name of the site as it appears in the designation.

Legislation: Specify the type of legal document (law, decree, regulation etc) which designates the wetland as a protected site and the date it was issued.

Cover (%): Indicate the approximate percentage area of the site pertaining to the protection legislation.

6. Site tenure

Site tenure: Supply a general description of the ownership regime of the wetland site (private, state-owned, provincial etc), specifying the owners when possible.

Area (%): In case of multiple ownership of the site, provide approximate percentages for the total area under public and private ownership.

7. Management

Name of the management authorities: Identify the management authorities responsible for the site.

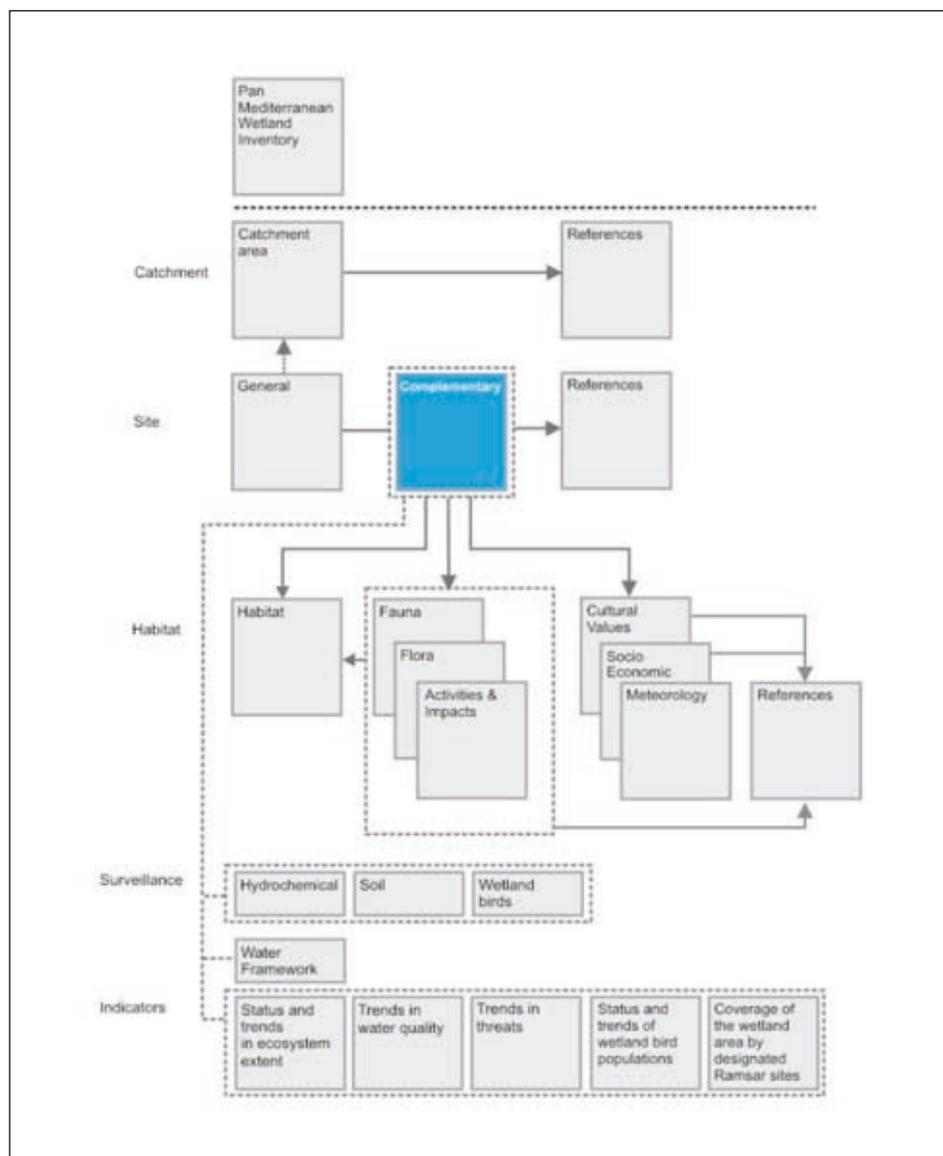
Plans and conservation measures: Cite any existing management plans for the site, management plans proposed and/or under implementation, as well as all current management activities.

Management plan under implementation: Enter Y (yes) in the box if there is an implemented management plan in the site; if not, enter N (no).

8. Cartography

Map or aerial photo with the limits of the wetland exists: Enter Y (yes) in the box when topographic maps or aerial photography depicting the wetland's boundaries exist, otherwise enter N (no). Note this information on the References Data Form.

Complementary Data Form



This Data Form allows collection of additional data to complement the wetland site information.

The main wetland habitats should be identified according to the MedWet description system (at least the first two digits). It is strongly recommended to add a detailed map of the different habitats described.

The Complementary Data Form includes data fields on:

1. Climate (additional data are recorded in the Meteorology Data Form)
2. Hydrology (description of the surface and groundwater hydrology). The detailed hydrochemistry characterization is recorded in the Hydrochemistry Data Form of the Surveillance Module

3. Geology/Geomorphology
4. Wetland Morphometry
5. Habitat (MedWet habitats, Habitats of Community Importance)
6. Flora
7. Fauna
8. Activities and Impacts
9. Valuation
10. Socioeconomic values
11. Additional information

Site code: Specify the site code, as it appears in the General Data Form.

1. Climate

See Data Form - Meteorology: Check the box when relevant information on the Meteorology Data Form is available for the site.

Bioclimate: Enter the bioclimatic class of the wetland site following the Emberger bioclimatic system (Appendix B).

- 1 Saharian
- 2 Arid Mediterranean
- 3 Semi-arid Mediterranean
- 4 Sub-humid Mediterranean
- 5 Humid Mediterranean
- 6 Pre-Atlantic
- 7 Mountain

Meteorological station: Specify the code and name of the site's most representative meteorological station(s), which in most cases will refer to the nearest one(s). Indicate the distance between the meteorological station(s) and the site, in kilometres; and its location in relation to the catchment area (including whether inside or outside). Define the relevance of each meteorological station to the specific site, according to the scale:

- 1 high
- 2 medium
- 3 low

Remarks: Add any relevant information on the site's climate.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

2. Hydrology

2.1 Surface hydrology

Inflow: Fill in all the necessary boxes to describe the inflow type (a) and inflow permanency (b) for the wetland, using the corresponding code for:

(a) inflow type	(b) inflow permanency
1 sea/ocean	1 permanent
2 river	2 intermittent
3 flood water	3 non-permanent
4 ground water	
5 spring	
6 rain only	
7 artificial	

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Outflow: Fill in all the necessary fields to describe the outflow type (a) and outflow permanency (b) from the wetland, according to the following code for:

(a) outflow type	(b) outflow permanency
1 evaporation	1 permanent
2 infiltration	2 intermittent
3 surface runoff	3 non-permanent
4 artificial runoff	

Remarks: Supply any specific remarks on the wetland's water balance that may complement the above information. If the inflow or outflow is controlled, specify it here.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

Presence of water: For each month provide two sets of information, if known.

The first box (a) records the presence or absence of water for the relevant month. Use the code corresponding to the following options:

- 1 totally dry
- 2 partially flooded
- 3 totally flooded

The second box (b) refers to the regularity of flooding. Use the code corresponding to the following options:

- 1 never flooded
- 2 exceptionally flooded
- 3 regularly flooded
- 4 permanently flooded.

Remarks: Specify any detail on hydrology, water chemistry, flooding patterns, flood depths, causes for exceptional floods and/or any exceptions to the flooding patterns previously specified.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

2.2 Hydraulic constructions

Hydraulic constructions: Briefly describe the executed or planned hydraulic constructions that have affected or can affect the wetland.

2.3 Groundwater hydrology

Hydrogeological unit: Identify the codes of the hydrogeological unit (Appendix I) of the site.

Aquifer system: Identify the codes which correspond to the geological formations (Appendix J) of the site.

Aquifer material

- 1 non consolidated.
- 2 consolidated porous, the water circulates through porous material (the geological formations are clean sands, sandstones, conglomerates etc)
- 3 consolidated fractured bedrock, the water circulates through fractures or small cracks (geological formations of granite, gabbro- and igneous dykes etc).
- 4 consolidated Karstic, the water circulates in conducts/channels resulting from the expansion of small fractures by dissolution (dolomites and limestones).

Permeability type

- 1 very high (such as alluvial lands, terraces, beach sands, slope deposits etc)
- 2 high (such as limestones, dolomites, pyroclasts, basalts, igneous dykes)
- 3 medium (such as sandstones, conglomerates, limestones)
- 4 low (such as mudstones , limestones)
- 5 null (such as marl clay, silt)

Wetland / aquifer interaction

- 1 no relation
- 2 the wetland flows into the aquifer
- 3 the aquifer flows into the wetland
- 4 no information

Remarks: Specify any detail on groundwater hydrology, water chemistry, flooding patterns, flood depths, causes for exceptional floods and/or any exceptions to the flooding patterns previously specified.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

2.4 Hydrochemistry

See Surveillance Module - Hydrochemistry: Check this box when relevant information on the Hydrochemistry Data Form exists for the site.

Sampling point: Code(s) and name(s) of the nearest or most representative sampling point(s) to the wetland. Specify the distance between the wetland site and the sampling point(s), in kilometres; and the relevance of each sampling point according to the scale:

- 1 high
- 2 medium
- 3 low

3. Geology/Geomorphology**3.1 Geology/Lithology**

See Surveillance Module - Soil: Check this box when relevant information on the soil surveillance module exists for the site.

Geology/Lithology: Describe the main geological features of the site and the sub-catchment area, including the main soil types.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

3.2 Geomorphology

Geomorphology: Describe the main geomorphological features of the site.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

4. Wetland Morphometry

Maximum area (ha): Specify the maximum wet surface area in maximum flood situations, in hectares.

Maximum perimeter (km): Specify the maximum wet perimeter in maximum flood situations, in kilometres.

Maximum width (m): Specify the length of the major transversal axis of the polygon of maximum water surface extent, in metres.

Average depth (m): Specify the average depth, in metres.

Maximum depth (m): Specify the maximum depth, in metres.

Height of water level (m): Specify the height of the water surface, in metres Above Sea Level.

Orientation of the longest axis: Specify the orientation of the line crossing the major axis of the wetland's surface. Choose one of the options: (N-S); (E-W); (NW-SE); (SW-NE).

Maximum length of the flooding area (m): Specify the maximum length of the flooding area, in metres.

Remarks: Specify any other details related to wetland morphometry.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

5. Habitat

See Site Module - Habitat: Check this box when more information is available in the site's Habitat Data Form.

MedWet Code (up to third level): Enter the three first digits of MedWet Habitat code (system, subsystem and class according to the MedWet Habitat Description System - Appendix K), as well as the relative cover of each habitat (as a percentage).

Habitats of Community Importance (Annex I of EU Habitats Directive): When present at the site, complete according to the habitat types included in Annex I of the Habitats Directive (Appendix L), specifying the approximate percentage of the site area covered by each type. Figures are not required because, if such information is not already available, precise figures are difficult to calculate. Hence give an estimated value, expressed as a percentage. Pay special attention to priority habitats (marked with "P" in Appendix G).

Corine Landcover Terrestrial Habitats (non wetland area): Specify the terrestrial area code of the wetland site present in the Corine Landcover classification (Appendix M) and indicate, as a percentage, the area of the site covered by each class.

6. Flora

See Site Module - Flora: Check this box when more information is available in the site's Flora Data Form.

Noteworthy flora species and vegetation communities (species, dominance, height): Supply information about the main vegetation communities present in the site and other particular information about plant species (rarity, protection status, introduced species etc).

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

7. Fauna

See Site Module - Fauna: Check this box when more information is available in the site's Fauna Data Form.

See Surveillance Module - Water Birds: Check this box when more information is available in the site's water birds surveillance module.

Noteworthy animal species (whenever possible indicate the population estimate): Supply a brief list of the main animal species and additional information about the species (rarity, protection status, date of the last observation, observer's name etc).

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

8. Activities and Impacts

8.1 Activities

See Site Module - Activities and impacts: Check this box when more information is available in the site's Activities and Impacts Data Form.

Activities: Supply a brief description of the main activities and other particular information about the activities.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

8.2 Impacts

See Site Module - Activities and impacts: Check this box when more information is available in the site's Activities and Impacts Data Form.

Impacts: Supply a brief description of the main impacts to which the site is subject, as well as other relevant information about the impacts.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

9. Valuation

9.1 Environmental values

Ramsar Criteria: Whenever appropriate, fill in the criteria codes defined by the Ramsar Convention to identify wetlands of international importance (Appendix N). Briefly explain the choice of the adopted criteria.

9.2 Other wetland values

Code: Specify the most important wetland values (Appendix O) that may be attributed to the site.

Criteria scale: For each level - International (I), National (N), Regional (R) or Local (L) - fill in the box with the relative importance of the wetland value:

- 1 insufficient information to make a judgment at this level
- 2 probably no value at this level for this criterion
- 3 low significance at this level
- 4 moderate significance at this level
- 5 high significance at this level

Remarks: Any additional information, comments or justification for the attribution of the criteria, when appropriate.

10. Socioeconomic values

10.1 Social and cultural values

Supply a brief description of the social and cultural values of the wetland.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

10.2 Economic values

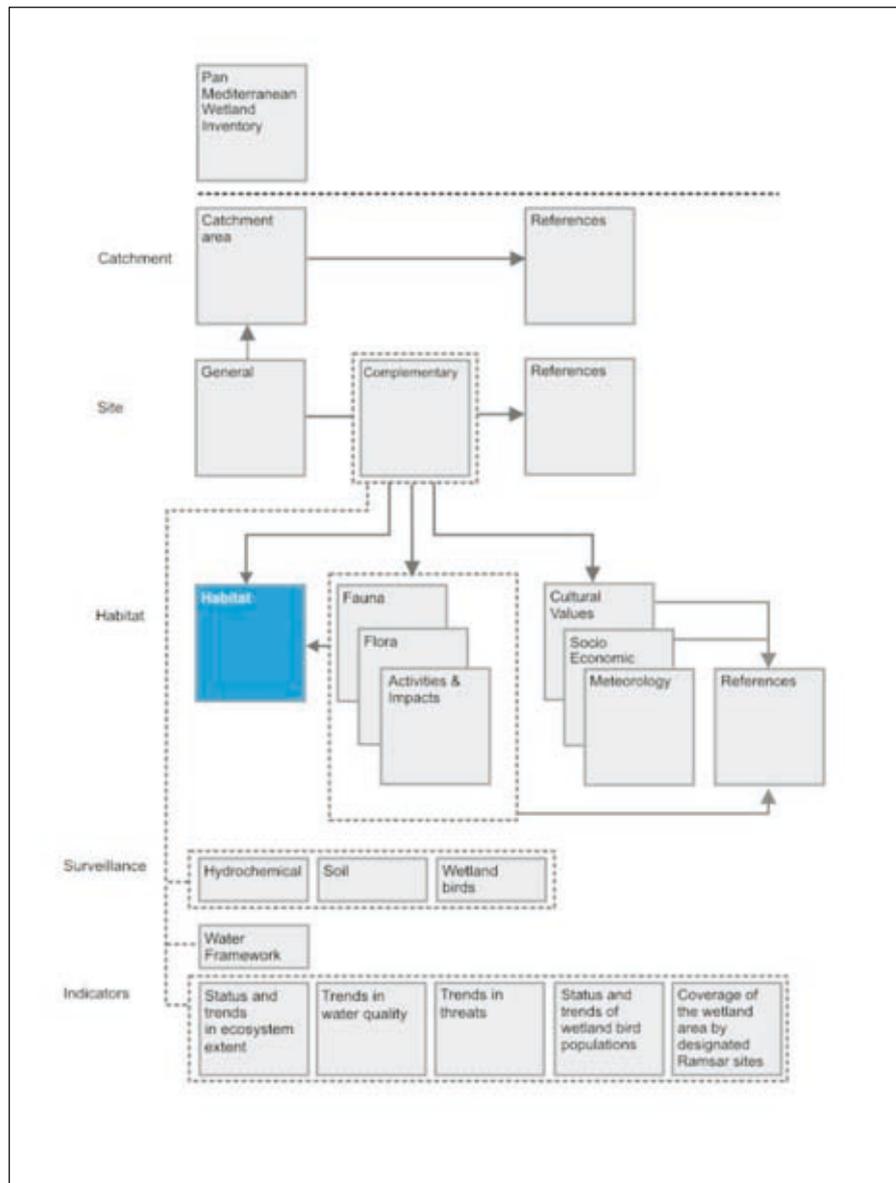
Supply a brief description of the economic values in the wetland.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

11. Additional information

Supply any additional information relevant to the wetland.

Habitat Data Form



This Data Form is designed to collect information on the habitats present in the site and it will normally require fieldwork to be undertaken.

The main habitats of the wetland should be identified using the MedWet Habitat description system. The MedWet Habitat description system requires adequate fieldwork and map or aerial photo interpretation; it is especially aimed to be linked to detailed maps of the site. Habitat units should be identified according to the habitat description system and recorded as the Habitat Code. This habitat system (and therefore the code) has many parameters built in, ie system, subsystem, class, subclass, artificiality, salinity, permanence of water. The habitat description system is presented in detail in a separate document (Farinha, et al 2005)³

Site code: Specify the code for the corresponding site.

³ To see this document go to the cdrom menu "Other Resources".

Habitat Code: Enter the code for each habitat present in the wetland site, using the MedWet Habitats Description System (Appendix K). The boxes are:

- 1 System
- 2 Subsystem
- 3 Class
- 4 Subclass
- 5 Water regime
- 6 Water salinity
- 7 Artificially modified
- D Dominance type
- CCC Counter

Area (ha): Specify the surface area of each Habitat (as classified in Appendix K), in hectares.

Max. depth (m): Max. depth (m): Specify the maximum depth recorded for each habitat, in metres.

C (Condition): Specify the actual condition (status) of the habitat in terms of human-induced changes

- 0 unknown
- 1 untouched (No signs of man-made changes)
- 2 original vegetation/landscape still predominant (>50%)
- 3 original vegetation/landscape partially modified (10-50% untouched)
- 4 original vegetation/landscape highly modified (<10% untouched)
- 5 original vegetation/ landscape totally changed

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A (Artificiality): Describe the level of artificiality of the hydrological regime.

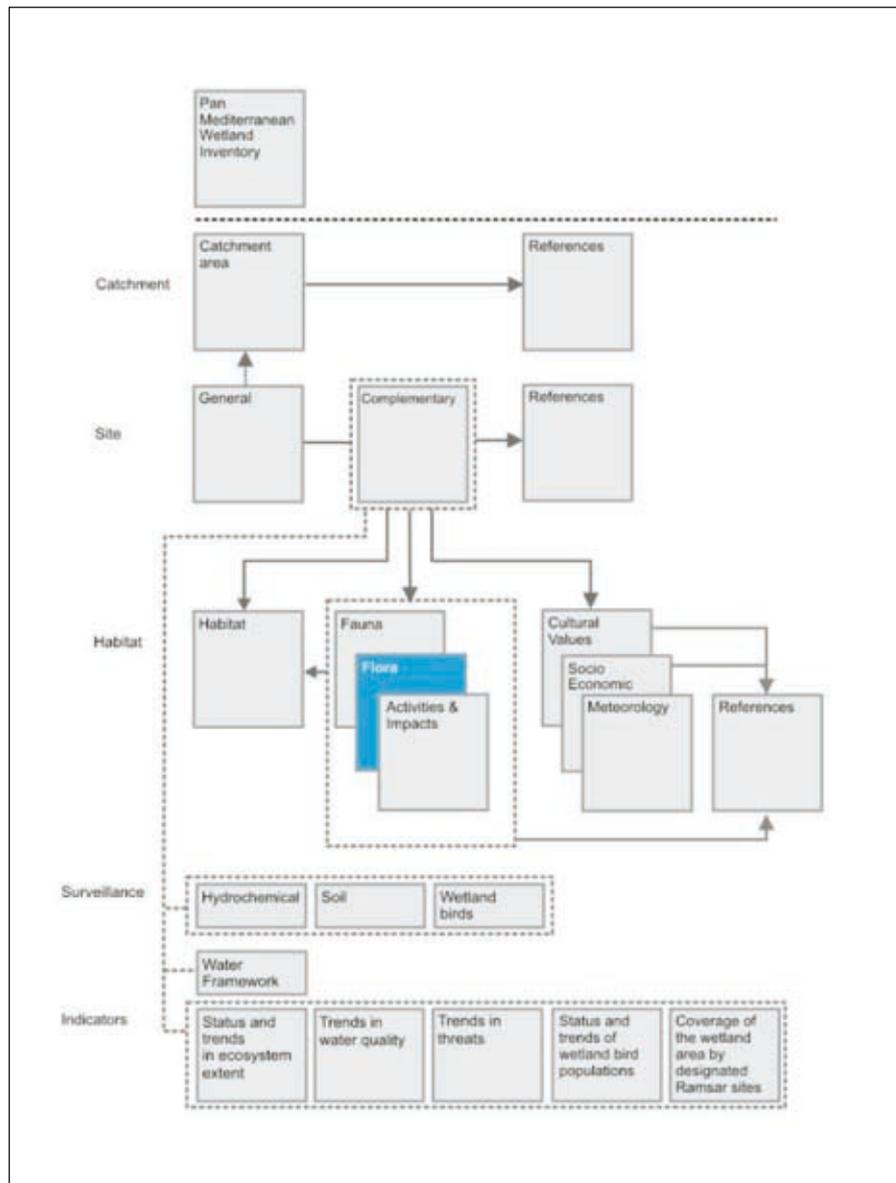
- 0 unknown
- 1 naturally flooded
- 2 partially controlled
- 3 heavily controlled

pH: Specify the pH range of the water in this habitat during most of the flooded period.

- 0 unknown
- 1 acid (pH<5.5)
- 2 circumneutral (pH 5.5 – 7.4)
- 3 alkaline (pH>7.4)

General habitat description: Supply a short description of each habitat, outlining its principal physical and ecological features, as well as any other useful information.

Flora Data Form



Flora species are listed along with their cover and height.

Depending on the detail required and the time and resources available, the information on flora can be related to the site or to the habitat.

Site code: Specify the code for the corresponding site.

Date: Specify the date of the fieldwork or the bibliographical reference, in the format: mm/yy.

D (Dominance): Specify whether the species is dominant or co-dominant in the vegetation community.

- D Dominant
- C Co-dominant

Species: Specify the scientific name of the species.

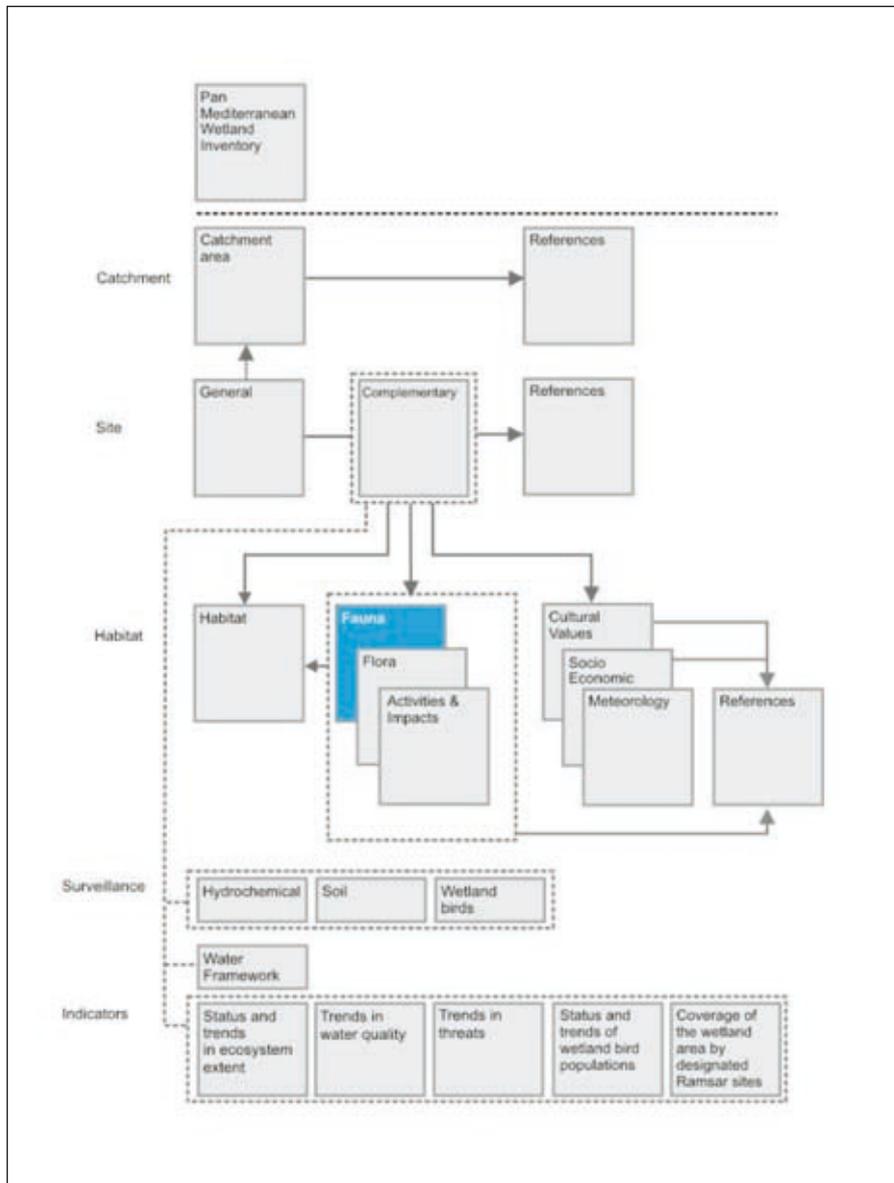
C (Cover): Specify the approximate area (percentage cover) occupied by each species in the wetland site, using the following scale:

- (+) present
- 1 1-10%
- 2 11-25%
- 3 26-50%
- 4 51-75%
- 5 76-100%

Habitat code: If the information refers to a particular habitat, fill in the relevant code as used in the Habitat Data Form.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

Fauna Data Form



Fauna species are recorded along with their abundance and status (breeding, wintering etc).

Depending on the detail required and the time and resources available, the information on fauna can be related to the site or to the habitat.

For each group (invertebrates, fish, amphibians, reptiles, birds, mammals) specify:

Site code: Specify the code for the corresponding site.

Date: Specify the date of the fieldwork or the bibliographical reference, in the format: mm/yy.

Species: Specify the scientific name of the species.

Number: If known, specify the estimated number of individuals of the species within the wetland. If the number is not known, only fill in the "A - Abundance" box.

A (Abundance): The codes for the estimated abundance of the species within the wetland are.

- 1 Abundant
- 2 Common
- 3 Uncommon
- 4 Rare

E (Status): The codes for the status of the species at this wetland are

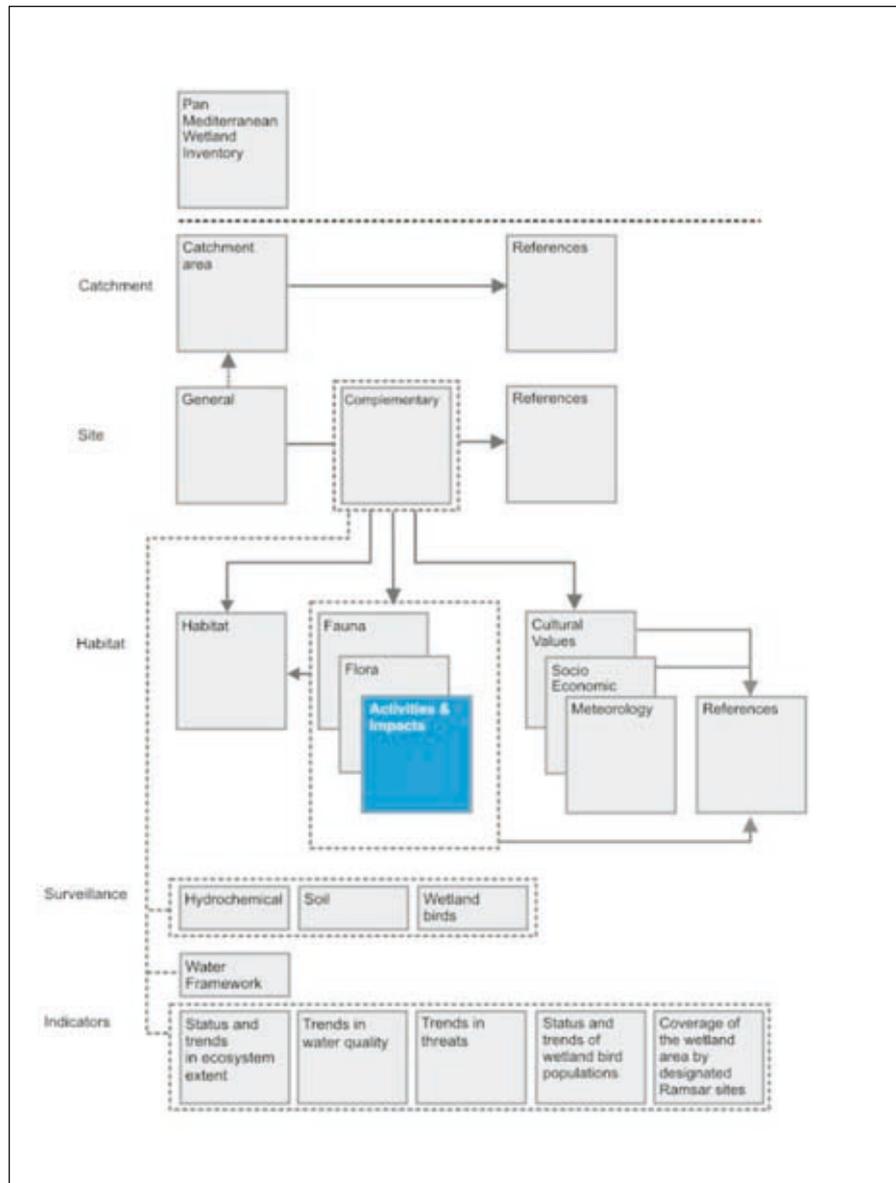
- 1 Breeding: species mainly present during breeding seasons, thus spring or summer.
- 2 Wintering: species mainly present at non-breeding seasons, thus autumn or winter.
- 3 Resident: species present throughout the year, regardless of nesting activities.
- 4 Staging: species only present during migratory periods or as a result of regional dispersion movements.
- 5 Accidental: species only sporadically or irregularly present.

Number of pairs: Only fill in when there are data for breeding species within the wetland (breeding or resident status). In such cases, specify the month and year of recorded breeding and the estimated number of pairs or "reproductive units" breeding in the wetland (eg singing males for some birds, nesting females for marine turtles etc). If several sets of data are held for the same species, eg totals for different years, use more lines for the same species.

Habitats Code: If the information refers to a particular habitat, fill in the relevant code as used in the Habitat Data Form.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

Activities and Impacts Data Form



This Data Form should be completed at site level in order to have a broad vision of the site. Nevertheless, if some activities and impacts occur in a particular wetland habitat, you can relate the data to the habitat level. If that is the case, you must allocate the habitat code to the corresponding activity.

Site Code: Specify the code for the corresponding site.

Date: Specify the date of the fieldwork or the bibliographical reference, in the format: mm/yy.

Activity Code: Use the numeric codes of Appendix P (Natura 2000 list) and fill in as many lines of information as needed to record information on all relevant activities having a positive or negative effect on the site.

P (Position): Specify the activity's position in relation to the wetland site. Use:

- 1 if the activity occurs inside the site boundaries
- 2 if it occurs outside the site boundaries
- 3 if it occurs both inside and outside the site boundaries

T (Trend): Specify the way the activity has been developing.

- 0 unknown
- 1 past activity, refers to an activity which happened in the past but is no longer taking place
- 2 current activity, refers to an activity currently occurring
- 3 predicted activity, refers to an activity which is expected for the future but has not started yet

The second character refers to the trend of a current activity:

- 0 unknown
- 1 activity likely to increase
- 2 activity likely to decrease
- 3 activity likely to stop
- 4 stable

I (Importance): Specify the level and degree of importance of the activity for humans.

The first character refers to the level of importance:

- 1 subsistence level
- 2 local level
- 3 regional level
- 4 national level

The second character refers to the degree of importance of the activity at that level:

- 0 unable to specify
- 1 minor importance
- 2 important activity
- 3 very important activity

Cover (%): State the approximate relative proportion of the site where this activity occurs, as a percentage.

Impact code: Fill in the main impact of each activity, using the codes listed in Appendix Q. If an activity causes more than one impact, it should be registered on different lines. On the other hand, if the activity causing an impact is not known, the impact should still be recorded in the form, with the corresponding "activity" field left empty.

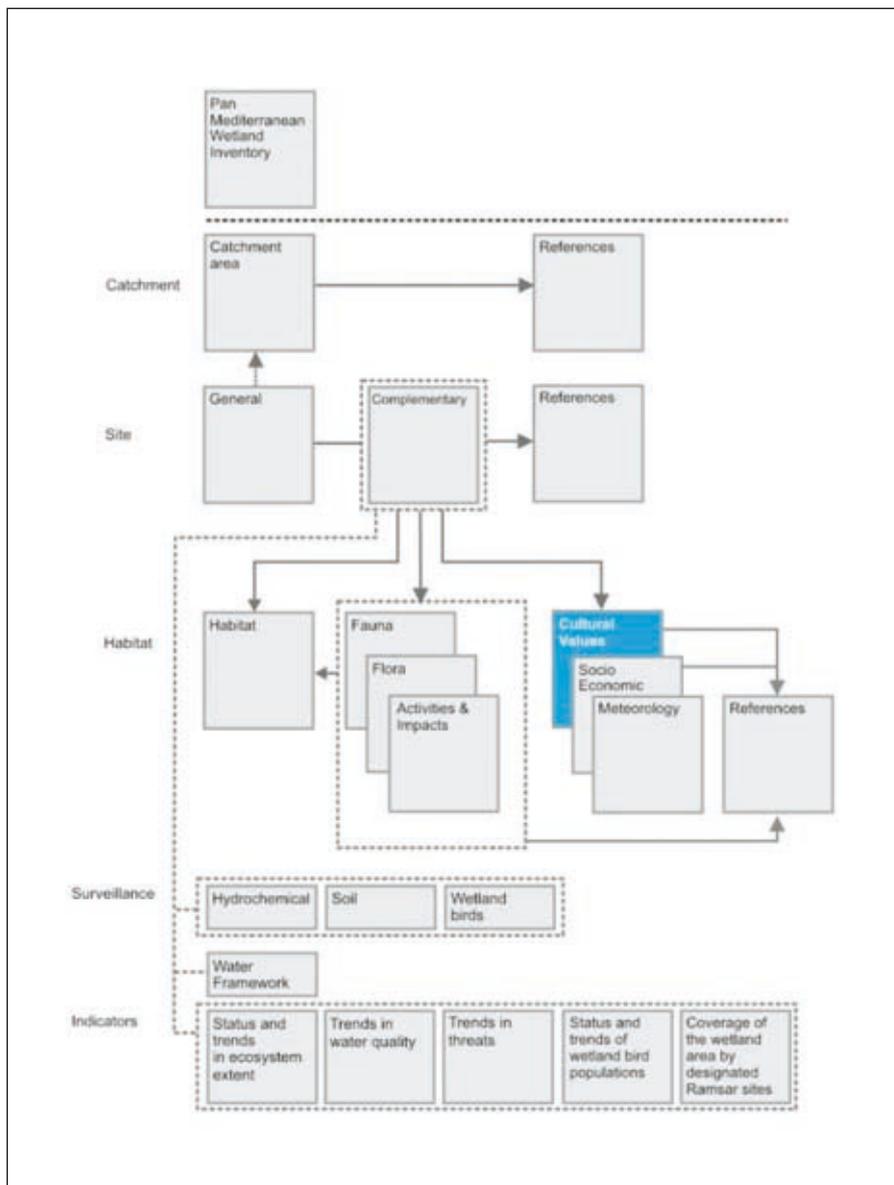
E (Scale): Specify the impact gravity (positive or negative) of the activity on the wetland values

- 1 - Significant enhancement of wetland values.
- 2 - Some enhancement of wetland values;
- 3 - No major effect on major wetland values;
- 4 - Some effect on major values but not significant;
- 5 - Some reduction of major wetland values;
- 6 - Significant reduction of major wetland values;
- 7 - Lost of one or more wetland values;
- U - Unknown;

Habitat Code: If the information refers to a particular habitat, fill in the relevant code as used in the Habitat Data Form.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

Cultural values Data Form



Cultural values can be identified and listed according to the corresponding heritage type, outlined below.

Site code: Specify the code for the corresponding site.

Element denomination: Specify the common name of the heritage element as well as other denominations (eg official denomination, legal denomination etc).

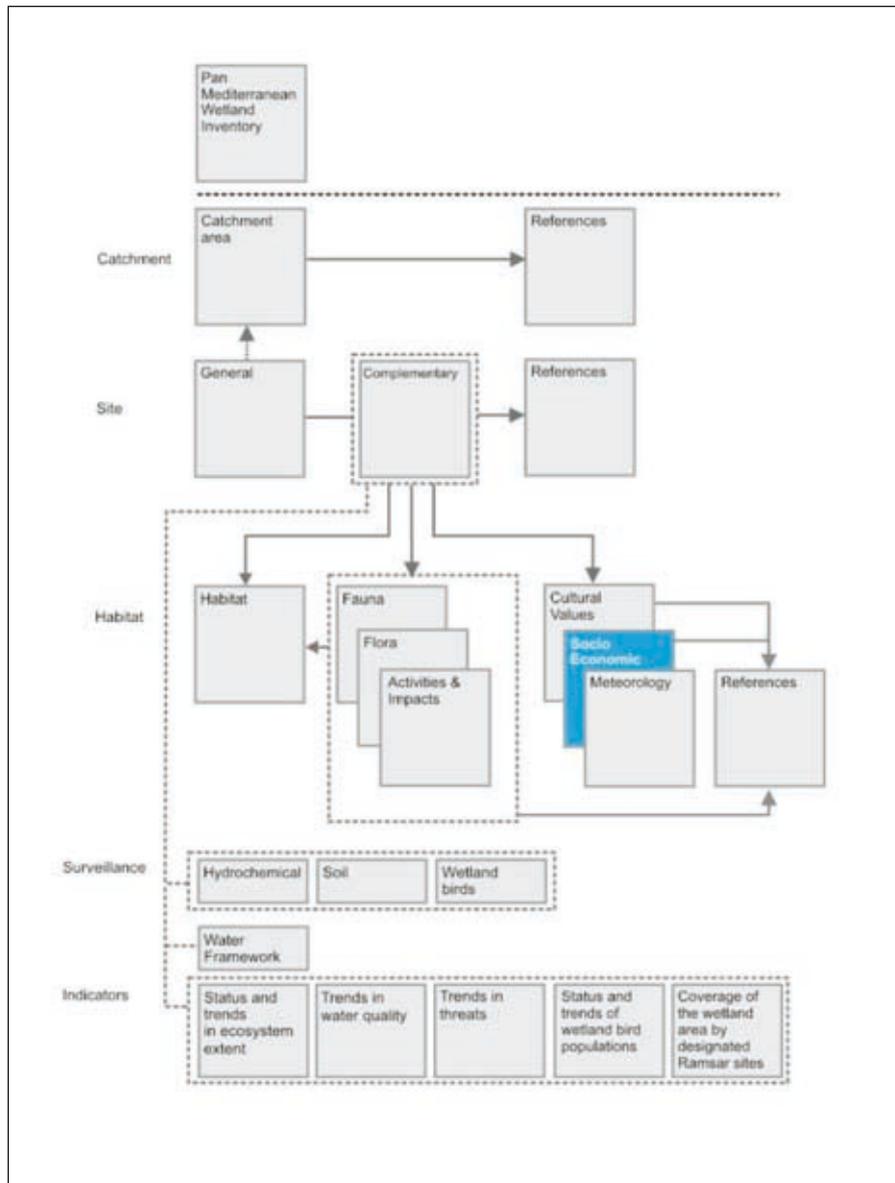
Heritage type: Indicate the element's heritage type according to the classification:

- 1 **Cultural landscape:** The cultural landscapes represent the combined works of Nature and Humanity. They illustrate the evolution of human society and how it has become established over time. Some cultural landscapes have survived, providing a record of the history of the civilizations that once occupied or still occupy wetland areas, and representing an important cultural and historical heritage. Rice fields, traditional oases, fishing and shell-fishing sites, salt works, wet pastureland and historical urban complexes are just a few examples of cultural landscapes.
- 2 **Movable heritage:** Taken to be all movable objects that have archaeological, ethnological, historical, artistic, scientific and/or technical value, eg utensils for traditional work, traditional storage and transport tools (baskets, carts, draught animals - ie animals used as major sources of motive power and transport etc), traditional domestic implements and furnishings (furniture, decorative objects, kitchen implements, clothing and footwear etc), traditional tools and building materials or products (foods, salted products, soap, soda, glass, fireworks, basketry, musical instruments etc).
- 3 **Immovable heritage:** Taken to be immovable man-made works or output that cannot be moved from one place to another, either because they are built structures or because they are inseparable features of the areas where they occur. For example, features relating to habitat (traditional housing, quarters/ neighbourhoods associated with specific trades, public buildings etc) or infrastructures (waterwheels, waterpowered mills, tidal mills, dams, weirs, ditches, pools, evaporation troughs, jetties, silos, grain stores, roads, bridges etc).
- 4 **Intangible heritage:** This relates to non-material elements, activities, procedures, customs, uses and beliefs. This heritage is very closely linked with local traditional and popular culture, eg community history and culture, traditional know-how (working methods, traditional methods of orientation, empiric meteorology, construction techniques and repair of traditional implements, techniques for animal domestication, ethnobotany and ethnomedicine etc), beliefs and rituals, typical songs and dances, ways of communication, oral literature, popular traditional celebrations, traditional foods and beverages, traditional cooking, craftwork and popular arts or arrangements and traditional resource management.

Element's brief description: Describe the main characteristics of the element: date (date of origin, periodicity, date of occurrence), original purposes, materials etc.

Element's reference: Allocate a unique code to each element, which will allow for the establishment of links between the element and every other information field related to it.

Socioeconomics Data Form



The root causes of wetland degradation are in most cases related to human activities having a direct or indirect impact on the wetland. In most cases, these activities are related to economic or social development (or most often both in combination), oriented to the generation of employment, income, production for own consumption or tradable goods and services. In addition, wetlands provide cheap land for the establishment of production units and public service infrastructure at relatively low cost.

The socioeconomics Data Form is designed to collect the information pertaining to such pressures and reasons for wetland degradation, so that decision makers, planners, stakeholders and conservation groups know where to start when tackling the basic social and economic factors affecting the state of the wetland. In addition, by providing information on the basic socioeconomic facilities and needs, media presence, as well as basic population figures and statistics, the Data Form provides information which helps design appropriate interventions of both material and non-material (eg public awareness and education) nature.

Site code: Specify the code for the corresponding site Data Form.

Basic statistical information should be the source for the data inserted in this Data Form. In some cases, though, the requested information is more qualitative than quantitative, and the data-collecting team should fill in the information on the basis of their own perception and/or through discussions with the local people.

The Socioeconomics Data Form includes data fields on:

1. Socioeconomic facts and trends
2. Values and services provided by the wetland
3. Other information
4. Land use maps
5. Audiovisual material

1. Socioeconomic facts and trends

1.1 Population

Total population: Fill in the number of the total population living within the area of the wetland as described in the General Data Form.

Population trends: Mark the box indicating the local population trend (increasing, stable or decreasing).

Seasonal fluctuation of population: Indicate (Yes or No) whether there is a seasonal fluctuation of this population (for example due to tourism, transhumance or other reasons). Indicate the reason if possible.

Age range distribution: Specify the percentage of population corresponding to each of the age classes.

Age range trend: Indicate if the population in the area is getting younger (young people increasing), older (older people increasing) or remaining stable. Tick the appropriate box.

List of municipalities: List the Municipalities (or other primary level administrative divisions) in the wetland area.

% Population literacy: Specify the percentage of inhabitants who can read and write.

1.2 Economy

Annual income per capita: If available, enter the mean income per capita for the local population.

Activity fields: Specify (Y or N) the activity fields existing in the region, and if available, provide their contribution to the Gross Product of the area. For each activity field, use the Code Numbers in Appendix P (Activities) to describe the specific activities present in the area.

1.3 Employment

Employment by sector: Specify the percentage of the local active population employed in each sector.

1.4 Land use

Land use: Specify the percentage of land occupied by each category within the total wetland area (as described in the General Data Form).

1.5 Social Services and Infrastructure

Schools: Specify the number of schools of each grade within the area.

Medical services: Provide information on the medical services available locally and, if available, give the numbers for each category.

Electricity/Communication/Information: Provide information on the existence of each category using the following codes:

- 1 widespread
- 2 scarce
- 3 not available

Accessibility: Provide information on the ways to access the wetland area by all different means of transport. Provide details on the condition of the main road network. If known, state the distance in terms of time (in hours) and kilometres (for road access) for each option.

1.6 Sustainable development potential

Sustainable development potential: Provide information on the possible and existing development status of sustainable activities (in terms of economy and environment) under the categories provided, or add a category if needed.

Development level: Specify the level of development of each of the activities using the scale

- 0 none
- 1 basic
- 2 small scale
- 3 very developed

1.7 Resource ownership

Land: State the percentage of land under private and public ownership.

Water/Wood/Fisheries/Hunting: mark the appropriate box from three options – the resource has private ownership; the resource is public but use is controlled by permits, meters etc; resource use is free and not controlled.

1.8 Incentives and counter incentives

Describe existing financial or other (eg legislative) incentives, either in favour of wetland protection or against it (for example financial or administrative incentives promoting or controlling the use of pesticides, investment incentives for agri-environmental schemes etc)

2. Values and services provided by the wetland

Social (non commercial) uses: Specify Y (yes) or N (no) in relation to the wetland being used by the categories listed.

Economic Uses: For products, use the codes provided in Appendix O for products derived from the wetland. Specify Y (yes) or N (no) for the other uses listed.

Services provided by the wetland: Specify Y (yes) or N (no) in the boxes of services provided by the wetland to humans through the performance of the wetland functions listed.

Employment related to the wetland: Provide estimates of the percentage of the population whose employment is directly or indirectly associated with the wetland.

3. Other information

Local press / media in wetland area: Indicate presence (Y) or absence (N).

List titles / names: List the names of local press (newspapers, magazines etc) or other media (radio stations, TV stations) with a focus on the wetland area.

NGO presence / activity in the wetland area: Indicate the presence (Y) or absence (N) of local NGOs.

Name and contact details: List the names and contact details of press/media and NGOs based or active in the wetland.

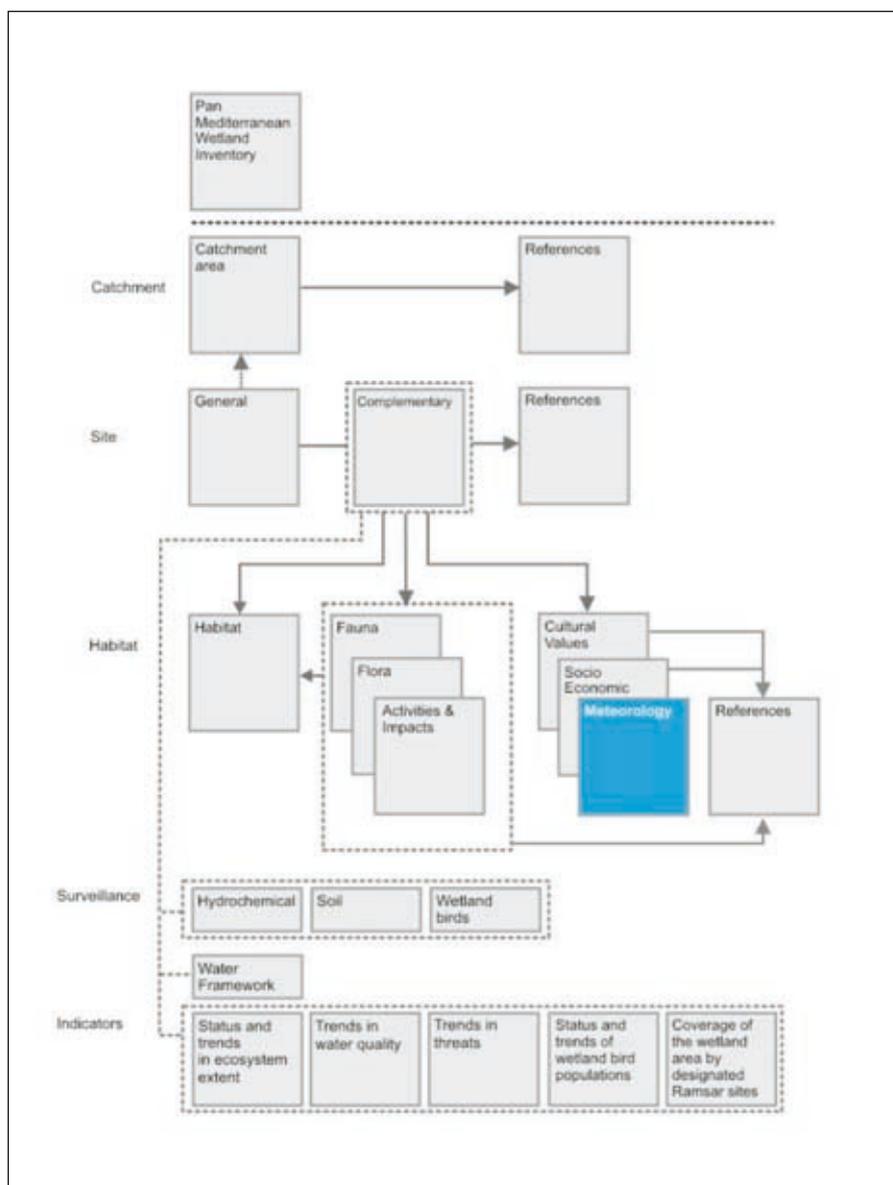
4. Land use maps

List attached maps, electronic and hard (paper) copies.

5. Audiovisual material

List attached audiovisual material: photographs, films, documentaries etc.

Meteorology Data Form



The meteorological data from the main weather stations are listed in an appropriate Data Form, in order to be related to all adjacent sites at a later stage. This Data Form includes information on evaporation, temperature, precipitation and ice/snow cover duration.

The Meteorology Data Form includes data fields on:

- 1 Temperature
- 2 Rainfall

Site code: Specify the code for the corresponding site.

Meteorological station: Specify the name and the code for the Meteorological station closest, or most relevant, to the wetland site, according to the data included in the Complementary Data Form. This code should also be used in the site Data Forms.

Evaporation (mm): Specify the minimum, maximum and average values of the recorded annual evaporation, in millimetres.

Ice/snow cover duration (days/year): Specify the average number of days per year of ice/snow cover on the wetland site.

Altitude (m): Altitude of the meteorological station, in metres Above Sea Level.

1. Temperature

Recording period (years): Specify the time span taken into consideration for the calculation of the means, eg "from 1965 to 1995".

Mean monthly temperature (°C): Specify, for each month, the monthly mean temperature, in degrees Celsius.

Average (°C): Specify the mean annual temperature calculated for the corresponding period of years, in degrees Celsius.

2. Rainfall

Recording period (years): Specify the time span taken into consideration for the calculation of the means, eg "from 1965 to 1995".

Mean monthly rainfall (mm): Specify the mean monthly rainfall for each month, in millimetres.

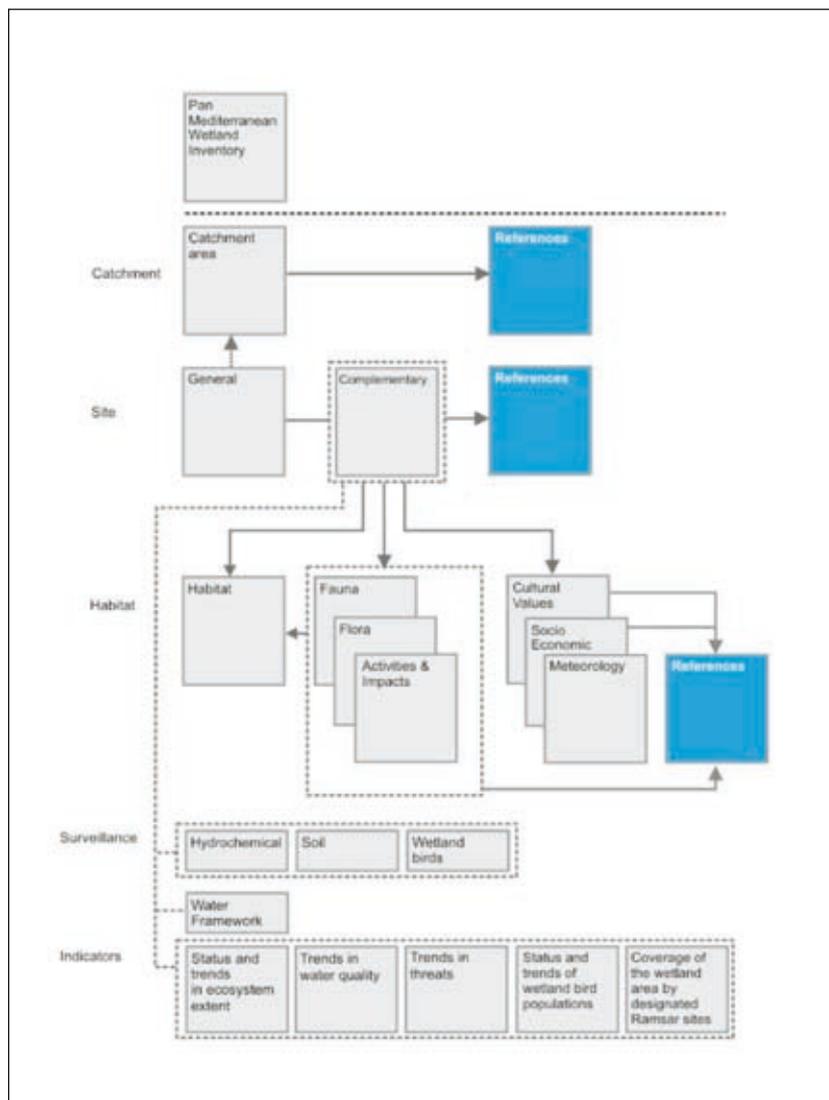
Average (mm): Specify the average annual rainfall calculated for the corresponding period of years, in millimetres.

Monthly rainfall: An available option is to record the monthly rainfall data for a number of years. In the first column fill in the year and in the following columns fill in the rainfall values for each month of the year, in millimetres.

Remarks: Supply any complementary information concerning the climatic features.

Ref. no.: Enter the reference number(s), as listed in the References Data Form, of all bibliographical references which have been used as an information source in the preceding fields.

References Data Form



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This is a list of key references which should contain all the detailed reference works used to compile the data forms (including major scientific reports, management plans and others). The References data form allows us also to collect information about maps, aerial photographs, orthophotos, satellite images and relevant links. These references will later be related with the information included in the different data forms: catchment area, wetland site etc.

The Meteorology Data Form includes data fields on:

- 1 Bibliography
- 2 Maps
- 3 Aerial photographs
- 4 Orthophotos
- 5 Satellite images
- 6 Relevant links

Site code: Specify the code for the corresponding site.

1. Bibliography

Authors: Specify the name(s) of the author(s) of the particular reference.

Year: Specify the year of publication of the reference.

Title: Specify the title of the reference.

Editor: Specify the publisher/editor of the reference.

Location: Specify the location of the reference.

Ref. no.: This is the code allocated by the observer to each particular reference. Each code should be unique and therefore distinct from any other reference previously inserted by the current or other users.

2. Maps

Title: Specify the map title.

Year: Specify the map's year of publication.

Scale: Specify the map scale.

Type: Specify the map type (eg soil; flora; topographic etc).

Source: Specify the map source (names of authors, institution responsible for the production of the map).

Number: Specify the map number or code given by the source.

Projection: Specify the map projection type (eg UTM; Lambert; Gauss etc) – please include datum (eg WGS84; ED1950).

Coordinate system: Specify the map's coordinates system (eg degrees, minutes, seconds; decimal degrees; grid system).

Ref. no.: This is the code allocated by the observer to each particular reference. Each code should be unique and therefore distinct from any other reference previously inserted by the current or other users.

3. Aerial photographs

Title: Specify the title of the Aerial photograph.

Code: Specify the Aerial photograph number or code as given by the source.

Scale: Specify the Aerial photograph scale.

Type: Specify the Aerial photograph type.

Date (dd/mm/yyyy): Specify the Aerial photograph date.

Source: Specify the Aerial photograph source (names of authors, institution responsible for the production of the Aerial photograph).

Ref. no.: This is the code allocated by the observer to each particular reference. Each code should be unique and therefore distinct from any other reference previously inserted by the current or other users.

4. Orthophotos

Title: Specify the orthophoto title.

Code: Specify the orthophoto number or code as given by the source.

Resolution: Specify the orthophoto resolution.

Type: Specify the orthophoto type.

Date (dd/mm/yyyy): Specify the orthophoto date.

Source: Specify the orthophoto source (names of authors, institution responsible for the production of the orthophotomap).

Coordinate system: Specify the orthophoto's coordinate system.

Ref. no.: This is the code allocated by the observer to each particular reference. Each code should be unique and therefore distinct from any other reference previously inserted by the current or other users.

5. Satellite images

Title: Specify the image title.

Code: Specify the satellite image number or code as referred to in the source.

Resolution: Specify the satellite image resolution.

Type: Specify the satellite image type.

Date (dd/mm/yyyy): Specify the satellite image date.

Source: Specify the image source (names of authors, institution responsible for the production of the satellite image).

Coordinate system: Specify the image's coordinate system.

Ref. no.: This is the code allocated by the observer to each particular reference. Each code should be unique and therefore distinct from any other reference previously inserted by the current or other users.

6. Relevant links

List relevant links pertaining to the information indicated above.

REFERENCES

Cenni M & Tarsiero S 2008. *Inventory, assessment and monitoring of Mediterranean wetlands: The Water Framework Directive Module*. ARPAT. MedWet publication. (Scientific reviewer Nick J Riddiford).

Farinha JC & Fonseca E 2008. *Inventory, assessment and monitoring of Mediterranean Wetlands: The Surveillance Module*. ICNB. MedWet publication. (Scientific reviewer Nick J Riddiford).

Fitoka E, Chrysopolitou V & Tsiaoussi V 2008a. *Inventory, assessment and monitoring of Mediterranean Wetlands: The Indicators Module*. EKBY. MedWet publication. (Scientific reviewer Nick J Riddiford).

Fitoka E, Kapanidis Y, Tomàs-Vives P, Katsaros P & Liaska A 2008b. *Inventory, assessment and monitoring of Mediterranean Wetlands: The MedWet Inventory Data Sharing Protocol*. EKBY, TdV & AUTH. MedWet publication. (Scientific reviewer Nick J Riddiford).

Katsaros P, Kapanidis Y & Mentis A 2008. *Inventory, assessment and monitoring of Mediterranean Wetlands: The MedWet Web Information System User Manual*. AUTH & EKBY. MedWet publication. (Scientific reviewer Nick J Riddiford).

Tomàs-Vives P 2008. *Inventory, assessment and monitoring of Mediterranean wetlands: The Pan-Mediterranean Wetland Inventory Module*. TdV. MedWet publication. (Scientific reviewer Nick J Riddiford).