NATURA 2000

STANDARD DATA FORM

EXPLANATORY NOTES

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INTRODUCTION

Central to the success of NATURA 2000 is the level of information on habitats and species of Community interest which will be assembled during the coming years. Experience in data collection in Europe has been build up through the CORINE biotopes project, which at present describes over 6000 sites in the European Union. The base for the core data fields incorporates this experience, amended and expanded in the framework of the directives concerned.
As the sites classified under the "Birds" and the "Habitats" directives will together form NATURA 2000, a common baseline for both types is essential to achieve the objective of creating a coherent network. The data-entry form takes all aspects of both directives into account and there is only a need for one form. All data fields from the existing data sheet for the 'Birds' directive are fully compatible with the new entry form. So, where the data from the 1100 Special Protection Areas (SPAs) exist, they can be transferred automatically.

Therefore, this form will be used for all sites designated as SPAs under the Birds Directive. As regards the Habitats Directive it will initially be used to supply the necessary information for sites eligible for identification as Sites of Community Importance (SCIs) in application of Article 4.1 of the Directive (Stage 1) to be completed by June 1995.

The legal basis for providing the data to implement this phase of NATURA 2000 is outlined in article 4 of the Habitats Directive which defines that 'information shall include a map of the site, its name, location, extent and the data resulting from application of the criteria specified in Annex III (Stage 1) provided in a format established by the Commission in accordance with the procedure laid down in Article 21'. Under Article 4 paragraph 3 of the Birds Directive Member States are already required to 'send the Commission all relevant information so that it may take appropriate initiatives with a view to the coordination necessary to ensure that the areas provided for in paragraph 1 and 2 (of Article 4) form a coherent whole which meets the protection requirements of these species in the geographical sea and land area where this Directive applies.

The main objectives of the database are :

1. to provide the necessary information to enable the Commission, in partnership with the Member States, to co-ordinate measures to create a coherent NATURA 2000 network and to evaluate its effectiveness for the conservation of Annex I habitats and for the habitats of species listed in Annex II of Council Directive 92/43/EEC as well as the habitats of Annex I bird species and other migratory bird species covered by Council Directive 79/409/EEC.

2. to provide information which will assist the Commission in other decision making capacities to ensure that the NATURA 2000 network is fully considered in other policy areas and sectors of the Commission's activities in particular regional, agricultural, energy, transport and tourism policies.

3. to assist the Commission and the relevant committees in choosing actions for funding under LIFE and other financial instruments where data relevant to the conservation of sites, such as ownership and management practice, are likely to facilitate the decision making process.

4. to provide a useful forum for the exchange and sharing of information on habitats and species of Community interest to the benefit of all Member States.

This document illustrates all elements which are part of the form. In addition, some elements will be subject of a"user manual" in particular as to the interpretation of priority habitat types.

The form is being designed with a view to paper records and computerized entry and transfer of data.

Those data fields which must be filled in at the stage of identifying sites eligible as SCIs are shown as bold italics in the recording form and indicated as 'obligatory' in the relevant sections of the explanatory notes. These fields are also obligatory for SPAs. As regards the ecological information requirements this is further clarified in Section 3 of the explanatory notes.

The other fields should be filled in at the stage of classification as SPA or designation as SAC where the information is relevant to the conservation and management of the site. These fields are indicated in the explanatory notes as 'to be supplied where relevant'.

It is expected that all information relevant for the purposes of site designation or classification will be indicated. This includes, in particular, the information related to the justification of the site in question and to enable evaluation of its contribution to the effectiveness and coherence of the NATURA 2000 network. Additional relevant information should be provided as soon as possible. Nevertheless, for sites definitively included in the NATURA 2000 network, it is desirable to fill all fields since the information fields included in the form have been limited to those estimated as being of major importance for site protection and monitoring, both at national and Community levels.

In consultation with the relevant authorities, it is hoped to develop the NATURA 2000 database system in a format that will be compatible with information gathered under international agreements and convention, such as biogenetic reserves and the European diploma of the Council of Europe.

Note that in addition to the habitat recording within each site, the Member States will have to supply, pursuant to Annex III of the "Habitats" Directive, the total area covered by each habitat type within their country, and that in addition to the population data within each site, an overall estimate of population figures within each national territory is needed for annex III analysis. This information, as well as information on bird populations, will be subject of separate files. A database is at present being established under the auspices of the ORNIS Committee to compile data on bird populations in each region of the Community.

Figure 1. Possible relationships between sites

NATURA 2000 DATA-ENTRY FORM AND DATABASE.

One form type is to be used for all sites included in this stage of the development of NATURA 2000 to cover classified Special Protection Areas (SPAs) and those sites that are eligible as Sites of Community Importance (SCI). There may be cases where a relationship exists between two, or more NATURA 2000 sites. **Figure 1** outlines the different possible relationships that can exist between two NATURA 2000 sites. In cases where an overlap exists between two sites or where one of them is within the other, there will be a need to complete two separate forms. This is due to the different legal implications arising from the different designation types.

1. SITE IDENTIFICATION

1.1 Site type (obligatory)

This 1 character code takes into account the possible relations between proposed eligible Sites of Community Importance (SCI) and classified Special Protection Sites (SPA). Each of these codes (from A to K) corresponds to a particular relation as outlined in Figure 1. Where a relationship exists with more than one other site use the code which defines the predominant relationship. The code also automatically allows identification of the site type (whether it is SPA, eligible as SCI or both).

1.2. Site code (obligatory)

"In a relational database, each site is recognised by a unique code which forms the key-item within the database. The unique site code comprises 9 characters and consists of 2 components:

1) The first two codes are the country code

AT	Austria	IE	Ireland
BE	Belgium	IT	Italy
DE	Germany	LU	Luxemburg
DK	Denmark	NL	The Netherlands
ES	Spain	PT	Portugal
FI	Finland	SE	Sweden
FR	France	UK	United Kingdom
GR	Greece		

2) the remaining 7 characters, which serve to create a unique alphanumeric code for each site, are to be given following a logical and coherent system defined by the responsible national authority "

Note that there may also be a relation between the described site and those identified as Corine Biotopes Sites. This information is to be given in Section 5 of the form which deals with relations with other designated areas (optional).

1.3. Form compilation date (obligatory)

Enter the date you wish to see as the 'compilation date' for the information recorded. The data field takes the form of the year(four digits) followed by the month in numeric form (two digits).

Example: - 199305 : data first compiled in May 1993

1.4. Update (obligatory)

Enter the date when the information reported for the site was last changed, using the same format as for 'Date'. In the case of a record of a new site leave the 'update' field as six spaces. Where the information has been updated several times this field contains the date the information was changed most recently. Intermediate updates are stored in the 'history field', together with the nature of the change (see 3.7).

1.5. Relations with other described sites (obligatory if relation exists)

This field provides a cross-reference to all related described sites for which the NATURA 2000 form is being used: proposed eligible Sites of Community Importance (SCI) and classified Special Protection Areas (SPA) (and in the future will be used for sites designated as Special Areas of Conservation) . Give the site code of each related site.

1.6. Respondent (obligatory)

Enter here the name, affiliation and address of the individual or organization providing the information contained in the record. If major parts of the information have been supplied by more than one individual or organization, each one of them will be entered, together with their own name, affiliation and address.

1.7. Site name (obligatory)

Sites names are entered in their local language. In this way, difficult translation is avoided and integration of existing data on the national or local level is straightforward. In the case of different characters (e.g. Greek), names are transliterated.

1.8. Site indication and designation dates (obligatory)

Four dates can be involved, the date the site is proposed as eligible for identification as a Site of Community Importance (SCI), the date the site is confirmed as a SCI, and two designation dates (SAC and SPA), there is a need to store the date for each one of them. Four sub-fields will indicate the year and month the site was proposed as eligible for identification as a Site of Community Importance (SCI), the date the site is confirmed as a SCI, the date the site has officially been listed by the Member States as a Special Protection Area, and/or finally the date it was designated as a Special area of Conservation. Where a site has been designated and subsequently enlarged, the year of initial listing is presented and the most recent total area is given.

2. SITE LOCATION

2.1. Site-centre location (obligatory)

The geographical co-ordinates (longitude and latitude) of the site centre must be entered in degrees, minutes and seconds of arc. Degrees, minutes and seconds of longitude West of the meridian of Greenwich are conventionally given a negative value, and degrees East a positive value, which can be confirmed with a + sign or taken as understood if the sign is replaced with a space. This avoids co-ordinate problems if data are subsequently transferred to a Geographical Information System (GIS).
For sites composed of several distinct areas, the co-ordinates of the most important sub-area is entered.

Almost all countries use different scales, projection types and parameters for the production of topographic maps. Being the most important source for co-ordinate identification such alternative co-ordinate systems (UTM, Lambert Conformal or Azimuthal, Gauss-Kruger, etc..) are acceptable for recording site locations on the condition that the projection type and parameters are indicated in section 7 (map of the site). These co-ordinate references will be converted in a GIS to degrees of longitude and latitude for storage in the final database.

Although site-centre co-ordinates are missing in almost all source documents please make the extra effort to fill in this field accurately. It is the key to mapping and overlay procedures with other thematic data layers (such as Land Cover, soil type, land use, air quality, ...).
Anyone transferring data to the central database and who wants to use an alternative co-ordinate system will have to talk to the competent Commission service. Once co-ordinates are accurately recorded, information on other data fields can be filled in an automatic way, without lengthy procedures.

If site boundaries are transferred in digital way this field can be automatically calculated as the central point of the polygons.

2.2. Site Surface Area (obligatory)

The surface area of a site is entered in hectares. Although it is an obligatory field, the value of -99 is given to sites for which the area is still unknown. A value of 0 can be correct if the site is a cave or cliff. In this case the field 2.3. is obligatory.
When the area of the site has changed over time, the most recent total area is entered.

2.3. Site length (obligatory if 2.2. => 0)

This field is only obligatory when area measurements are not relevant (e.g. caves, cliffs). Site length is entered in kilometres.
When the length of the site has changed over time, the most recent total length is entered.

2.4. Altitude (to be supplied where relevant)

Enter the altitude of the site above sea level in three sub-fields which record the minimum, maximum and mean altitude within the site boundaries. It is also important to record negative (below sea-level) values where they exist. The mean value should be calculated as the weighted average of the altitude classes within the site.

In order to calculate altitude data in an automatic way, using an existing digital elevation model (DEM) in a GIS system, it is extremely important to spend more time to accurately record site co-ordinates and boundaries. Such a model will become available for use within the Commission through the EUROSTAT Gisco-project.

2.5. Administrative Region Code, Name and percentage cover within each region (obligatory)

Eurostat has developed a standard hierarchical coding system for the regions of the European Community to reference statistical data. This coding system must be applied to all regional coding applications in the Commission. A full description can be found in the publication of Eurostat and Appendix A.

The NUTS-codes are entered for each site, together with the percentage of the site within each region. One code is obligatory. Where a site is split over different regions, as many codes as regions which are involved are entered in the database at the most detailed level (5 characters). The Region name is required for cross-check.

Where boundary information exists in digital form the percentage cover of the site in different NUTS regions can be calculated in digital form.

Where sites include a marine component that is not covered by the NUTS system, the % area of the site within this component should be noted as well.

2.6. Biogeographic region(s) (obligatory)

With reference to the map of the biogeographic regions (Figure 2: Doc. Hab 95/10) indicate in which region(s) the sites occurs by marking the appropriate boxes.

Figure 2: Map of Biogeographic Regions (Doc. Hab 95/10)

3. ECOLOGICAL INFORMATION

For the establishment of the list of Sites of Community Importance (S.C.I.) under Council Directive 92/43/EEC

- Member States must provide the relevant information on the habitat types of Annex I (section 3.1) and for the species of flora and fauna of Annex II (sections 3.2.c to 3.2.g).

In the final phase of designation or classification of the site listed under either Directive all the ecological information necessary to enable evaluation of the contribution of the site to the overall effectiveness and coherence of the NATURA 2000 network must be provided.

For sites classified or to be classified as Special Protection Areas (S.P.A.)

- all the relevant information on Annex I species (section 3.2.a) and migratory species not included in Annex I (section 3.2.b) is obligatory
- information concerning the habitats of Annex I (section 3.1) and the species of fauna and flora of Annex II (Sections 3.2.c to 3.2.g) must also be provided for all or that part of the site if it is also recognised as of Community importance pursuant to Council Directive 92/43/EEC or simultaneously designated as a Special Area of Conservation (S.A.C.)
- all other relevant information on species of fauna and flora (section 3.3) is desirable.
- in the case of a site being classified as a SPA, and not being recognised in total or in part as being of Community importance under Council Directive 92/43/EEC, but yet for which certain information on natural habitats or on species of fauna and flora is relevant for the conservation of the bird species for which the SPA was classified this information is desirable.

For sites to be designated as Special Areas of Conservation (S.A.C.)

- all relevant information concerning the types of habitats of Annex I (section 3.1) and the species of fauna and flora of Annex II (sections 3.2.c. to 3.2.g.) is obligatory
- all relevant information concerning bird species of Annex I and migratory species pursuant to Council Directive 79/409/EEC (sections 3.2.a and 3.2.b.) must be provided for all or that part of the site which is simultaneously classified or to be classified as a SPA.
- all other relevant information on species of fauna and flora (section 3.3) is desirable.

3.1. HABITAT TYPES present on the site and site assessment for them

i) CODES and % COVER of Habitats

* Annex I habitat types: CODES and their % COVER within the site. (Appendix B)

Enter here the code of the habitat types of Annex I of directive 92/43/EEC, as indicated in Appendix B. This 4 character code follows the hierarchical presentation of the habitat types in Annex I of the directive.
All Annex I habitats occurring in the specific site must be entered, with the % cover (linked to criteria A(b) of Annex III of the Directive).
Example: 4110/005 : 5 % of the site is covered by annex I habitat type number 4110

ii) Site assessment criteria for a given natural habitat type in Annex I (in accordance with Section A of Annex III)

* REPRESENTATIVITY = A.a) of Annex III: Degree of representativity of the natural habitat type on the site.

Criterion A.a) of Annex III should be linked to the interpretation manual on Annex I habitat types since this manual provides a definition, a list of characteristic species and other relevant elements. The degree of representativity gives a measure of 'how typical' a habitat type is. If need be, this assessment should likewise take into account the representativity of the habitat type concerned on the site in question, either for a group of habitat types or for a particular combination of different habitat types.

If the field data, namely quantitative data, for the comparison do not exist or if measurement of the criterion is not feasible, the 'best expert judgment' may be used to rank the habitat type.

The following ranking system should be used:

A : excellent representativity
B : good representativity
C : significant representativity

Furthermore, all cases where a habitat type is present on the site in question in a **non-significant** manner must be indicated in a fourth category.

D: non-significant presence

In cases where the site representativity for the habitat type concerned is classed "D: non-significant", no other indication is required for the other evaluation criteria concerning this habitat type on the site in question. **In these cases the criteria "Relative surface", "Conservation Status" and Global evaluation" should not be marked**.

*** RELATIVE SURFACE = A.b) of Annex III: Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory.**

Theoretically, to assess criterion A.b) one needs to measure the surface covered by the habitat type in the site, and the total surface of the national territory that is covered by the same habitat type. Although this is evident, it can be extremely difficult to make these measurements, especially those concerning the reference national surface.

This criterion should be expressed as a percentage "p". Whether the two measures exist or can be obtained (and the percentage can therefore be calculated) or that the result arises from an estimation according to the best judgement (which is the more likely situation) an evaluation of "p" in class intervals should be made using the following progressive model.

A : 100 >= p >15%
B : 15 >= p > 2%
C : 2 >= p > 0

*** CONSERVATION STATUS = A.c) of Annex III. Degree of conservation of the structure and functions of the natural habitat type concerned. and restoration possibilities**

This criterion comprises three sub-criteria

i) degree of conservation of the structure
ii) degree of conservation of the functions
iii) restoration possibility

Although the above sub-criteria could be evaluated separately, they should nonetheless be combined for the requirements of selection of sites proposed on the national list as they have a complex and interdependent influence on the process.

i) Degree of conservation of structure

This sub-criterion should be linked to the interpretation manual on Annex I habitats since this manual provides a definition, a list of characteristic species and other relevant elements.

Comparing the structure of a given habitat type present in the site with the data of the interpretation manual (and other relevant scientific information), and even with the same habitat type in other sites, it should be possible to establish a ranking system as follows, using the 'best expert judgment':

I : excellent structure
II : structure well conserved
III : average or partially degraded structure

In cases where the sub-class "excellent structure" is given the criterion A.c) should in its totality be classed as "A: excellent conservation", independently of the grading of the other two sub-criteria.

In cases where the habitat type concerned on the site in question does not possess an excellent structure, it is still necessary to evaluate the other two sub-criteria.

ii) Degree of conservation of functions

It can be difficult to define and measure the functions of a particular habitat type on the defined site and their conservation, and to do this independently of other habitat types. For this reason it is useful to paraphrase ' the conservation of functions' by the prospects (capacity and probability) of the habitat type concerned on the site in question to maintain its structure for the future, given on the one hand the possible unfavourable influences and on the other hand all the reasonable conservation effort which is possible.

I: excellent prospects
II: good prospects
III: average or unfavourable prospects

In cases where the sub-class "I: excellent prospects" or " II: good prospects" are combined with the grading "II: structure well conserved" of the first sub-criterion, the criterion A.c) should in its totality by classed "A: excellent conservation" or "B: good conservation" respectively, independently of the grading of the third sub-criterion which should not further be considered.

In cases where the sub-class "III: average or unfavourable prospects"is combined with the grading "III : average or partially degraded structure" of the first sub-criterion, the criterion A.c) in its entirety should be classed as "C: average or reduced conservation" independently of the grading of the third sub-criterion which should not further be considered.

iii) Restoration possibilities.

This sub-criterion is used to evaluate to what extent the restoration of an habitat type concerned on the site in question could be possible.

The first thing to evaluate is its feasibility from a scientific point of view: does the current state of knowledge provide an answer to the 'what to do and how to do it' questions? This implies a full knowledge of the structure and functions of the habitat type and of the concrete management plans and prescriptions needed to restore it, that's to say, to stabilize or increase the percentage of area covered by that habitat type, to re-establish the specific structure and functions which are necessary for its long-term maintenance and to maintain or restore a favourable conservation status for its typical species.

The second question that may be asked is the whether it is cost-effective from a nature conservation point of view?'. This assessment must take into consideration the degree of threat and rarity of the habitat type.

The ranking system should be the following, using 'best expert judgement':

I: restoration easy
II: restoration possible with an average effort
III: restoration difficult or impossible

Synthesis:	**applying to the overall grading of the three sub-criteria**
A: excellent conservation	= excellent structure, independent of the grading of the other two sub-criteria.
	= structure well conserved and excellent prospects independent of the grading of the third criterion
B: good conservation	= structure well conserved and good prospects independent of the grading of the third sub-criterion
	= structure well conserved and average/ maybe unfavourable prospects and restoration easy or possible with average effort
	= average structure/partially degraded, excellent prospects and restoration easy or possible with average effort
	= average structure/partially degraded, good prospects and restoration easy
C: average or reduced conservation	= all other combinations

*** GLOBAL ASSESSMENT = A.d) of Annex III: Global assessment of the value of the site for conservation of the natural habitat type concerned.**

This criterion should be used to assess the previous criteria in an integrated way and taking into consideration the different weights they may have for the habitat under consideration. Other aspects may be considered regarding the evaluation of the most relevant elements in order to globally assess their positive or negative influence on the conservation of the habitat type. The 'most relevant' elements may vary from habitat type to habitat type; they may include the human activities, both in the site or in its neighbouring areas, that are likely to influence the conservation status of the habitat type, the ownership of the land, the existing legal status of the site, the ecological relations between the different habitat types and species, etc.

The 'best expert judgment' may be used to assess this global value, and the ranking system used to express it should be as follows:

A : excellent value
B : good value
C : significant value

3.2. SPECIES referred to in Article 4 of Council Directive 79/409/EEC and species listed in Annex II of Council Directive 92/43/EEC and site evaluation for them

i) CODE, NAME and POPULATION data on species

For sites as appropriate enter the scientific NAME of all bird species relevant for Article 4.1 and 4.2 of Council Directive 79/409/EEC, and of all fauna and flora species listed on Annex II of Council Directive 92/43/EEC that occur at the site. with an indication of their population within the site (see below). Each relevant species is also to be indicated by a 4 character sequential CODE taken from Appendix C, including all migratory bird species, linked to Article 4.2 of Council Directive 79/409/EEC.

As a number of fauna species, in particular many bird species, are migratory the site may be important for different aspects of the life cycle of species. These are categorized below:

Resident:	to be found throughout the year on the site
Breeding/reproducing:	uses the site to nest and raise young
Staging:	site used on migration or for moulting outside the breeding grounds
Wintering:	uses the site during the winter

Where a non-resident population is to be found at a site in more than one season entries should be made in the appropriate fields.

As regards abundance, always enter exact POPULATION data where known. Where an exact number is not known give population range in which it falls (1-5, 6-10, 11-50, 51-100, 101-250, 251-500, 501-1000, 1001-10.000, > 10.000). Where a population range is not known but information exists on minimum or maximum population size, indicate abundance by < (less than) or > (greater than). Indicate with a suffix whether the population value is pairs (p) or individuals (i). For some species with specialized breeding systems, counts may be of males and females separately: these could be suffixed (m) or (f) respectively. In particular for mammals, amphibians / reptiles and fishes no numeric information might be available at all. In this case note the population size/density by indicating whether the species is common (C), rare (R) or very rare (V). In the absence of any population data indicate it as being present (P).

For invertebrate and plants in the few special cases where abundance of the species is known for the site, give population estimate or population range as given above. Otherwise indicate whether the species is common (C), rare (R), or very rare (V). In the absence of any population data indicate it as being present (P).

If, in the absence of any population data a site is still known to be of community importance for a species, describe the character of the population in the site description text field 'Quality' outlining the nature of the population (e.g. dense, dispersed or isolated).

The following species groups are recorded separately: birds, mammals, amphibians and reptiles, fishes, invertebrates and plants.

ii) Site assessment criteria for a given species in Annex II (in accordance with Section B of Annex III).

*** POPULATION = B.a) of Annex III: Size and density of the population of the species present on the site in relation to the populations present within national territory**

This criterion exists to evaluate the relative size or density of the population in the site with that of the national population.

This last aspect is in general quite difficult to evaluate. The optimal measure would be a percentage, resulting from the ratio of the population in the site / population in the national territory. As proposed for criterion A.b) an estimate or a class interval should be used according to the following progressive model:

A: 100% >= p > 15%
B: 15% >= p > 2%
C: 2% >= p > 0%

Furthermore, all cases where a population of the species concerned is present on the site in question in a non-significant manner must be indicated in a fourth category.

D: non-significant population

In cases where the site representativity for the population concerned is classes "D: non-significant", no other indication is required for the other evaluation criteria concerning this habitat type on the site in question. **In these cases the criteria "Conservation" "Isolation" and Global evaluation" should not be marked.**

*** CONSERVATION = B.b) of Annex III: Degree of conservation of the features of the habitat which are important for the species concerned. and possibilities for restoration**

This criterion comprises two sub-criteria:
i) degree of conservation of the features of the habitat important for the species
ii) restoration possibilities

i) Degree of conservation of the features of the habitat important for the species

Criterion i) requires a global evaluation of the features of the habitat regarding the biological requirements of a given species. The features relating to population dynamics are among the most appropriate for both animal and plant species. The structure of the habitat and some abiotic features should be assessed.

The 'best expert judgment' should be used to rank this criterion:

I: elements in excellent condition
II: elements well conserved
III: elements in average or partially degraded condition

In cases where the sub-class "I : elements in excellent condition" or "II: elements well conserved" is given the criterion B.b) should in its totality be classed "A: excellent conservation" or "B: good conservation" respectively. Independent of the grading of the other sub-criterion.

ii) Restoration possibilities.

For this sub-criterion, which only needs to be taken into account when the elements are in an average or partially degraded condition, an approach analogous to that of criterion A.c.iii), should be used, adding an evaluation of the viability of the population under consideration. This should result in the system of grading as follows:

I: restoration easy
II: restoration possible with average effort
III: restoration difficult or impossible

Synthesis	**applying to classification of the two sub-criteria**
A. conservation excellent	= elements in an excellent condition, independent of the grading of the possibility of restoration
B: good conservation	= elements well conserved independent of the grading of the possibility of restoration
	= elements in average or partially degraded condition and restoration easy
C: average or reduced conservation	= all other combinations

*** ISOLATION = B.c) of Annex III: Degree of isolation of the population present on the site in relation to the natural range of the species.**

This criterion may be interpreted as an approximate measure of the contribution of a given population to the genetic diversity of the species on the one hand and of the fragility of this specific population on the other hand. Using a simplistic approach one may say that the more a population is isolated (in relation to its natural range), the greater is its contribution to the genetic diversity of the species. Consequently the term "isolation" should be considered in a wider context,

applying equally to strict endemics, to sub-species/varieties/races as well as sub-populations of a meta-population. In this context the following grading should be used:

A: population (almost) isolated
B: population not-isolated, but on margins of area of distribution
C: population not-isolated within extended distribution range

*** GLOBAL = B.d) of Annex III: Global assessment of the value of the site for conservation of the species concerned.**

This criterion refers to the global assessment of the value of the site for the conservation of the species concerned. It may be used to sum up the previous criteria and also to assess other features of the site thought to be relevant for a given species. These features may vary from one species to another and might include human activities on the site or in nearby areas which are capable of influencing the conservation status of the species, land management, the statutory protection of the site, ecological relations between the different types of habitats and species, etc.

A 'best expert judgment' may be used for this global evaluation, using the following ranking system:

A : excellent value
B : good value
C : significant value

3.3 Other species (to be supplied where relevant)

All other **i m p o r t a n t** species of flora and fauna may be subsequently entered, where they are relevant to the conservation and management of the site, according to the following procedure:

- Tick the box of the appropriate species group,
- Provide the scientific name of the species
- Give regular maximum population data for the species where possible. Where quantitative data do not exist indicate abundance semi-quantitatively or qualitatively using the notation outlined in Section 3.2.i..
- Please indicate the motivation for listing each species using the following categories:
  - A. National Red Data list
  - B. Endemics
  - C. International Conventions (incl. Bern, Bonn and Biodiversity)
  - D. Other reasons

  Further details on the motivations for listing individual species, especially regarding D, can be given in Section 4.2 which is the free-text field for describing the quality and importance of the site).

The codes of Appendix III are not used here, nor is there any site assessment for the species.

4. SITE DESCRIPTION

This section is principally for free-text description of key-site characteristics.
which has two purposes:
- to allow key information to be recorded which is inadequately represented in the code list;
- to provide a concise and structural description of the site when details are being displayed.

4.1. General site Character (obligatory)

This field should provide an overall 'picture' of the site. Summarise the broad characteristics of the site starting with a indication of the site's division into broad habitat classes using best expert judgement to estimate their percentage cover (these habitat classes are pre-formulated in the corresponding field). The total cover of habitat classes should be 100 % and correspond to the total surface area of the site.
The main geological, geomorphological and landscape features of importance should be described here. Where relevant indicate the dominant vegetation types. Also mention other non-Annex I habitats important for the conservation of the site. Where further detailed breakdown of the information on habitat classes is important for the conservation of the site (e.g. whether dehesas or vineyards) this should be given in the free text section called other site characteristics. Information on small linear and mosaic-type wooded areas (Hedges, Bocage, Tree lines) should also be provided under this general text.

4.2. Quality and importance (obligatory)

Enter the overall indication of the quality and importance of the site, in view of the conservation objectives of the directives.
For internationally important wetlands that regularly hold >20.000 waterfowl this fact should be entered here.
Where a species is listed in Section 3.3 with motivation D, outline the basis for its inclusion.

4.3. Vulnerability (obligatory)

Indicate the nature and extent of pressures upon the site from human and other influences and the fragility of habitats and ecosystems found there. This field should include a description of important elements not adequately covered by the coded data contained in section 6.1..

4.4. Site designation (to be supplied where relevant)

Enter as free text any aspect of the site designation that is not adequately covered by the codes used in site designation codes fields (see Section 5).

4.5. Ownership (to be supplied where relevant)

Enter a general description of the site ownership (e.g. 'private' ; 'state', "conservation NGO",...). If possible include an estimate of the proportion of the site area in each ownership class.

4.6. Documentation (to be supplied where relevant)

If available, for each site reference is made to relevant publications and/or scientific data concerning the site. Information entering should be made according to standard convention for scientific references. Unpublished or communications, referring to the information given in the recording form, should be included wherever useful.

4.7. History (not to be filled in)

This field will be used by the competent Commission service to maintain a log of the stages by which the current site record developed. Examples of the information to be recorded include:
initial notification; correction of errors; changes resulting from actual physical changes in the site.

In each case, the history field comprises three sub-fields which are:
- the date of the change
- name of the field that is being changed
- a description outlining the changes that have been made

5. SITE PROTECTION AND RELATION WITH CORINE BIOTOPE SITES

With regard to the recorded relationships indicated in 5.1 and 5.2 below, a map clearly showing the boundaries of these related sites must be delivered (see Section 7 of explanatory notes for further clarification on this)

5.1. Protection status at national and regional level (Appendix D) (obligatory)

For each Member State, Appendix D contains a sequential list of the relevant nature conservation designation types which have statutory protection with their definition from the national /regional level. Three list of protection types cover the following three categories.

A. Designation types used with the intention to protect fauna, flora, habitats and landscapes (the latter as far as relevant for fauna, flora and for habitat protection).
B. Statutes under sectorial, particularly forestry, legislative and administrative acts providing an adequate protection relevant for fauna, flora and habitat conservation.
C. Private statute providing durable protection for fauna, flora or habitats.

Protection types are ranked by strictness of protection starting with the strictest statutes. Where there is no protection status for the site it is important to indicate this by using the national code corresponding to 'No protection status'

For each site the codes of the appropriate designation types are to be entered, together with the % cover within the site for each designation type. The information stored in this field is on the level of the different designation types. If several nature reserves of the same type are included in the recorded site, the percentage of the total area covered by these reserves is to be entered.
The relation of individual designated areas with the site is recorded separately (see 5.2).

5.2. Sites to which this site is related (neighbouring sites and sites belonging to different designation types) (to be supplied where relevant)

This part of the recording form allows neighbouring sites or sites belonging to different designation types which overlap or neighbour each other to be indicated. The inter-relationship between the different types is also established by cross-referencing them.
All possible relationships are coded using one of the following:

- types are coincident (use code =) ;
- the described site includes another site completely (use code +) ;
- the other site includes the described site completely (use code -)
- the two sites partially overlap (use code *).

In addition to entering these codes, the percentage of the described site that is overlapping with the other site should be entered.

- Neighbouring sites are indicated with a "/".

In addition, the form provides for possible designation types on the international level (e.g.. Ramsar, Biogenetic, European diploma, Barcelona, Biosphere, World Heritage, ...) and first some open text fields in which national designations with the name of the site can be mentioned together with the type of relation and % overlap with reference to the described site. This permits cross-referencing with the Designated Areas database.

5.3. Relationship with Corine biotope sites (to be supplied where relevant)

For all described sites which overlap with Corine biotope sites, record the Corine site code, the type of overlap (using notation as in 5.2) and the percentage of the described site that is overlapping with the Corine site.

6. INFORMATION ON IMPACTS AND ACTIVITIES IN AND AROUND THE SITE.

6.1. General impacts and proportion of the surface area of the site affected (Appendix E) (to be supplied where relevant)

Impacts relate to all human activities and natural process that may have an influence, either positive or negative, on the conservation and management of the site (listed in Appendix E).
Considering the impacts and activities within the site:

- Enter the appropriate codes from Appendix E
- indicate the intensity of their influence on the site using the following categories:
  - A: high influence
  - B: medium influence
  - C: low influence
- give the percentage of the surface area of the site affected by them.
- indicate whether their influence is positive (+), neutral (o) or negative (-)

Also describe the impacts and activities in the surroundings of the site. The surroundings is the area where the outside impacts and activities may affect the integrity of the site. It will depend among other things on local topography, the nature of the site and on the type of human activities.
If there are relevant impacts or activities which are not included in this list, indicate them in the free-text field "vulnerability" in Section 4.3.

6.2. Site Management

Body responsible for the management of the site (to be supplied where relevant)

Enter the full reference including name, address and phone/fax of the authority and/or individual responsible for the management of the site.

Information on site management plans and practice, including traditional human activities (to be supplied where relevant)

A concise overview of the management plans undertaken or under preparation, with an agenda of actions. These should take into account the threats to the site described by the human activities in association with the vulnerability field (4.3).
As already indicated in the introduction, information of this kind can in many cases be an important consideration when estimating the degree of success when evaluating the conservation measures proposed under LIFE or other financial instruments.
Please cite any plans published.

7. MAP OF THE SITE (obligatory)

By mapping site boundaries, information on the site can be more precisely spatially referenced. When digitised, data can be explored in the context of the wider environment, by means of digital overlay with other data layers (e.g. results from the Land Cover project, soils, water quality or physical planning data) This enables the data to be used in a variety of applications which require exact information about spatial relationships. For example, the data become much more useful as an aid to environmental impact assessment.

All sites must be drawn on maps of the same detail and quality as the official published topographic maps and meeting all the standards of the competent topographical institute with a scale of 1:100 000 or the nearest possible scale, with a line thickness smaller than 0.4 mm. Using this scale where several nearby sites occur the same map should be used for all sites.

If site boundaries are also available from a geographical information system, with reference to map series used for digitisation, scale, map projection and parameters, these digital data should be accessible and information related hereto included in the form.

The areas corresponding to the main categories of designation having the highest degree of conservation must be drawn on a second map with exactly the same characteristics as the first map.

In addition, if available, an aerial photograph of the site is considered to be very useful to 'understand' the nature of the site.

8. SLIDES AND OTHER PHOTOGRAPHIC MATERIAL (to be supplied where relevant)

List of slides and other photographic material, sent in together with the form, with reference to subject, place and recording date. Although optional, it is very useful to have photographic material to 'understand' the general form of the site concerned, especially when problems or complaints arise for a particular site. In addition, these slides can be used by the Commission for information or educational purposes concerning the NATURA 2000 network.

The number of the slide indicated in the form must also be given on a copy of the slide. With regard to all slides and photographs the author and copyright should also be provided."

IMPACTS AND ACTIVITIES INFLENCING THE CONSERVATION STATUS OF THE SITE

1. Agriculture, Forestry and animal breeding

- 1.0 Cultivation
  - 1.01 Modification of cultivation practices
  - 1.02 Mowing / Cutting
- 1.1 Use of pesticides
- 1.2 Fertilisation
- 1.3 Grazing
  - 1.3 Abandonment of pastoral systems
- 1.4 Agricultural land re-organisation
  - 1.41 Irrigation
  - 1.42 Removal of hedges and copses
- 1.5 Forestry Planting
  - 1.51 Replanting
  - 1.52 Artificial planting
- 1.6 Forestry clearance
  - 1.61 Removal of undergrowth
  - 1.62 Removal of dead and dying trees
  - 1.63 Exploitation without replanting
- 1.7 Animal breeding
  - 1.71 stock feeding
- 1.8 Burning
- 1.9 Agriculture and forestry activities not referred to above

2. Fishing, hunting and collecting

- 2.1 Fish and Shellfish Aquaculture
- 2.2 Professional fishing
  - 2.21 fixed location fishing
  - 2.22 trawling
  - 2.23 drift-net fishing
- 2.3 Leisure fishing
  - 2.31 bait digging
- 2.4 Hunting
- 2.5 Taking / Removal of fauna
  - 2.51 collection (insects, reptiles, amphibians.....)
  - 2.52 taking from nest (falcons)
  - 2.53 trapping, poisoning, poaching
  - 2.54. other forms of taking
- 2.6 Taking / Removal of flora
  - 2.6 Pillaging of floristic stations

3. Mining and extraction of materials

- 3.1 Sand and gravel extraction
  - 3.11 quarries
  - 3.12 removal of beach materials
- 3.2 Peat extraction
  - 3.21 hand cutting of peat
  - 3.22 mechanical removal of peat
- 3.3 Exploration and extraction of oil or gas
- 3.4 Mines
  - 3.41 open cast mining
- 3.5 Salt works

SECONDARY ACTIVITIES

4. Urbanisation, industrialisation and similar activities

- 4.1 Urbanised areas, human habitation
  - 4.11 continuous urbanisation
  - 4.12 discontinuous urbanisation
  - 4.13 dispersed habitation
  - 4.19 other patterns of habitation
- 4.2 Industrial or commercial areas
  - 4.21 factory
  - 4.22 industrial stockage
  - 4.29 other industrial / commercial areas
- 4.3 Discharges
  - 4.31 disposal of household waste
  - 4.32 disposal of industrial waste
  - 4.33 disposal of inert materials
  - 4.34 other discharges
- 4.4 Agricultural structures
- 4.5 Storage of materials

5. Transportation and communication

- 5.1 Communication networks
  - 5.11 paths, tracks, cycling tracks
  - 5.12 routes, autoroutes
  - 5.13 railway lines, TGV
  - 5.14 port areas
  - 5.15 airport
  - 5.16 aerodrome, heliport
  - 5.17 bridge, viaduct
  - 5.18 tunnel
  - 5.19 other communication networks
- 5.2 Energy transport
  - 5.21 electricity lines
  - 5.22 pipe lines
  - 5.23 other forms of energy transport
- 5.3 Shipping
- 5.4 Improved access to site

6. Leisure and tourism

(some included above under different headings)

- 6.1 Sport and leisure structures
  - 6.11 golf course
  - 6.12 skiing complex
  - 6.13 stadium
  - 6.14 circuit, track
  - 6.15 hippodrome
  - 6.16 attraction park
  - 6.17 sports pitch
  - 6.18 camping and caravans
  - 6.19 other sport / leisure complexes
- 6.2 Interpretative centres
- 6.3 Outdoor sports and leisure activities
  - 6.31 nautical sports
  - 6.32 walking, horseriding and non-motorised vehicles
  - 6.33 motorised vehicles
  - 6.34 mountaineering, rock climbing, speliology
  - 6.35 gliding, delta plane, paragliding, balooning
  - 6.36 skiing, off-piste
  - 6.39 other outdoor sports and leisure activities

7. Pollution and other human impacts/activities

- 7.1 Pollution
  - 7.11 water pollution
  - 7.12 air pollution
  - 7.13 soil pollution
  - 7.19 other forms of pollution
- 7.2 Noise nuisance
- 7.3 Trampling, overuse
- 7.4 Military manouvres
- 7.5 Vandalism

8. Human induced changes in hydraulic conditions

(wetlands and marine environments)

- 8.1 Landfill, land reclamation and drying out
  - 8.11 polderisation
  - 8.12 reclamation of land from sea, estuary or marsh
  - 8.13 infilling of ditches, dykes, ponds, pools, marshes or pits
- 8.2 Drainage
  - 8.21 management of aquatic and bank vegetation for drainage purposes
- 8.3 Removal of sediments (mud...)
- 8.4 Canalisation
- 8.5 Flooding
- 8.6 Modification of hydrographic functioning
  - 8.81 Modification of marine currents
  - 8.82 modifying structures of inland water courses
  - 8.83 management of water levels
- 8.7 Dumping, depositing of dredged deposits
- 8.8 Dykes, embankments, artificial beaches
  - 8.81 sea defense or coast protection works

9. Natural processes (biotic and abiotic)

- 9.1 Erosion
- 9.2 Silting up
- 9.3 Drying out
- 9.4 Submersion
- 9.5 Natural catastrophes
  - 9.51 inundation
  - 9.52 avalanche
  - 9.53 collapse of terrain, landslide
  - 9.54 storm, cyclone
  - 9.55 volcanic activity
  - 9.56 earthquake
  - 9.57 tidal wave
  - 9.58 fire
- 9.6 Biocenotic evolution
  - 9.61 drying out / accumulation of organic material
  - 9.62 eutrophication
  - 9.63 acidification
  - 9.64 invasion by a species
- 9.7 Interspecific faunal relations
  - 9.71 competition (example: gull/tern)
  - 9.72 parasitism
  - 9.73 introduction of disease
  - 9.74 genetic pollution
  - 9.75 predation
  - 9.76 antagonism arising from introduction of species
  - 9.77 antagonism with domestic animals
- 9.8 Interspecific floral relations
  - 9.81 competition
  - 9.82 parasitism
  - 9.83 introduction of disease
  - 9.84 genetic pollution
  - 9.85 lack of pollinating agents
  - 9.86 damage by game species

APPENDIX E

IMPACTS AND ACTIVITIES INFLENCING THE CONSERVATION STATUS OF THE SITE

CODE	CATEGORY
	Agriculture, Forestry and animal breeding
100	Cultivation
101	Modification of cultivation practices

102 Mowing / Cutting
110 Use of pesticides
120 Fertilisation
130 Irrigation
140 Grazing
141 Abandonment of pastoral systems
150 Restructuring agricultural land holding
151 Removal of hedges and copses
160 General Forestry management
161 Planting
162 Artificial planting
163 Replanting
164 Forestry clearance
165 Removal of undergrowth
166 Removal of dead and dying trees
167 Exploitation without replanting
170 Animal breeding
171 stock feeding
180 Burning
190 Agriculture and forestry activities not referred to above

Fishing, hunting and collecting

200 Fish and Shellfish Aquaculture
210 Professional fishing
211 fixed location fishing
212 trawling
213 drift-net fishing
220 Leisure fishing
221 bait digging
230 Hunting
240 Taking / Removal of fauna, general
241 collection (insects, reptiles, amphibians.....)
242 taking from nest (falcons)
243 trapping, poisoning, poaching
244 other forms of taking fauna
250 Taking / Removal of flora, general
251 pillaging of floristic stations
290 Hunting, fishing or collecting activities not referred to above

Mining and extraction of materials

300 Sand and gravel extraction
301 quarries
302 removal of beach materials
310 Peat extraction
311 hand cutting of peat
312 mechanical removal of peat
313 Exploration and extraction of oil or gas

320 Mines
321 open cast mining
330 Salt works
390 Mining and extraction activities not referred to above

Urbanisation, industrialisation and similar activities

400 Urbanised areas, human habitation
401 continuous urbanisation
402 discontinuous urbanisation
403 dispersed habitation
409 other patterns of habitation
410 Industrial or commercial areas
411 factory
412 industrial stockage
419 other industrial / commercial areas
420 Discharges
421 disposal of household waste
422 disposal of industrial waste
423 disposal of inert materials
424 other discharges
430 Agricultural structures
440 Storage of materials
490 Other urbanisation, industrial and similar activities

Transportation and communication

500 Communication networks
501 paths, tracks, cycling tracks
502 routes, autoroutes
503 railway lines, TGV
504 port areas
505 airport
506 aerodrome, heliport
507 bridge, viaduct
508 tunnel
509 other communication networks
510 Energy transport
511 electricity lines
512 pipe lines
513 other forms of energy transport
520 Shipping
530 Improved access to site
590 Other forms of transportation and communication

Leisure and tourism
(some included above under different headings)

600 Sport and leisure structures
601 golf course
602 skiing complex
603 stadium
604 circuit, track
605 hippodrome
606 attraction park
607 sports pitch
608 camping and caravans
609 other sport / leisure complexes
610 Interpretative centres
620 Outdoor sports and leisure activities
621 nautical sports
622 walking, horseriding and non-motorised vehicles
623 motorised vehicles
624 mountaineering, rock climbing, speliology
625 gliding, delta plane, paragliding, balooning
626 skiing, off-piste
629 other outdoor sports and leisure activities
690 Other leisure and tourism impacts not referred to above

Pollution and other human impacts/activities

700 Pollution
701 water pollution
702 air pollution
703 soil pollution
709 other forms or mixed forms of pollution
710 Noise nuisance
720 Trampling, overuse
730 Military manouvres
740 Vandalism
750 Other pollution or human impacts/activities

Human induced changes in hydraulic conditions (wetlands and marine environments)

800 Landfill, land reclamation and drying out, general
801 polderisation
802 reclamation of land from sea, estuary or marsh
803 infilling of ditches, dykes, ponds, pools, marshes or pits
810 Drainage
811 management of aquatic and bank vegetation for drainage purposes
820 Removal of sediments (mud...)
830 Canalisation
840 Flooding
850 Modification of hydrographic functioning, general

851 modification of marine currents
852 modifying structures of inland water courses
853 management of water levels
860 Dumping, depositing of dredged deposits
870 Dykes, embankments, artificial beaches, general
871 sea defense or coast protection works
890 Other human induced changes in hydraulic conditions

Natural processes (biotic and abiotic)

900 Erosion
910 Silting up
920 Drying out
930 Submersion
940 Natural catastrophes
941 inundation
942 avalanche
943 collapse of terrain, landslide
944 storm, cyclone
945 volcanic activity
946 earthquake
947 tidal wave
948 fire
949 other natural catastrophes
950 Biocenotic evolution
951 drying out / accumulation of organic material
952 eutrophication
953 acidification
954 invasion by a species
960 Interspecific faunal relations
961 competition (example: gull/tern)
962 parasitism
963 introduction of disease
964 genetic pollution
965 predation
966 antagonism arising from introduction of species
967 antagonism with domestic animals
969 other forms or mixed formsof interspecific faunal competition
970 Interspecific floral relations
971 competition
972 parasitism
973 introduction of disease
974 genetic pollution
975 lack of pollinating agents
976 damage by game species
979 other forms or mixed formsof interspecific floral competition
990 Other natural processes