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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE  
AND NATURAL HABITATS

**Group of Experts on  
Protected Areas and Ecological Networks**

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Room 8

**THE EMERALD NETWORK  
A NETWORK OF AREAS OF SPECIAL CONSERVATION INTEREST  
FOR EUROPE**

**INFORMATION DOCUMENT**

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by the Directorate of Culture  
and Cultural and Natural Heritage*

This document explains how the Emerald Network was born, its characteristics, its reach and development, and its relation with Natura 2000 and the Pan-European Ecological Network.

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## 1. Introduction

In June 1989 the Standing Committee of the Bern Convention held an extraordinary meeting exclusively devoted to habitat conservation within the Convention. At the meeting the Committee adopted an interpretative resolution [Resolution No. 1 (1989) on the provisions relating to the conservation of habitats] and three operative recommendations [Recommendations Nos. 14, 15 and 16 (1989)] aimed at the development of a network of areas under the Convention. A further recommendation [Recommendation No. 25 (1991) on the conservation of natural areas outside protected areas proper] was adopted at a later meeting of the Committee. All relevant resolutions and recommendations mentioned in this paper appear in its appendices.

In Recommendation No. 16 (1989) "*on Areas of Special Conservation Interest*" (ASCIs), the Standing Committee recommended Parties to "*take steps to designate Areas of Special Conservation Interest to ensure that the necessary and appropriate conservation measures are taken for each area situated within their territory or under their responsibility where that area fits one or several of the following conditions...*" (a list of conditions followed).

The Committee had wished that all these recommendations on habitat conservation be rapidly implemented by Contracting Parties but two major events delayed their implementation. The first was the fundamental change in the political map of Europe that followed the fall of the Berlin wall in October 1989. The Bern Convention had to change its priorities from the building of a network of areas to the extension of the Convention to the new democracies of Central and Eastern Europe. The second was the preparation, at the European Community, of a legal instrument aimed at implementing the Bern Convention within the Community. (As any other Contracting Party to the Convention, the European Community had the obligation to take "*the appropriate and necessary legislative and administrative measures*" to implement the Convention.) The legal instrument was finalised in May 1992 and was called the "Directive on the conservation of natural habitats and of wild fauna and flora". Happily, that text did not simply take the text of the Bern Convention, but went much further in developing the obligations on habitat protection (so much that it is now best known as the "Habitats Directive"). The Habitats Directive created "*a coherent European ecological network of special areas of conservation ... to be set up under the title of Natura 2000*".

In order to assure coherence between the network of Areas of Special Conservation Interest (ASCIs) to be designated under the Bern Convention and the network of Special Areas of Conservation (SACs) designated under the Habitats Directive, the Standing Committee to the Convention thought preferable to wait for the establishment of the proper mechanism by the Directive. In January 1996, a sufficient number of States of Central and Eastern Europe had become Parties to the Convention and were requesting the development of the network of ASCIs. The Standing Committee, realising this wish and noting that the Habitats Directive was already sufficiently advanced in its work to build Natura 2000, decided to adopt its Resolution No. 3 (1996), in which it resolved to "*set up a network (Emerald Network) which would include the Areas of Special Conservation Interest designated following its Recommendation No. 16*"; it furthermore "*encouraged Contracting Parties and observer states to designate Areas of Special Conservation Interest and to notify them to the Secretariat*". Resolution No. 3 (1996) was, in a sense, a second act of birth of the network, after its first creation in 1989. More precisely it was an act of baptism as the network had not been given a name in 1989 and it had proved rather awkward to promote a network under the name of "network to develop Recommendation No. 16 (1989) of the Standing Committee of the Convention on areas of special conservation interest". Short names have advantages.

## 2. Legal support of the Emerald Network

The Bern Convention does not deal exclusively with the protection of species. Articles 1, 2, 3, 4, 6 and 9 of the Convention deal with the protection of natural habitats, in particular:

- Habitats of the wild flora and fauna species (specially those in Appendices I and II);
- Endangered natural habitats;
- Areas of importance for migratory species.

Relevant texts of the Convention and the Standing Committee concerning protection of natural habitats are appended to this document.

The Emerald Network was created by virtue of Recommendation No. 16 (1989) and Resolution No. 3 (1996) and thus benefits from the "soft law" approach characteristic of recommendations. Nevertheless, the obligations to protect the habitats of species and endangered natural habitats are not "soft law" but rather strict obligations clearly marked in the Convention, and forming part of international law. The Standing Committee recommended Contracting Parties to implement their obligations regarding natural habitats through the taking of a number of measures, among which the designation of the Areas of Special Conservation Interest (ASCIs) that form the Emerald Network. Obviously obligations under the Bern Convention can only be requested from Contracting Parties. Other European states were "invited" to participate in the exercise. As for member States of the European Union (which are all Contracting Parties to the Convention), Resolution No 5 (1998) concerning the Rules for the Network of Areas of Special Conservation Interest stipulates that "for contracting parties which are Member States of the European Union Emerald Network sites are those of the Natura 2000".

### 3. Areas of special conservation interest (ASCIs)

#### What are Areas of special conservation interest?

Recommendation No. 16 defines Areas of Special Conservation Interest as those designated by states where that area fits one or several of the following conditions:

- a. it contributes substantially to the survival of threatened species, endemic species, or any species listed in Appendices I and II of the convention;
- b. it supports significant numbers of species in an area of high species diversity or supports important populations of one or more species;
- c. it contains an important and/or representative sample of endangered habitat types;
- d. it contains an outstanding example of a particular habitat type or a mosaic of different habitat types;
- e. it represents an important area for one or more migratory species;
- f. it otherwise contributes substantially to the achievement of the objectives of the convention.

It must be stressed that for Contracting Parties which are member States of the European Union the procedures established in the Birds Directive and Habitats Directive will be those to apply so that criteria for choice of those areas will be those of the Directive (which are largely the same criteria anyway).

The conditions above point clearly towards areas of a great ecological value for both the threatened and endemic species listed in the Appendices of the Bern Convention and for the endangered habitat types which have been identified by the Standing Committee as "requiring specific conservation measures".

The Emerald Network would thus not be simply a box, into which any type of protected area can be put, or a mere collection of areas designated under other schemes. Its coherence – much like that of Natura 2000 – comes from the limited criteria for choice: they have to be important and contribute substantially (the adjective is important!) to the objectives of the Convention.

#### Which States may designate ASCIs?

Resolution No. 3 (1996) encourages "*Contracting Parties and observer states to designate ASCIs*" and to notify them to the Secretariat.

The following 45 European States are Contracting Parties to the Convention :

Albania, Andorra, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, 'The former Yugoslav Republic of Macedonia', Turkey, Ukraine, United Kingdom;

The following 4 European states have the status of observer at the meetings of the Standing Committee: Belarus, Holy See, the Russian Federation, San Marino.

The participation of non-European Parties in the Emerald Network was decided by the Standing Committee in 1998. Four African states are Contracting Parties to the Convention: Burkina Faso, Morocco, Tunisia and Senegal. This raises to 53 the number of States, which may participate in the Emerald Network.

The participation of States, which are not yet Contracting Parties, is not only possible, but highly desirable. Resolution No. 3 (1996) invites "*European states, which are observer States in the Standing Committee of the Bern Convention, to participate in the network and designate ASCIs*".

Resolution No. 5 (1998) establishes that for Contracting Parties that are member States of the European Union, Emerald Network sites are those of the Natura 2000. Indeed no further action would be expected from them, the Natura 2000 network having identical objectives (and a more solid legal basis) to those of the Emerald Network. In this respect, the full and thorough implementation of the Habitats Directive is contemplated as a necessary and fundamental step into the achievement of the common goals it shares with the Bern Convention, both concerning the protection of natural habitats and the conservation of wild flora and fauna.

#### **What are the duties of states concerning the status and management of ASCIs?**

Once ASCIs have been designated by the states, that is not the end of the Emerald Network, but rather the start, as states are recommended to take a number of steps (by legislation or otherwise), to ensure that ASCIs are properly managed. They are asked in Recommendation No. 16 (1989) to "*ensure, wherever possible that*":

- a. ASCIs "*are the subject of an appropriate regime, designed to achieve the conservation of the factors*" responsible for the designation of the area;
- b. "*the agencies responsible for the designation and/or management and/or conservation of ASCIs have available to it sufficient manpower, training, equipment and resources (including financial resources) to enable them properly to manage, conserve and survey the areas*;
- c. *Appropriate ecological and other research is conducted, in a properly co-ordinated fashion, with a view to furthering the understanding of the critical elements in the management of ASCIs and to monitoring the status of the factors giving rise to their designation and conservation*;
- d. *Activities taking place adjacent to such areas or within their vicinity do not adversely affect the factors giving rise to the designation and conservation of those sites.*"

Furthermore, the States are recommended to take steps, as appropriate, in respect of ASCIs to:

- "a. *Draw up and implement management plans which will identify both short- and long-term objectives (such management plans can relate to individual areas or to a collection of areas such as heathlands)*;
- b. *Regularly review the terms of the management plans in the light of changing conditions or of increased scientific knowledge*;
- c. *Clearly mark the boundaries of ASCIs on maps and, as far as possible, on the ground*;
- d. *Advise the competent authorities and landowners of the extent of ASCIs and their characteristics*;
- e. *Provide for the monitoring of ASCIs and especially of the factors for which their conservation is important.*"

It is obvious from the paragraphs above that states are invited to pay much conservation attention to ASCIs. There is, however, no precise recommendation to give legal protection to ASCIs, the Standing Committee having preferred to keep a supple wording and having recommended that the areas "*be subject to the appropriate regime*". As usual the Standing Committee was more interested by the achievement of conservation results than by a particular "*area protection*" procedure. Some systems may work very well without strong legal obligations attached. In any case the Standing Committee asked states to look into the matter of the protection of ASCIs and the last point of Recommendation No. 16 reads as follows:

The Standing Committee recommends that Contracting Parties:

*"5. Determine those areas which remain inadequately provided for under existing mechanisms and improve the conservation status of such areas, using whatever mechanisms are appropriate in order to meet the requirements of the convention."*

Resolution No. 5 has a more precise wording: *"The governments are asked to inform the Secretariat of any important changes likely to affect negatively in a substantial way the ecological character of the designated ASCIs or the conditions having justified their designation. Where any such changes come to light, the Standing Committee may advise the government concerned on steps to be taken to ensure conformity with the provisions of Recommendation No.16 (1989)".*

Building the Emerald Network is designed to be a dynamic process, which will need regular updates of the information contained and the way the states comply with the recommendation. Paragraph 2 of Recommendation No. 16 invites states to *"review regularly or continually in a systematic fashion their performance in the implementation of [the designation of ASCIs]."*

### **How are ASCIs designated?**

Resolution No. 3 (1996), Recommendation No. 16 (1989) and Resolution No. 5 (1998) provide the fundamental basis for the designation of ASCIs. They encourage Contracting Parties and observer States *"to designate ASCIs and to notify them to the Secretariat"*. Thus the responsibility for designating ASCIs lies with the government of the States concerned. As for the technical details, it is worth noting that Resolution No. 3 created *"a group of experts to carry out the necessary activities related to the building up of the network"*.

The Group of experts has agreed in principle that the designation process would be done in such a way that it would be compatible with that of the Natura 2000 Network. Resolution No.5 (1998) establishes the procedure, which the governments should follow in designation of sites for the Emerald network.

In order to designate an ASCI, any government should deposit a standard Data Form with the Secretariat of the Council of Europe, that will register the designation. A Standard data form is based on the database designated for Natura 2000. The data has been modified to cover the larger geographical area and more numerous species of the Bern Convention. The forms can be filled in electronically and the software allows for the semi-automatic transfer of information gathered by other projects such as the CORINE-biotopes programme.

In accordance with the 'Rules for the Emerald Network', the Standing Committee has the right to advise the government concerned to designate one or more areas of particular interest to the Network. If a government designates an area, which does not meet the criteria, the Standing Committee may advise the government to withdraw the designation. If the government nevertheless maintains the designation, the Standing Committee may decide not to accept it.

The Standing Committee thought that, for the designation of ASCIs and for the protection of natural habitats, it was necessary to reinforce the work that Contracting Parties were carrying out in habitat protection. Thus, it decided to ask Parties (in Recommendation No. 14 (1989)) to:

*"1. Identify in the areas within their jurisdiction:*

- a. Species requiring specific habitat conservation measures;*
- b. Endangered natural habitats requiring specific conservation measures;*
- c. Migratory species requiring specific habitat conservation measures;*
- d. Species of which the breeding and/or resting sites require protection and their breeding and for each of these categories to indicate, as far as possible, their sites".*

Although the above tasks were addressed to Contracting Parties, the Standing Committee decided, after 1989, to prepare, for the whole of Europe lists for points *a*, *b*, *c* and *d* above.

In December 1996 the Standing Committee adopted Resolution No. 4 identifying endangered natural habitats (point *b.* above) requiring specific conservation measures.

In 1998 at its 18<sup>th</sup> meeting the Standing Committee adopted Resolution No. 6 (1998) listing the species requiring specific habitat conservation measures (including the migratory species mentioned in *c.* above).

The identification of species requiring specific habitat conservation measures is a useful step towards the designation of ASCIs because it will guide choices of sites of particular relevance for threatened species.

As for *d.* above (species of which the breeding and/or resting sites require protection), while all of them can be considered as included in *a.* above (*i.e.* they require specific habitat conservation measures), the identification of breeding and/or resting sites requiring protection will be clearly associated with the designation of ASCIs, which has not yet started.

The information on ASCIs shall be public and stored in a database, except for the information communicated as confidential. The group of experts will endeavour, under the aegis of the Standing Committee, to publish regularly lists of designated ASCIs and their character and to make that information available in electronic form.

For Contracting Parties of the Convention, which are also member states of the European Community, the procedure will be different. In order to assure harmonisation and compatibility with the Natura 2000 Network, they need only to notify, which areas have been effectively included in the Natura 2000 Network, after all the necessary verification process agreed in the Habitats Directive. This procedure is designed to assure full compatibility and coherence of both networks.

## **4. Relations of the Emerald Network with Natura 2000 and the Pan-European Ecological Network**

### **Link with Natura 2000**

The Bern Convention (1979) and the Habitats Directive (1992) have a complete coincidence of objectives. Both are international legal instruments aimed at the conservation of wild flora, fauna and natural habitats. Their main differences come from the territory they apply to (European Union member States for the Directive and the whole of Europe and part of Africa for the Convention) and to the fact that the Directive is more explicit on the obligations concerning conservation of natural habitats.

In any case the Directive is a piece of legislation designed to implement the Bern Convention in the European Union and, as such, it is fundamentally coherent with the Convention. As Resolution No. 1 and Recommendations Nos. 14, 15 and 16 were adopted in 1989, and Recommendation No. 25 in 1991 at the time the Directive was being prepared, it is clear that they also influenced the content of the Directive. For instance, the "*species requiring specific habitat conservation measures*" mentioned in Recommendation No. 14 has its equivalent in Annex II of the Directive ("*Animal and plant species of Community interest whose conservation requires the designation of Special Areas of Conservation*"). Also the "*endangered natural habitats requiring specific habitat conservation measures*" of Recommendation No. 14 became Annex I of the Directive ("*Natural habitat types of Community interest whose conservation requires the designation of Special Areas of Conservation*"). Even the term "*Areas of Special Conservation Interest*" (by the way, inspired by the United Kingdom's Sites of Special Scientific Interest) was taken in the Directive to become finally *Special Areas of Conservation*. The resemblance is even more striking in French (*Zones d'intérêt spécial pour la conservation/Zones spéciales de conservation*).



The great interest and merit of the Directive has been to convert into precise law the ideas and recommendations on habitat conservation contained in the Bern Convention, improving its reach and reinforcing its application in the member States of the European Union. It seems clear that the member States of the European Union will satisfy the habitat requirements of the Bern Convention through the designation of sites to the Natura 2000 Network. Thus, the Special Areas of Conservation of the Natura 2000 Network will also become Areas of Special Conservation Interest of the Emerald Network as it is foreseen in Resolution No. 5. This ensures the coherence of the Network for the whole of Europe.

There is an obvious advantage in this approach, which is that the building of the Emerald Network will benefit from the work carried out in the European Union to build Natura 2000, so that remaining work will be concentrated in States which are not members of the European Union. In this way it will be possible to extend to the whole of Europe a homogeneous network of areas, helping to break down in this sector the barriers that history, politics and economic reality have imposed on the European continent. This is in line with the missions, the challenges and the ambitions of the Council of Europe.

Additionally, it may also help some states, candidates to join the European Union, to do part of the preparatory work necessary to comply in advance with the Habitats Directive. It seems evident that if a state designates a coherent network of ASCIs within the Emerald Network, it will be in a more favourable position to designate its own SACs when it joins the Union. Such a possibility has led to close co-operation and co-ordination of the Council of Europe, serving the Bern Convention, and the European Commission, responsible for the Directive, in terms of technical and financial matters derived from the building of both networks.

In a sense the Emerald Network will take farther than the borders of the European Union the philosophy of the Natura 2000 Network and will materialise in the whole continent the fundamentally coincident objectives of both the Bern Convention and the Habitats Directive regarding conservation of natural habitats. Its success will be that of nature conservation in Europe.

### **Link with the Pan-European Ecological Network (PEEN)**

The setting up of the Pan-European Ecological Network had been conceived within the activities of the Pan-European Biological and Landscape Diversity Strategy (PEBLDS). The Pan-European Strategy was endorsed in October 1995 by the Ministers of Environment meeting in Sofia at the 3<sup>rd</sup> Ministerial Conference "Environment for Europe".

The PEEN will contain the following key elements:

- Core areas identified in accordance with the application of relevant international instruments (Bern Convention, European Union Habitats and Birds Directives, Ramsar Convention, Bonn Convention, Helsinki Convention, World Heritage Convention, the Fourth Protocol of the Barcelona Convention, etc.) ;
- Ecological corridors restoring the connectivity between different parts of habitats or connecting core areas ;
- Buffer zones mitigating the environmental impacts of activities located outside core areas and corridors ;
- Restoration zones where they are needed.

The Natura 2000 and Emerald Networks will constitute the two main components of the Pan-European Ecological Network owing to their political importance, their geographical extent and their biological and landscape diversity.

## 5. Progress in setting up the Emerald Network

With the adoption in December 1998 of Resolution No. 5 (1998) “Rules for the Emerald network”, Resolution No. 6 (1998) listing the species requiring specific habitat conservation measures and the development of the bilingual version of the Emerald software, preparatory work for the launching of the Emerald network was successfully concluded.

### *Pilot projects programme*

In the beginning of 1999, in order to assist the initial implementation phase of the Emerald Network, the Council of Europe proposed to a number of countries of Central and Eastern Europe to start the pilot projects in their respective countries. The overall objective of the Emerald network pilot project is to develop a pilot database, containing a fair proportion of the Areas of Special Conservation Interest and submit a proposal for the sites designation to the Standing Committee of the Bern Convention.

In order to achieve this objective, the countries have to form project teams, carry out the training of the teams (organise the workshop) and proceed with the scientific work (data collection on species and habitats concerned; field survey for a selected pilot area; mapping of distribution data on species and habitats) and technical tasks of installing the software, introduction of data on the sites into the database; preparing Standard Data sheets on the designated sites and transmitting this information in the electronic form to the Secretariat with the project report.

The tasks, which are to be carried out in the framework of the Emerald network pilot project, are described in detail in the document T-PVS/Emerald (2002) 16 “Building up the Emerald Network: a guide for Emerald Network country team leaders”, which is intended as a user-friendly guide for the countries, that are implementing Emerald pilot projects.

For Bern Convention Contracting Parties which are European Union Member States, the Emerald Network sites consist of the Natura 2000 sites. Before joining the European Union, the twelve following countries have implemented Emerald pilot projects as preparatory work to setting up the Natura 2000 network : Bulgaria, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia and Slovakia. The other countries engaged in the constitution of the Emerald Network are : in Western Europe, Iceland, Norway, Switzerland, in Central and Eastern Europe, Belarus, Moldova, the Russian Federation and the Ukraine; in South-Eastern and East Europe, Albania, Bosnia-Herzegovina, Croatia, Montenegro, “the former Yugoslav Republic of Macedonia”, Serbia, Turkey; and in the South Caucasus, Armenia, Azerbaijan and Georgia. Today, Emerald training workshops have been organised in each of these countries.

In Africa, three Contracting Parties of the Bern Convention have implemented pilot projects : Burkina Faso, Senegal and Morocco. The Emerald Network could also be launched in Tunisia, at the request of the national authorities.

### *Regional development programmes of the Emerald Network*

An Emerald Network development programme was implemented in 2005/2008, in South-Eastern Europe, as a continuation of the initial pilot projects launched by the Council of Europe. This programme, funded through CARDS grants and thus called “the CARDS/Emerald programme” targetted the following countries: Albania, Bosnia-Herzegovina, Croatia, Montenegro, “The Former Yugoslav Republic of Macedonia” and Serbia. Its overall objective was to identify 100 % of the potential Emerald sites in these countries. The programme benefitted from a financial contribution of the European Environmental Agency and represented an important tool contributing to preparing the countries concerned for the future work on Natura 2000 and for advance compliance with the Habitats and Birds Directives.

A Joint Programme with the European Union has been launched in 2009, for a period of three years, in order to substantially develop the Emerald Network in the seven following countries: Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine and the European part of the Russian Federation. The objective of this Joint Programme is to identify at the end of 2011 all the potential Emerald sites in the three countries of South-Caucasus and in Moldova; the objective set for Belarus and the Russian Federation amounts to 50 % of the potential Emerald sites while in Ukraine, 80 % of the potential Emerald sites are expected to be identified.

## **Appendix 1**

### **Articles 1, 2, 3, 4, 6.b and 9 of the Convention**

“(…)

#### **Chapter I – General provisions**

##### **Article 1**

- 1 The aims of this Convention are to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the co-operation of several States, and to promote such co-operation.
- 2 Particular emphasis is given to endangered and vulnerable species, including endangered and vulnerable migratory species.

##### **Article 2**

The Contracting Parties shall take requisite measures to maintain the population of wild flora and fauna at, or adapt it to, a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements and the needs of sub-species, varieties or forms at risk locally.

##### **Article 3**

- 1 Each Contracting Party shall take steps to promote national policies for the conservation of wild flora, wild fauna and natural habitats, with particular attention to endangered and vulnerable species, especially endemic ones, and endangered habitats, in accordance with the provisions of this Convention.
- 2 Each Contracting Party undertakes, in its planning and development policies and in its measures against pollution, to have regard to the conservation of wild flora and fauna.
- 3 Each Contracting Party shall promote education and disseminate general information on the need to conserve species of wild flora and fauna and their habitats.

#### **Chapter II – Protection of habitats**

##### **Article 4**

- 1 Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the conservation of the habitats of the wild flora and fauna species, especially those specified in the Appendices I and II, and the conservation of endangered natural habitats.
- 2 The Contracting Parties in their planning and development policies shall have regard to the conservation requirements of the areas protected under the preceding paragraph, so as to avoid or minimise as far as possible any deterioration of such areas.
- 3 The Contracting Parties undertake to give special attention to the protection of areas that are of importance for the migratory species specified in Appendices II and III and which are appropriately situated in relation to migration routes, as wintering, staging, feeding, breeding or moulting areas.
- 4 The Contracting Parties undertake to co-ordinate as appropriate their efforts for the protection of the natural habitats referred to in this article when these are situated in frontier areas.

#### **Chapter III – Protection of species**

##### **Article 6**

Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. The following will in particular be prohibited for these species:

- b the deliberate damage to or destruction of breeding or resting sites;

##### **Article 9**

- 1 Each Contracting Party may make exceptions from the provisions of Articles 4, 5, 6, 7 and from the prohibition of the use of the means mentioned in Article 8 provided that there is no other satisfactory solution and that the exception will not be detrimental to the survival of the population concerned:

- for the protection of flora and fauna;
  - to prevent serious damage to crops, livestock, forests, fisheries, water and other forms of property;
  - in the interests of public health and safety, air safety or other overriding public interests;
  - for the purposes of research and education, of repopulation, of reintroduction and for the necessary breeding;
  - to permit, under strictly supervised conditions, on a selective basis and to a limited extent, the taking, keeping or other judicious exploitation of certain wild animals and plants in small numbers.
- 2 The Contracting Parties shall report every two years to the Standing Committee on the exceptions made under the preceding paragraph. These reports must specify:
- the populations which are or have been subject to the exceptions and, when practical, the number of specimens involved;
  - the means authorised for the killing or capture;
  - the conditions of risk and the circumstances of time and place under which such exceptions were granted;
  - the authority empowered to declare that these conditions have been fulfilled, and to take decisions in respect of the means that may be used, their limits and the persons instructed to carry them out;
  - the controls involved. ”

(...)”

## Appendix 2

### **Resolution No. 1 (1989) of the Standing Committee on the provisions relating to the conservation of habitats** (adopted by the Standing Committee of 9 June 1989 at its 8<sup>th</sup> meeting)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the convention,

Having regard to the obligations laid down by the convention, particularly in Articles 1, 2, 3, 4, 6.b and 9;

Conscious of the fact that most of these obligations bind Contracting Parties as to the results to be attained, while leaving them the choice of the means to be used for that purpose;

Recognising, however, that the absence of a common interpretation of certain provisions of the convention, and certain terms contained therein, may lead to considerable differences in the legal interpretation of the convention by individual Contracting Parties and may undermine the effectiveness of the convention;

Desirous to promote agreement, as much as possible, among Contracting Parties as to what is required to be done in order to implement the convention;

Convinced that a common interpretation of certain of the provisions and terms of the convention, particularly in Articles 4, 6.b and 9, will facilitate the achievement of the aims of the convention in a harmonised way by all Contracting Parties,

Resolves that, for the purpose of improving the effectiveness of the convention, the terms listed hereunder are to be interpreted as follows:

1. For the purpose of the convention:

- a.* "habitat" of a species (or population of a species) means the abiotic and biotic factors of the environment, whether natural or modified, which are essential to the life and reproduction of members of that species (or population of that species) and which occur within the natural geographical range of the species (or population of that species);
- b.* "natural habitat" means a biotope, that is a distinctive type of terrestrial or aquatic area distinguished by geographic, abiotic or biotic features, whether entirely natural or modified as a result of human activities;

2. For the purpose of Article 4:

- a.* "necessary measures" means in particular those measures which are required:
  - i.* to ensure the conservation of the habitats of those species which have been identified by the Standing Committee, on the basis of scientific evidence, as requiring specific habitat conservation measures and, most particularly, of those part of their geographical range which are essential for the conservation of those species (hereinafter referred to as "critical sites");
  - ii.* to ensure the conservation of those natural habitats which have been identified by the Standing Committee, on the basis of scientific evidence, as being endangered natural habitats and requiring specific conservation measures;
- b.* "appropriate measures" means in particular those measures, pursuant to paragraph *a* above, which are able to ensure the conservation of the habitat of particular species or of particular natural habitats;
- c.* "conservation" means the maintenance and, where appropriate, the restoration or improvement of the abiotic and biotic features which form the habitat of a species or a natural habitat, as defined in paragraph 1 above, and includes, where appropriate, the control of activities which may indirectly result in the deterioration of such habitats, including areas of importance for the migratory species specified in Appendices II and III, even where such areas are outside the jurisdiction of the Party in question;
- d.* "areas of importance for the migratory species specified in Appendices II and III" means the critical sites, wherever situated, of those migratory species which have been identified by the Standing Committee, on the basis of scientific evidence, as requiring specific habitat conservation measures;

- e.* the conditions attached by Article 9 to the making of exceptions from the provisions of Article 4, as well as the obligation laid down in that article to report such exceptions to the Standing Committee, shall apply to:
  - i. the critical sites of those species which have been identified by the Standing Committee, pursuant to paragraph *a.i* above;
  - ii. natural habitats which have been identified by the Standing Committee, pursuant to paragraph *a.ii* above;
  - iii. areas of importance for migratory species which have been identified by the Standing Committee, pursuant to paragraph *d* above;
- 3. For the purpose of Article 6.*b*:
  - a.* "breeding and resting sites" means, in respect of each species for which the Standing Committee has identified that breeding and/or resting sites require protection, those breeding and/or resting site types in respect of which the Standing Committee has considered that such measures are required;
  - b.* "deliberate damage to or destruction of breeding or resting sites" means, subject to relevant provisions of the law of each Contracting Party, any act committed with the intention of destroying or causing harm to breeding or resting sites as defined in paragraph *a* above, and any act committed without the intention to cause damage or destruction but in the knowledge that such would probably be the consequences of the act;
  - c.* the conditions attached by Article 9 to the making of exceptions from the provisions of Article 6.*b*, as well as the obligation, laid down in that article, to report these exceptions to the Standing Committee, only apply to those breeding and resting site types in respect of which the Standing Committee has considered that they require protection pursuant to paragraph *a* above.

## Appendix 3

### **Recommendation No. 14 (1989) of the Standing Committee on species habitat conservation and on the conservation of endangered natural habitats** (adopted by the Standing Committee on 9 June 1989)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the convention,

Considering Articles 3 and 4 of the convention;

Having regard to Resolution No. 1 (1989) on the provisions relating to the conservation of habitats, and to the decision it has taken to act by virtue of paragraph 2, sub-paragraphs *a* and *d*, and paragraph 3, sub-paragraph *a* of that resolution,

Recommends that Contracting Parties:

1. identify in the areas within their jurisdiction:
  - a.* species requiring specific habitat conservation measures;
  - b.* endangered natural habitats requiring specific conservation measures;
  - c.* migratory species requiring specific habitat conservation measures;
  - d.* species of which the breeding and/or resting sites require protection and their breeding and/or resting site types requiring protection;and for each of these categories to indicate, as far as possible, their sites;
2. identify, furthermore, endangered species on their territory requiring recovery plans, and develop and implement such plans;
3. communicate to the Standing Committee the results of their work in the implementation of the recommendations above;
4. ensure that appropriate and necessary measures of conservation are taken for the species, habitats and sites identified according to paragraphs 1 and 2 above.



## **Appendix 4**

### **Recommendation No. 15 (1989) of the Standing Committee on the conservation of endangered natural habitat types**

(adopted by the Standing Committee on 9 June 1989)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the convention,

Having regard to the provisions of Articles 4 and 9, paragraph 1, of the convention and to Resolution No. 1 (1989) on the provisions relating to the conservation of habitats;

Conscious of the need not to endanger the survival of habitat types,

Recommends that Contracting Parties make exceptions to Article 4, by virtue of Article 9, paragraph 1, with respect to endangered natural habitat types as identified by the Standing Committee in Resolution No. 1 (1989) only in exceptional circumstances and provided that the exceptions will not be detrimental to the survival of the habitat type concerned.

## Appendix 5

### **Recommendation No. 16 (1989) of the Standing Committee on areas of special conservation interest**

(adopted by the Standing Committee on 9 June 1989)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under Article 14 of the convention,

Having regard to Article 4 of the convention and to Resolution No. 1 (1989) on the provisions relating to the conservation of habitats;

Desirous of establishing common criteria for the identification of areas to be conserved;

Desirous also of ensuring that the conservation and management of such areas have regard to certain minimum requirements,

Recommends that Contracting Parties:

1. take steps to designate areas of special conservation interest to ensure that necessary and appropriate conservation measures are taken for each area situated within their territory or under their responsibility where that area fits one or several of the following conditions:
  - a. it contributes substantially to the survival of threatened species, endemic species, or any species listed in Appendices I and II of the convention;
  - b. it supports significant numbers of species in an area of high species diversity or supports important populations of one or more species;
  - c. it contains an important and/or representative sample of endangered habitat types;
  - d. it contains an outstanding example of a particular habitat type or a mosaic of different habitat types;
  - e. it represents an important area for one or more migratory species;
  - f. it otherwise contributes substantially to the achievement of the objectives of the convention;
2. review regularly or continually in a systematic fashion their performance in the implementation of paragraph 1 above;
3. take such steps, either by legislation or otherwise, to ensure wherever possible that:
  - a. areas referred to in paragraph 1 above are the subject of an appropriate regime, designed to achieve the conservation of the factors set out in that paragraph;
  - b. the agencies responsible for the designation and/or management and/or conservation of such areas or any one of them have available to it sufficient manpower, training, equipment and resources (including financial resources) to enable them properly to manage, conserve and survey the areas;
  - c. appropriate ecological and other research is conducted, in a properly co-ordinated fashion, with a view to furthering the understanding of the critical elements in the management of such areas and to monitoring the status of the factors giving rise to their designation and conservation;
  - d. activities taking place adjacent to such areas or within their vicinity do not adversely affect the factors giving rise to the designation and conservation of those sites;
4. take steps, as appropriate, in respect of areas referred to in paragraph 1 above, to:
  - a. draw up and implement management plans which will identify both short- and long-term objectives (such management plans can relate to individual areas or to a collection of areas such as heathlands);
  - b. regularly review the terms of the management plans in the light of changing conditions or of increased scientific knowledge;
  - c. clearly mark the boundaries of such areas on maps and, as far as possible, on the ground;
  - d. advise the competent authorities and landowners of the extent of the areas and their characteristics;
  - e. provide for the monitoring of such areas and especially of the factors for which their conservation is important;
5. determine those areas which remain inadequately provided for under existing mechanisms and improve the conservation status of such areas, using whatever mechanisms are appropriate in order to meet the requirements of the convention.

## Appendix 6

### **Recommendation No. 25 (1991) of the Standing Committee on the conservation of natural areas outside protected areas proper** (adopted by the Standing Committee on 6 December 1991)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under Article 14 of the convention,

Having regard to Articles 1, 2, 3 and 4 of the convention and to its Resolution No. 1 (1989);

Conscious that most of the obligations under Articles 1, 2, 3 and 4 of the convention are binding upon the Contracting Parties as to the results to be attained while allowing them a choice of the means to be used for that purpose;

Conscious that the establishment of protected areas of the A and B categories defined in Resolution 73 (30) of the Committee of Ministers of the Council of Europe of 26 October 1973 may prove to be insufficient to comply with the obligations of the convention;

Recognising that measures to conserve natural habitats outside protected areas thus defined are necessary for the protection of some species;

Recognising, however, that certain forms of action have proved particularly effective in the countries where they have been adopted and that the experience thus acquired should be brought to the attention of all Contracting Parties;

Recognising that flora and fauna conservation is possible only in the context of a regional planning policy conserving their environments and habitats,

Recommends that Contracting Parties:

1. examine the possibility, for the purpose of the convention, of taking conservation measures such as those mentioned as examples in the appendix to this recommendation to improve conservation outside the protected areas of categories A and B of the above-mentioned Resolution (73) 30 of the Committee of Ministers;
2. communicate to the Secretariat, for the information of the other Contracting Parties, any other relevant measures they have already taken or intend to take as well as any available information on the effects of measures they have taken.

#### **Appendix**

##### **Examples of conservation measures<sup>1</sup>**

##### *1. General measures for promoting ecological management of the environment as a whole*

1. Submit all projects, plans, programmes and measures with an impact on the natural and semi-natural environment to an examination of environmental compatibility with a view to protecting nature and landscapes and conserving them intact in cases where there is an overriding general interest in doing so.
2. Take care to use agricultural land and forests in a sustainable way by making maximum possible use of natural protection capacities and by reducing inputs.
3. Encourage the use of environment friendly technologies when carrying out technical operations in natural or semi-natural environment, and replace large-scale single operations by regular maintenance measures which are more evenly distributed in time and space. If it is impossible to avoid affecting natural or semi-natural environments which are worth protecting, ensure that mitigation measures are taken to minimise as much as possible the negative effects of the operations, to restore, or failing this, to replace them by adequate compensation.

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<sup>1</sup> These examples have been taken from document T-PVS (90) 52 on "The conservation of natural habitats outside protected areas proper – a juridical analysis", Cyrille de Klemm, 1990.

## II. Areas of special conservation interest

1. Draw up a detailed inventory of areas of special conservation interest as defined in paragraph 1 of the Standing Committee's Recommendation No. 16 (1989) and ensuring the conservation and management of those areas, when it is not possible or appropriate to include them in protected areas of categories A and B, by taking, in particular, the following measures:

- a. including those areas in land-use planning zones which enjoy a high level of protection;
- b. requiring that any development or activity liable to have an adverse ecological impact on those areas be subject to the authorisation, consultation, or agreement of the nature conservation authorities;
- c. requiring that any request for permission submitted in accordance with paragraph b above be accompanied by an environmental impact assessment or equivalent assessment making it possible to determine the precise effects of the proposed development or activity on the ecological characteristics which warranted the inclusion of those areas in the inventory;
- d. advising government agencies against carrying out, authorising or subsidising developments or activities which are shown by the environmental impact assessment or equivalent assessment adversely to affect significantly those ecological characteristics;
- e. granting exceptions to these provisions only under the conditions specified in Article 9 of the convention and in Recommendation No. 15 (1989) of the Standing Committee;
- f. taking the necessary measures to ensure that laws and regulations laying down obligations with regard to drainage, use of phytosanitary products, dredging of watercourses, consolidation of land-holdings or other activities liable to harm the natural environment are not compulsorily applicable to areas appearing in the inventory.

2. Facilitate the acquisition and management of areas of special conservation interest by the state or other public bodies in particular by taking the following measures:

- a. *Acquisition:*
  - i. establishing a right of pre-emption for the state or other public bodies in respect of land included in the said areas;
  - ii. authorising land forming part of those areas to be transferred to the state in lieu of inheritance tax;
  - iii. introducing incentives to encourage gifts and bequests of land included in those areas to the state or to other public bodies, such as tax concessions, the payment of an annuity to donors until their deaths or authorising donors to stay on until their death, as usufructuaries;
- b. *Management:*
  - i. when a government agency is not in a position to manage land it owns or is responsible for within an area of special interest, arranging for the land to be managed by another government agency or a private person;
  - ii. authorising the conclusion of long-term management contracts between the government agency that owns or is responsible for the land and a public body or private person;
  - iii. authorising the nature conservation agency to conclude co-operative agreements with the public body owning or responsible for the land, for the purpose of managing the land concerned.

3. Facilitate the acquisition, conservation and management of areas of special conservation interest by private persons, in particular by taking the following measures:

- a. *Acquisition:*  
granting subsidies, loans and tax concessions to private nature conservation organisations for the acquisition of land included in such areas;
- b. *Conservation:*
  - i. setting up voluntary reserves approved by a government agency and enjoying as such the same level of protection as reserves set up by government agencies themselves;
  - ii. authorising the imposition by contract of land use restrictions which may be binding upon successors in title;
  - iii. granting tax concessions to owners or occupiers who comply with these restrictions. It should be possible to apply the concessions to property tax and inheritance tax. In the latter case, it should be possible to grant concessions to heirs who undertake to conserve and manage the areas concerned according to a management plan drawn up by the conservation authorities. In the event of failure to observe the conditions in this plan, inheritance tax would immediately become due;
  - iv. providing the state with the necessary legal powers to introduce immediate controls prohibiting all potentially harmful activities in the event of a threat to the integrity of an area of special interest and, where necessary, to expropriate the land in question;
- c. *Management:*
  - i. setting up a system of management agreements, where such a system does not already exist, between the state or another public body on the one hand, and the owners of land included in areas of special interest on the other, whereby the latter undertake to perform or refrain from certain actions in return for fair remuneration and other possible benefits such as tax concessions;
  - ii. eliminating legal obstacles liable to hamper the conservation of land within areas of special interest, particularly rules prohibiting the owner from including in a farm lease clauses that limit the tenant farmer's freedom, for example with regard to the removal of banks and hedges or the ploughing up of meadowland.

### III. *Ecological corridors*

Encourage the conservation and, where necessary, the restoration of ecological corridors in particular by taking the following measures:

#### 1. *Rights of way of roads, railways and high-voltage lines*

Authorising agreements between nature conservation authorities and government or other public bodies owning or responsible for such areas with a view to maintaining natural plant cover and preserving the sites of rare or endangered plant species, prohibiting or limiting the use of phytosanitary products and of fire in those areas, as well as restricting the use of machinery to the strict minimum necessary for safety reasons.

Taking measures to restore or to compensate for the loss of ecological corridors caused by the building of new roads and other constructions that prevent animals from migrating or interchanging. In these cases, the responsible authority has to safeguard such crossing routes, for example, by building special tunnels for otters, badgers, by building so-called cerviducts for deer, by closing roads during the spring migrational period for amphibians, or by any other appropriate measures.

#### 2. *Watercourses*

Maintaining certain watercourses or parts thereof in their natural state, and where necessary restoring them, by prohibiting the building of dams, any straightening or canalisation work and the extraction of materials from their beds, and by maintaining or restoring vegetation along their banks. Ensuring that dredging operations, when they prove essential, do not harm the integrity of the aquatic ecosystem or of the banks.

On other watercourses, limiting canalisation and straightening work to whatever is absolutely essential, providing fish passes across dams, maintaining a minimum flow in low-water periods as far as possible, limiting extraction of materials from the bed and maintaining vegetation along the banks.

### IV. *Habitat types*

1. Ensure the conservation of endangered habitat types such as wetlands, heathlands and dry grasslands by requiring that all projects liable to cause their deterioration or destruction be subject to the permission (or agreement) of the authority responsible for nature conservation.

2. Subject permission, once it has been granted, to an obligation, where appropriate, to take suitable compensation measures.

3. Set up a system of management agreements, together with financial incentives, to provide for the management of certain habitat types, whether or not they are protected.

### V. *Landscape features*

Encourage the conservation of landscape features such as streams, ponds, small woods, individual trees, hedges and natural grassland, in particular, by taking the following measures:

1. drawing up in each municipality an inventory of landscape features which should be preserved;
2. taking these features into account in the preparation or revision of land-use plans by including them in zones enjoying a high level of protection;
3. setting up a system of management agreements for the preservation and, where appropriate, the management of the landscape features thus protected;
4. for each agricultural production unit, establishing, in agreement with the farmer, a conservation plan comprising:
  - a. an ecological analysis of the unit;
  - b. a map of landscape features and natural areas to be conserved and, where necessary, restored or reconstituted;
  - c. practicable and advisable "extensification" methods;
  - d. setting aside certain plots of land where appropriate, selected on the basis of an ecological study;
  - e. a management agreement specifying the results to be achieved, the means needed to achieve them and the amounts to be paid to the farmer by way of compensation or remuneration for services rendered.

### VI. *Ecologically sensitive areas*

Set up special legal regimes applicable to certain areas requiring specific measures on account of their ecological vulnerability and the various kinds of pressure to which they are exposed, including, in particular, the following measures:

#### 1. *Coastlines and adjacent marine areas*

- a. setting up a legal regime for natural areas in the public maritime domain which takes account of the need to preserve the natural habitats comprising them and which regulates activities liable to affect them adversely;
- b. instituting binding land-use plans for marine areas which are of special ecological interest or require special protective measures on account of their vulnerability;
- c. adopting special planning regulations prohibiting or limiting new development, especially the building of roads, on the coastline;

- d. protecting landscape features and habitats characteristic of coastal ecosystems, such as dunes, beaches, cliffs, wetlands, salt marshes and woodlands, by including them in land-use planning zones enjoying the highest level of protection;
- e. as far as possible, eliminating the difficulties due to the division of powers between different government agencies on either side of the upper limit of the public maritime domain by setting up a co-ordinating mechanism allowing for the management of the coastline and the adjacent marine areas, particularly protected ones, as a single unit.

## 2. *Montains*

- a. providing for financial means of encouragement along with management agreements to maintain the rural mountain population, while promoting farming methods respectful of natural habitats and the balance of nature; adjusting aid arrangements for stock-breeding in mountain areas to the carrying capacity of the pasture land;
- b. designating areas where the building of roads, except access tracks to pastures and forests, and the construction of buildings and other structures are prohibited;
- c. including in land-use planning zones enjoying the highest level of protection the landscape features and habitats typical of mountain ecosystems, such as glaciers, névés, moraines, rock faces, scree, high-altitude lakes, torrents, peat bogs and dry grasslands;
- d. regulating off-piste skiing, the spreading of artificial snow, the use of cross-country vehicles and any other activities liable to harm mountain ecosystems.

## 3. *Flood plains*

- a. maintaining and, where possible, restoring the natural cycle of flooding in flood-plains;
- b. designating flood-risk areas and subjecting them to special restrictions, particularly with regard to building;
- c. protecting landscape features and habitats that are typical of flood plains, such as alluvial forests, water meadows, oxbow lakes and islands, by including them in land-use planning zones enjoying the highest level of protection;
- d. encouraging the continuation of traditional agricultural and stock breeding methods by means of subsidies and management agreements;
- e. requiring prior authorisation for any drainage or conversion of wetlands in a flood plain;
- f. creating river nature parks, in accordance with paragraph VII.3 below.

## 4. *Forests*

- a. maintaining at least 2% of the surface area of publicly-owned indigenous and natural forests in its natural state by letting biological cycles, including the recycling of dead wood, occur freely;
- b. setting up a system of management agreements with the owners of private forests to encourage the conservation of certain forest ecosystems or the continuation of certain forestry practices;
- c. adopting regulations to ensure the protection of forest clearings and edges;
- d. requiring that, after an environmental impact assessment has been carried out, any afforestation of semi-natural or natural non-wooded land and any conversion of natural forest into artificial forest be subject to the permission (or agreement) of the authority responsible for nature conservation and/or forest management.

## VII. *Protected landscapes*

1. Set up a network of nature parks of the C and D categories defined in Resolution (73) 30 of the Committee of Ministers with a view to conserving European landscapes by managing all their component elements in an integrated way.
2. Provide each nature park thus defined with the following means of action:
  - a. a specific land-use planning instrument with which the land-use plans of municipalities situated in the park must comply, and which includes the zoning and regulation of human activities according to the conservation needs of each zone;
  - b. incentives to encourage the maintenance of traditional activities compatible with the conservation needs of each zone, or necessary to achieve them;
  - c. administration specific to each park and empowered to grant the permits required to carry out those activities which are regulated in each zone;
  - d. adequate funds and staff for providing information, encouragement and financial or technical assistance to all public bodies and private individuals that own land or carry out activities in the park.
3. Pay particular attention to establishing river nature parks covering the whole width of the flood plain, on either side of certain watercourses or parts thereof, where hydraulic schemes, drainage and any activities liable to harm river and alluvial ecosystems are regulated.

## Appendix 7

### **Resolution No. 3 (1996) of the Standing Committee concerning the setting up of a Pan-European Ecological Network** (adopted by the Standing Committee on 26 January 1996)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the convention,

Desirous to pursue the implementation of its Recommendation No. 16 (1989) on areas of special conservation interest;

Desirous also to contribute as a first step to the implementation of the Pan-European Biological and Landscape Diversity Strategy, in particular to Theme 1 of the strategy "Establishing the Pan-European ecological network", as endorsed at the Ministerial Conference "Environment for Europe" (Sofia, Bulgaria, October 1995),

Resolves to:

1. set up a network (Emerald Network) which would include the areas of special conservation interest designated following its Recommendation No. 16;
2. create a group of experts to carry out the necessary activities related to the building up of the network;
3. encourage contracting parties and observer states to designate areas of special conservation interest and to notify them to the Secretariat;
4. invite European states which are observer states in the Standing Committee of the Bern Convention to participate in the network and designate areas of special conservation interest.

## Appendix 8

### **Resolution No. 4 (1996) of the Standing Committee listing endangered natural habitat requiring specific conservation measures** (adopted by the Standing Committee on 6 December 1996)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the convention,

Having regard to its Resolution No. 1 (1989) on the provisions relating to the conservation of habitats,

Having regard to its Recommendation No. 14 (1989) on species habitat conservation and on the conservation of endangered natural habitats,

Acknowledging that for Contracting Parties which are Member States of the European Union the list of natural habitats requiring specific conservation measures corresponds to Annex I of the Council Directive 92/43/EEC,

Resolves to identify the natural habitats listed in Annex I to this resolution as endangered natural habitat types requiring specific conservation measures. (Selected habitats are marked with the sign !)

Resolves to update periodically Annex I to this resolution.

#### **Annex 1**

#### **ENDANGERED NATURAL HABITAT TYPES**

- |                  |   |
|------------------|---|
| <b><u>1.</u></b> | <b><u>COASTAL AND HALOPHYTIC COMMUNITIES</u></b>            |
| <b>11.</b>       | <b>OCEAN AND SEAS, MARINE COMMUNITIES</b>                   |
| <b>11.2</b>      | <b>Benthic communities</b>                                  |
| ! 11.22          | Sublittoral soft seabeds                                    |
| ! 11.24          | Sublittoral rocky seabeds and kelp forests                  |
| ! 11.25          | Sublittoral organogenic concretions                         |
| ! 11.26          | Sublittoral cave communities                                |
| ! 11.27          | Soft sediment littoral communities                          |
| <b>! 11.3</b>    | <b>Sea-grass meadows</b>                                    |
| <b>11.4</b>      | <b>Brackish sea vascular vegetation</b>                     |
| ! 11.42          | Marine spike-rush beds                                      |
| <b>12.</b>       | <b>SEA INLETS AND COASTAL FEATURES</b>                      |
| <b>! 12.7</b>    | <b>Sea-caves</b>  |
| <b>13.</b>       | <b>ESTUARIES AND TIDAL RIVERS</b>                           |
| <b>! 13.2</b>    | <b>Estuaries</b>  |
| <b>! 14.</b>     | <b>MUD FLATS AND SAND FLATS</b>                             |
| <b>15.</b>       | <b>SALTMARSHES, SALT STEPPES, SALT SCRUBS, SALT FORESTS</b> |
| <b>15.1</b>      | <b>Annual salt pioneer swards</b>                           |
| ! 15.1132        | Venetian glasswort swards                                   |
| ! 15.114         | Iberian glasswort swards                                    |
| ! 15.115         | Continental glasswort swards                                |
| ! 15.13          | Sea-pearlwort communities                                   |
| ! 15.14          | Central Eurasian crypsoid communities                       |



- 15.3 Boreo-nemoral coastal salt meadows**
  - ! 15.32 Atlantic lower schorre communities
  - ! 15.33 Atlantic upper schorre communities
  - ! 15.34 Atlantic brackish saltmarsh communities
- ! 15.4 Suboceanic inland salt meadows**
- ! 15.5 Mediterranean salt meadows**
- ! 15.6 Mediterraneo-Nemoral saltmarsh scrubs**
- ! 15.7 Mediterraneo-Canarian xero-halophile scrubs**
- ! 15.8 Mediterranean salt steppes**
- ! 15.9 Mediterranean gypsum scrubs**
- ! 15.A Continental salt steppes and saltmarshes**
- 
- 16. COASTAL SAND DUNES AND SAND BEACHES**
- ! 16.2 Dunes**
- ! 16.3 Humid dune-slacks**
- 
- 17. SHINGLE BEACHES**
- ! 17.3 Sea kale communities**
- 
- 1A. COASTAL AGROSYSTEMS**
- ! 1A.1 Machair**
- 
- 2. NON-MARINE WATERS**
- 
- ! 21. COASTAL LAGOONS**
- 
- 22. STANDING FRESH WATER**
- 
- 22.1 Permanent ponds and lakes**
  - ! 22.11 Lime-deficient oligotrophic waterbodies
- 
- 22.3 Amphibious communities**
  - ! 22.31 Euro-Siberian perennial amphibious communities
  - 22.32 Euro-Siberian dwarf annual amphibious swards
    - ! 22.321 Dwarf spike-rush communities
    - ! 22.322 Dune-slack centaury swards
    - 22.323 Dwarf toad-rush communities
      - ! 22.3232 Small galingale swards
      - ! 22.3233 Wet ground dwarf herb communities
  - 22.34 Mediterraneo-Atlantic amphibious communities
    - ! 22.341 Short Mediterranean amphibious swards
    - ! 22.342 Tall Mediterranean amphibious swards
    - ! 22.344 *Serapias* grasslands
  - 22.35 Central Eurasian amphibious communities
    - ! 22.351 Pannonic riverbank dwarf sedge communities
- 
- 22.4 Euhydrophyte communities**
  - 22.41 Free-floating vegetation
    - ! 22.412 Frogbit rafts
    - ! 22.413 Water-soldier rafts
    - ! 22.414 Bladderwort colonies
    - ! 22.415 *Salvinia* covers
    - ! 22.416 *Aldrovanda* communities
  - 22.43 Rooted floating vegetation

- 22.431 Floating broad-leaved carpets
- ! 22.4316 Sacred lotus beds
- 22.432 Shallow-water floating communities
- ! 22.4321 Water crowfoot communities
- ! 22.4323 Water violet beds
- ! 22.44 Chandaliar algae submerged carpets
  
- ! 22.5 **Turlough and lake-bottom meadows**
  
- 23. **STANDING BRACKISH AND SALT WATER**
  
- ! 23.1 **Athalassal saline lakes**
  
- ! 23.3 **Salt lake islands**
  
- 24. **RUNNING WATER**
  
- ! 24.2 **River gravel banks**
  
- 3. **SCRUB AND GRASSLAND**
  
- 31. **TEMPERATE HEATH AND SCRUB**
  
- ! 31.1 **European wet heaths**
  
- ! 31.2 **European dry heaths**
  
- ! 31.3 **Macaronesian heaths**
  
- 31.4 **Alpine and boreal heaths**
- 31.42 Alpenrose heaths
- ! 31.424 Carpathian Kotschy's alpenrose heaths
- ! 31.425 Balkan Kotschy's alpenrose heaths
- ! 31.46 *Bruckenthalia* heaths
  
- ! 31.7 **Hedgehog-heaths**
  
- 31.8 **Western Eurasian thickets**
- 31.8B South-eastern deciduous thickets
- ! 31.8B1 Pannonic and sub-Pannonic thickets
  
- 32. **SCLEROPHYLLOUS SCRUB**
  
- 32.2 **Thermo-Mediterranean shrub formations**
- ! 32.22 Tree-spurge formations
- ! 32.24 Palmetto brush
- ! 32.25 Mediterranean pre-desert scrub
- ! 32.26 Thermo-Mediterranean broom fields (*retamares*)
- ! 32.2B Cabo de Sao Vicente brushes
  
- ! 33. **PHRYGANA**
  
- 34. **STEPPES AND DRY CALCAREOUS GRASSLANDS**
  
- 34.1 **Middle European pioneer swards**
- 34.11 Middle European rock debris swards
- ! 34.112 Houseleek communities
  
- ! 34.2 **Lowland heavy metal grasslands**
  
- ! 34.3 **Dense perennial grasslands and middle European steppes**
  
- ! 34.5 **Mediterranean xeric grasslands**
  
- ! 34.9 **Continental steppes**
  
- ! 34.A **Sand steppes**

- 35. **DRY SILICEOUS GRASSLANDS**
- 35.1 **Atlantic mat-grass swards and related communities**
- ! 35.11 Mat-grass swards
- ! 35.7 **Mediterraneo-montane mat-grass swards**
- 37. **HUMID GRASSLAND AND TALL HERB COMMUNITIES**
- 37.1 **Lowland tall herb communities**
- ! 37.13 Continental tall herb communities
- ! 37.14 Eastern nemoral tall herb communities
- ! 37.2 **Eutrophic humid grasslands**
- ! 37.3 **Oligotrophic humid grasslands**
- ! 37.4 **Mediterranean tall humid grasslands**
- 37.7 **Humid tall herb fringes**
- 37.71 Watercourse veils
- ! 37.711 *Angelica archangelica* fluvial communities
- ! 37.712 *Angelica heterocarpa* fluvial communities
- ! 37.713 Marsh mallow screens
- 38. **MESOPHILE GRASSLANDS**
- 38.2 **Lowland high meadows**
- ! 38.25 Continental meadows
- 4. **FORESTS**
- 41. **BROAD-LEAVED DECIDUOUS FORESTS**
- ! 41.1 **Beech forests**
- ! 41.2 **Oak-hornbeam forests**
- ! 41.4 **Mixed ravine and slope forests**
- ! 41.5 **Acidophilous oak forests**
- ! 41.6 *Quercus pyrenaica* forests
- ! 41.7 **Thermophilous and supra-Mediterranean oak woods**
- ! 41.8 **Mixed thermophilous forests**
- ! 41.H **Euxino-Hyrcanian mixed deciduous forests**
- 42. **TEMPERATE CONIFEROUS FORESTS**
- 42.1 **Western Palaearctic fir forests**
- ! 42.15 Southern Apennine silver fir forests
- ! 42.16 Southern Balkan silver fir forests
- ! 42.17 Balkano-Pontic fir forests
- ! 42.19 Afro-Asian fir forests
- 42.2 **Western Palaearctic orogenous spruce forests**
- ! 42.21 Alpine and Carpathian sub-alpine spruce forests
- ! 42.22 Inner range montane spruce forests
- ! 42.23 Hercynian subalpine spruce forests
- 42.24 Sub-Mediterranean Norway spruce forests
- ! 42.241 Rhodope spruce forest
- ! 42.243 Montenegrine spruce forest
- ! 42.244 Paeonian spruce forest
- ! 42.245 Balkan Range spruce forest
- ! 42.27 Omorika spruce forests

- ! 42.28      Oriental spruce forests
  
- 42.3      Alpine larch-arolla forests**
- ! 42.31      Eastern Alpine siliceous larch and arolla forests
- ! 42.32      Eastern Alpine calcicolous larch and arolla forests
- ! 42.35      Carpathian larch and arolla forests
- ! 42.36      *Larix polonica* forests
  
- 42.4      Mountain pine forests**
- ! 42.41      Rusty alpenrose mountain pine forests
- ! 42.42      Xerocline mountain pine forests
  
- 42.5      Western Palaearctic Scots pine forests**
- ! 42.51      Caledonian forest
- 42.52      Middle European Scots pine forests
- 42.523      Western Eurasian steppe pine forest
- ! 42.5232      Sarmatic steppe pine forest
- ! 42.5233      Carpatian steppe pine forests
- ! 42.5234      Pannonic Scots pine steppe woods
- 42.54      Spring heath Scots pine forests
- ! 42.542      Carpatian relict calcicolous Scots pine forest
- ! 42.5C      South-eastern European Scots pine forests
- ! 42.5F      Ponto-Caucasian Scots pine forests
  
- 42.6      Black pine forests**
- ! 42.61      Alpino-Apennine *Pinus nigra* forests
- ! 42.62      Western Balkan *Pinus nigra* forests
- ! 42.63      Salzmann's pine forests
- ! 42.64      Corsican laricio pine forests
- ! 42.65      Calabrian laricio pine forests
- ! 42.66      Banat and Pallas' pine forests
  
- ! 42.7      High oro-mediterranean pine forests**
  
- 42.8      Mediterranean pine woods**
- 42.81      Maritime pine forests
- ! 42.811      Charente pine-holm oak forests
- ! 42.812      Aquitanian pine-cork oak forests
- ! 42.814      Iberian maritime pine forests
- ! 42.82      Mesogean pine forests
- ! 42.83      Stone pine forests
- 42.84      Aleppo pine forests
- ! 42.841      Iberian Aleppo pine forests
- ! 42.842      Balearic Aleppo pine forests
- ! 42.843      Provenço-Ligurian Aleppo pine forests
- ! 42.844      Corsican Aleppo pine woods
- ! 42.845      Sardinian Aleppo pine woods
- ! 42.846      Sicilian Aleppo pine woods
- 42.847      Italic Aleppo pine forests
- ! 42.8471      Gargano Aleppo pine forests
- ! 42.8472      Metapontine Aleppo pine forests
- ! 42.8473      Umbrian Aleppo pine forests
- ! 42.848      Hellenic Aleppo pine forests
- ! 42.849      Illyrian Aleppo pine forests
- ! 42.84A      East Mediterranean Aleppo pine forests
- ! 42.85      Aegean pine forests
  
- ! 42.9      Canary Island pine forests**
  
- ! 42.A      Western Palaearctic cypress, juniper and yew forests**
  
- ! 42.B      Western Palaearctic cedar forests**
  
- 44.      TEMPERATE RIVERINE AND SWAMP FORESTS AND BRUSH**
  
- ! 44.1      Riparian willow formations**
  
- ! 44.2      Boreo-alpine riparian galleries**

- ! 44.3 Middle European stream ash-alder woods**
- 44.4 Mixed oak-elm-ash forests of great rivers**
  - ! 44.41 Great medio-European fluvial forests
  - ! 44.43 South-east European ash-oak-alder forests
  - ! 44.44 Po oak-ash-alder forests
- ! 44.5 Southern alder and birch galleries**
- 44.6 Mediterraneo-Turanian riverine forests**
  - ! 44.66 Ponto-Sarmatic mixed poplar riverine forest
  - ! 44.69 Irano-Anatolian mixed riverine forests
- ! 44.7 Oriental plane and sweet gum woods**
- ! 44.8 Southern riparian galleries and thickets**
- 44.9 Alder, willow, oak, aspen swamp woods**
  - 44.91 Adler swamp woods
    - 44.911 Meso-eutrophic swamp alder woods
    - ! 44.9115 Eastern Carpathian alder swamp woods
    - ! 44.914 Steppe swamp alder woods
- ! 44.A Birch and conifer mire woods**
- ! 44.B Euxino-Hyrcanian wet ground forests**
- ! 45. TEMPERATE BROAD-LEAVED EVERGREEN FORESTS**
- 5. BOGS AND MARSHES**
- 51. RAISED BOGS**
  - ! 51.1 Near-natural raised bogs**
- ! 52. BLANKET BOGS**
- 53. WATER-FRIDGE VEGETATION**
- ! 53.3 Fen-sedge beds**
- 54. FENS, TRANSITION MIRES AND SPRINGS**
  - 54.1 Springs**
    - ! 54.12 Hard water springs
  - ! 54.2 Rich fens**
  - ! 54.3 Arcto-alpine riverine swards**
  - 54.4 Acidic fens**
    - 54.42 Black-white-star sedge fens
    - ! 54.426 Peri-Danubian black-white-star sedge fens
  - ! 54.5 Transition mires**
  - ! 54.6 White beak-sedge and mud bottom communities**
  - ! 54.8 Aapa mires**
  - ! 54.9 Palsa mires**
  - ! 54.A Polygon mires**

- 6.** **INLAND ROCKS, SCREES AND SANDS**
- 61.** **SCREES**
  - 61.3** **Western Mediterranean and thermophilous screes**
  - 61.31 Peri-Alpine thermophilous screes
  - ! 61.313 Paris Basin screes
- ! 64.** **INLAND SAND DUNES**
- ! 65.** **CAVES**
- 9.** **WOODED GRASSLANDS AND SCRUBS**
- 91.** **PARKLANDS**
- ! 91.2** **Dehesa**
- ! 93.** **WOODED STEPPE**

## Appendix 9

### **Resolution No. 5 (1998) of the Standing Committee concerning the rules for the Network of areas of special conservation interest (Emerald Network)**

(adopted by the Standing Committee on 4 December 1998)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the convention,

Having regard to its Resolution No. 1 (1989) on the provisions relating to the conservation of habitats;

Having regard to its Recommendation No. 14 (1989) on species habitat conservation and on the conservation of endangered natural habitats;

Having regard to its Recommendation No. 16 (1989) on Areas of Special Conservation Interest;

Having regard to its Resolution No. 3 (1996) on the setting-up of a pan-European Ecological Network;

Having regard to its Resolution No. 4 (1996) listing endangered natural habitats requiring specific habitat conservation measures;

Having regard to its Resolution No. 6 (1998) listing the species requiring specific habitat conservation measures;

Considering that for Contracting Parties which are Member States of the European Union Emerald Network sites are those of the Natura 2000 Network. Thus the procedures established by European Council Directives 79/409/EEC and 92/43/EEC will be the only rules to apply;

Noting that, following points 3 and 4 of Resolution No 3 (1996), the use of the term "governments" in this resolution means the governments of the States Contracting Parties to the Convention, of other Council of Europe States and of other States which are observer States in the Standing Committee of the Convention,

Resolves to adopt hereby the Rules for the Emerald Network of Areas of Special Conservation Interest:

#### *Article 1*

Any area, whether land or sea, where that area fits one or several of the conditions established in Recommendation No. 16 (1989), point 1, may form part of the Emerald Network.

#### *Article 2*

2.1. Areas of Special Conservation Interest (ASCIs) to be included in the Emerald Network shall be designated by the governments.

2.2. The Standing Committee may advise the government concerned on the advisability of designating one or more ASCIs that are of a particular interest to the Emerald Network.

#### *Article 3*

3.1. Any government designating an ASCI shall deposit a standard Data Form with the Secretariat. A model for this Standard Data Form, derived from and compatible with the Natura 2000 Standard Data Form, is found as appendix to this resolution. Governments are encouraged to provide the information for the Standard Data Form on electronic support.

3.2. Where the designations conform with the provisions of Article 1 of this resolution, the Secretariat shall notify the government of the fact and shall register them.

3.3. If not, the Standing Committee shall advise the government concerned to withdraw the designation. If the government nevertheless maintains the designation, the Standing Committee may decide not to accept it.

3.4. The information on ASCIs shall be public and stored in a database, except for information communicated as confidential. Governments are requested not to send any confidential information in electronic form, but to do it separately, mentioning its confidentiality. Confidential information shall not be included in the database and shall not become public.

*Article 4*

4.1. The governments shall undertake surveillance of the conservation status of species and natural habitats in designated ASCIs.

4.2. The governments shall inform the Secretariat of any important changes likely to affect negatively in a substantial way the ecological character of the designated ASCIs or the conditions having justified their designation.

4.3. Where any such changes come to light, the Standing Committee may advise the government concerned on steps to be taken to ensure conformity with the provisions of Recommendation No. 16 (1989).

4.4. Exceptions to the provisions of Articles 4, 5, 6 and 7 of the Convention in designated ASCIs shall be regulated by Article 9 of the Convention.

*Article 5*

5.1. The Group of Experts on the Setting-up of the Emerald Network shall follow the progress of the Emerald Network under the aegis of the Standing Committee. It will endeavour, under the aegis of the Standing Committee, to publish regularly lists of designated ASCIs and their character and to make that information available in electronic form.

5.2. The Standing Committee shall periodically review the contribution of the Emerald Network towards the achievement of the objectives of the Convention. In this context a designated ASCI may be considered for declassification where this is warranted by natural developments noted as a result of the surveillance provided for in Article 4.1.

*Article 6*

The Standing Committee shall encourage governments to implement Recommendation No. 16 (1989) on designated ASCIs and shall use its best endeavours to solve any difficulty that may arise in the implementation or interpretation of this resolution.

**Appendix to Resolution No. 5**

**Standard Data entry Form to be filled in for an Area of Special Conservation Interest: see Appendix 13 to this document**



## Appendix 10

### **Resolution No. 6 (1998) of the Standing Committee listing the species requiring specific habitat conservation measures** (adopted by the Standing Committee on 4 December 1998)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the convention,

Having regard to its Resolution No. 1 (1989) on the provisions relating to the conservation of habitats;

Having regard to its Recommendation No. 14 (1989) on species habitat conservation and on the conservation of endangered natural habitat types;

Conscious that habitat protection measures are only a part of the measures required for the long term conservation of species;

Taking into account the reservations made by the Contracting Parties at the time of signature or when depositing its instruments of ratification, acceptance, approval or accession;

Taking note of the conclusions of the Council of the European Union of 6 October 1995: "*The Council notes that the European Union will be represented in the framework of the Strategy (pan-European Biological and Landscape Diversity Strategy) by Natura 2000*", for the European Union the list of species requiring special habitat conservation measures corresponds to Annex II of the Council Directive 92/43/EEC, such as modified by Directive 97/621/CEE and to Annex I of the Council Directive 79/409/EEC of 2 April 1979;

Conscious that some species listed may be abundant in parts of Europe and may not require specific habitat conservation measures everywhere, and marking those species with the sign (#);

Recalling that some species listed may be abundant in some of the Member States of the European Union, and that the appropriate notes in Annex II of the Council Directive 92/43/EEC need to be taken into account for European Union Member States, and marking those species with the sign <sup>1</sup>;

Noting that some species or subspecies listed are not included in Appendices I or II of the Convention, although they appear in Annex II of the Council Directive 92/43/EEC such as modified by Directive 96/62/CEE or in Annex I of the Council Directive 79/409/EEC, and marking those species with the sign <sup>2</sup>,

1. Resolves to identify the species in Appendix 1 to this resolution as requiring specific habitat conservation measures;

#### **Appendix 1 Species requiring specific habitat conservation measures**

#### **PLANTS / PLANTES**

##### **PTERIDOPHYTA**

##### **ASPLENIACEAE**

*Asplenium jahandiezii* (Litard.) Rouy

##### **BLECHNACEAE**

*Woodwardia radicans* (L.) Sm.

##### **DICKSONIACEAE**

*Culcita macrocarpa* C. Presl

##### **DRYOPTERIDACEAE**

*Diplazium sibiricum* (Turcz. ex Kunze) Kurata

*Dryopteris corleyi* Fraser-Jenk.

*Dryopteris fragans* (L.) Schott

##### **HYMENOPHYLLACEAE**

*Trichomanes speciosum* Willd.

## ISOETACEAE

*Isoetes boryana* Durieu*Isoetes malinverniana* Ces. & De Not.

## MARSILEACEAE

*Marsilea batardae* Launert*Marsilea quadrifolia* L.*Marsilea strigosa* Willd.

## OPHIOGLOSSACEAE

*Botrychium simplex* Hitchc.*Ophioglossum polyphyllum* A. Braun**GYMNOSPERMAE**

## PINACEAE

*Abies nebrodensis* (Lojac.) Mattei**ANGIOSPERMAE**

## ALISMATACEAE

*Alisma wahlenbergii* (Holmberg) Juz.*Caldesia parnassifolia* (L.) Parl.*Luronium natans* (L.) Raf.

## AMARYLLIDACEAE

*Leucojum nicaeense* Ard.*Narcissus angustifolius* Curt.*Narcissus asturiensis* (Jordan) Pugsley*Narcissus calcicola* Mendonça*Narcissus cyclamineus* DC.*Narcissus fernandesii* G. Pedro*Narcissus humilis* (Cav.) Traub*Narcissus nevadensis* Pugsley*Narcissus pseudonarcissus* L. subsp. *nobilis* (Haw.) A. Fernandes*Narcissus scaberulus* Henriq.*Narcissus triandrus* L. subsp. *capax* (Salisb.) D. A. Webb.*Narcissus viridiflorus* Schousboe*Sternbergia candida* B.

## ARISTOLOCHIACEAE

*Aristolochia samsunensis* Davis

## ASCLEPIADACEAE

*Vincetoxicum pannonicum* (Borhidi) Holub

## BORAGINACEAE

*Anchusa crispa* Viv.*Lithodora nitida* (H. Ern) R. Fernandes*Myosotis lusitanica* Schuster*Myosotis rehsteineri* Wartm.*Myosotis retusifolia* R. Afonso*Onosma halophilum* Boiss. & Heldr.*Onosma polyphylla* Lebed.*Onosma proponticum* Aznav.*Omphalodes kuzinskyanae* Willk.*Omphalodes littoralis* Lehm.*Solenanthes albanicus* (Degen & al.) Degen & Baldacci*Symphytum cycladense* Pawl.

## CAMPANULACEAE

*Asyneuma giganteum* (Boiss.) Bornm.*Campanula damboldtiana**Campanula gelida* Kovanda*Campanula lycica**Campanula romanica* Savul.*Campanula sabatia* De Not.*Jasione crispa* (Pourret) Samp. subsp. *serpentinica* Pinto da Silva*Jasione lusitanica* A. DC.

## CARYOPHYLLACEAE

*Arenaria ciliata* L. ssp. *pseudofrigida* Ostenf. & O.C. Dahl  
*Arenaria humifusa* Wahlenberg  
*Arenaria nevadensis* Boiss. & Reuter  
*Arenaria provincialis* Chater & Halliday  
*Cerastium alsinifolium* Tausch  
*Dianthus arenarius* L. subsp. *arenarius*  
*Dianthus cintronus* Boiss. & Reuter subsp. *cintronus* Boiss. & Reuter  
*Dianthus hypanicus* Andr.  
*Dianthus marizii* (Samp.) Samp.  
*Dianthus nitidus* Waldst. et Kit.  
*Dianthus rupicola* Biv.  
*Dianthus serotinus* Waldst. et Kit.  
*Dianthus urumoffii* Stoj. et Acht.  
*Gypsophila papillosa* P. Porta  
*Herniaria algarvica* Chaudhri  
*Herniaria latifolia* Lapeyr. subsp. *litardierei* Gamis  
*Herniaria lusitanica* (Chaudhri) subsp. *berlengiana* Chaudhri  
*Herniaria maritima* Link  
*Minuartia smejkalii* Dvorakova  
*Moehringia hypanica* Grynj. et Klok.  
*Moehringia lateriflora* (L.) Fenzl.  
*Moehringia tommasinii* Marches.  
*Petrocoptis grandiflora* Rothm.  
*Petrocoptis montsicciana* O. Bolos & Rivas Mart.  
*Petrocoptis pseudoviscosa* Fernandez Casas  
*Saponaria halophila*  
*Silene cretacea* Fisch. ex Spreng.  
*Silene furcata* Rafin. ssp. *angustiflora* (Rupr.) Walters  
*Silene hicesiae* Brullo & Signorello  
*Silene hifacensis* Rouy ex Willk.  
*Silene holzmanii* Heldr. ex Boiss.  
*Silene longicilia* (Brot.) Oth.  
*Silene mariana* Pau  
*Silene orphanidis* Boiss.  
*Silene rothmaleri* Pinto da Silva  
*Silene salsuginae* Hub.-Mor.  
*Silene sangaria* Coode & Cullen  
*Silene velutina* Pourret ex Loisel.

#### CHENOPODIACEAE

*Bassia* (*Kochia*) *saxicola* (Guss.) A. J. Scott  
*Beta trojana* Pamuk. apud Aellen  
*Microcnemum coralloides* subsp. *anatolicum*  
*Suaeda cucullata* Aellen  
*Salicornia veneta* Pignatti & Lausi

#### CISTACEAE

*Cistus palhinhae* Ingram  
*Halimium verticillatum* (Brot.) Sennen  
*Helianthemum arcticum* (Grosser) Janch.  
*Helianthemum alypoides* Losa & Rivas Goday  
*Helianthemum caput-felis* Boiss.  
*Tuberaria major* (Willk.) Pinto da Silva & Rozeira

#### COMPOSITAE

*Achillea glaberrima* Klok.  
*Achillea thracica* Velen.  
*Anacyclus latealatus* Hub.-Mor.  
*Andryala levitomentosa* (E. I. Nayardy) P. D. Sell  
*Anthemis glaberrima* (Rech. f.) Greuter  
*Anthemis halophila* Boiss. & Bal.  
*Artemisia campestris* L. subsp. *bottnica* A.N. Lundström ex Kindb.  
*Artemisia granatensis* Boiss.  
*Artemisia laciniata* Willd.  
*Artemisia oelandica* (Besser) Komaror  
*Artemisia pancicii* (Janka) Ronn.  
*Aster pyrenaicus* Desf. ex DC  
*Aster sorrentinii* (Tod) Lojac.  
*Carduus myriacanthus* Salzm. ex DC.  
*Centaurea akamantis* Th Georgiades & G Chatzikyriakou  
*Centaurea alba* L. subsp. *heldreichii* (Halacsy) Dostal  
*Centaurea alba* L. subsp. *princeps* (Boiss. & Heldr.) Gugler  
*Centaurea attica* Nyman subsp. *megarensis* (Halacsy & Hayek) Dostal

*Centaurea balearica* J. D. Rodriguez  
*Centaurea borjae* Valdes-Berm. & Rivas Goday  
*Centaurea citricolor* Font Quer  
*Centaurea corymbosa* Pourret  
*Centaurea dubjanskyi* Iljin.  
*Centaurea gadorensis* G. Blanca  
*Centaurea hermannii* F. Hermann  
*Centaurea horrida* Badaro  
*Centaurea jankae* Brandza  
*Centaurea kalambakensis* Freyn & Sint.  
*Centaurea kartschiana* Scop.  
*Centaurea lactiflora* Halacsy  
*Centaurea micrantha* Hoffmanns. & Link subsp. *herminii* (Rouy) Dostál  
*Centaurea niederi* Heldr.  
*Centaurea peucedanifolia* Boiss. & Orph.  
*Centaurea pinnata* Pau  
*Centaurea pineticola* Iljin.  
*Centaurea pontica* Prodan & E. I. Nayardy  
*Centaurea pseudoleucolepis* Kleop  
*Centaurea pulvinata* (G. Blanca) G. Blanca  
*Centaurea rothmalerana* (Arènes) Dostál  
*Centaurea tchihatcheffii* Fich. & Mey  
*Centaurea vicentina* Mariz  
*Crepis crocifolia* Boiss. & Heldr.  
*Crepis granatensis* (Willk.) B. Blanca & M. Cueto  
*Crepis tectorum* L. subsp. *nigrescens*  
*Dendranthema zawadskyi* (Herb.) Tzvel.  
*Erigeron frigidus* Boiss. ex DC.  
*Hymenostemma pseudanthemis* (Kunze) Willd.  
*Jurinea cyanooides* (L.) Reichenb.  
*Jurinea fontqueri* Cuatrec.  
*Lagoseris purpurea* (Willd.) Boiss.  
*Lamyropsis microcephala* (Moris) Dittrich & Greuter  
*Leontodon microcephalus* (Boiss. ex DC.) Boiss.  
*Leontodon boryi* Boiss.  
*Leontodon siculus* (Guss.) Finch & Sell  
*Leuzea longifolia* Hoffmanns. & Link  
*Ligularia sibirica* (L.) Cass.  
*Santolina impressa* Hoffmanns. & Link  
*Santolina semidentata* Hoffmanns. & Link  
*Senecio elodes* Boiss. ex DC.  
*Senecio jacobea* L. subsp. *gotlandicus* (Neuman) Sterner  
*Senecio nevadensis* Boiss. & Reuter  
*Serratula tanaitica* P. Smirn.  
*Sonchus erzincanicus* Matthews

#### CONVOLVULACEAE

*Convolvulus argyrothamnus* Greuter  
*Convolvulus fernandesii* Pinto da Silva & Teles  
*Convolvulus pulvinatus* Sa'ad

#### CRUCIFERAE

*Alyssum pyrenaicum* Lapeyr.  
*Arabis sadina* (Samp.) P. Cout.  
*Armoracia macrocarpa* (Waldst. & Kit.) Kit. ex Baumg  
*Biscutella neustriaca* Bonnet  
*Biscutella vincentina* (Samp.) Rothm.  
*Boleum asperum* (Pers.) Desvaux  
*Brassica glabrescens* Poldini  
*Brassica insularis* Moris  
*Brassica macrocarpa* Guss.  
*Brassica sylvestris* (L.) Mill. subsp. *taurica* Tzvel.  
*Braya linearis* Rouy  
*Cochlearia polonica* Frohlich  
*Coincya rupestris* Rouy  
*Coronopus navasii* Pau  
*Crambe koktebelica* (Junge) N. Busch.  
*Crambe litwinonowii* K. Gross.  
*Diplotaxis ibicensis* (Pau) Gomez-Campo  
*Diplotaxis siettiana* Maire  
*Diplotaxis vicentina* (P. Cout.) Rothm.  
*Draba cacuminum* Elis Ekman  
*Draba cinerea* Adams

*Erucastrum palustre* (Pirona) Vis.  
*Erysimum pieninicum* (Zapal.) Pawl.  
*Iberis arbuscula* Runemark  
*Iberis procumbens* Lange subsp. *microcarpa* Franco & Pinto da Silva  
*Jonopsidium acaule* (Desf.) Reichenb.  
*Jonopsidium savianum* (Caruel) Ball ex Arcang.  
*Lepidium turezaninowii* Lipsky.  
*Rhynchosinapis erucastrum* (L.) Dandy ex Clapham subsp. *cintrana* (Coutinho) Franco & P. Silva (*Coincya cintrana* (P. Cout.) Pinto da Silva)  
*Schivereckia podolica* (Besser) Andr.  
*Sisymbrium cavanillesianum* Valdes & Castroviejo  
*Sisymbrium supinum* L.  
*Thlaspi caricense*

#### CYPERACEAE

*Carex holostoma* Drejer  
*Carex panormitana* Guss.  
*Eleocharis carniolica* Koch

#### DIOSCOREACEAE

*Borderea chouardii* (Gaussen) Heslot

#### DIPSACACEAE

*Dipsacus cephalarioides*

#### DROSERACEAE

*Aldrovanda vesiculosa* L.

#### ERICACEAE

*Vaccinium arctostaphylos* L.

#### EUPHORBIACEAE

*Euphorbia margalidiana* Kuhbier & Lewejohann  
*Euphorbia transtagana* Boiss.

#### GENTIANACEAE

*Centaurium rigualii* Esteve  
*Centaurium somedanum* Lainz  
*Gentiana ligustica* R. de Vilm. & Chopinet  
*Gentianella anglica* (Pugsley) E. F. Warburg

#### GERANIACEAE

*Erodium astragaloides* Boiss. & Reuter  
*Erodium paularense* Fernandez-Gonzalez & Izco  
*Erodium rupicola* Boiss.

#### GLOBULARIACEAE

*Globularia stygia* Orph. ex Boiss.

#### GRAMINEAE

*Arctagrostis latifolia* (R. Br.) Griseb.  
*Arctophila fulva* (Trin.) N. J. Anderson  
*Avenula hackelii* (Henriq.) Holub  
*Bromus grossus* Desf. ex DC.  
*Bromus psammophilus*  
*Calamagrostis chalybaea* (Laest.) Fries  
*Cinna latifolia* (Trev.) Griseb.  
*Coleanthus subtilis* (Tratt.) Seidl  
*Eremopoa mardinensis*  
*Festuca brigantina* (Markgr.-Dannenb.) Markgr.-Dannenb.  
*Festuca duriotagana* Franco & R. Afonso  
*Festuca elegans* Boiss.  
*Festuca henriquesii* Hack.  
*Festuca summilusitana* Franco & R. Afonso  
*Gaudinia hispanica* Stace & Tutin  
*Holcus setiglumis* Boiss. & Reuter subsp. *duriensis* Pinto da Silva  
*Micropyropsis tuberosa* Romero - Zarco & Cabezudo  
*Poa granitica* Br.-Bl.  
*Poa riphaea* (Ascherson et Graebner) Fritsch  
*Pseudarrhenatherum pallens* (Link) J. Holub  
*Puccinellia phryganodes* (Trin.) Scribner + Merr.  
*Puccinellia pungens* (Pau) Paunero  
*Stipa austroitalica* Martinovsky  
*Stipa bavarica* Martinovsky & H. Scholz

*Stipa danubialis* Dihoru & Roman  
*Stipa styriaca* Martinovsky  
*Stipa syreistschikowii* P. Smirn.  
*Stipa veneta* Moraldo  
*Trisetum subalpestre* (Hartman) Neuman

## GROSSULARIACEAE

*Ribes sardoum* Martelli

## HIPPURIDACEAE

*Hippuris tetraphylla* L. Fil.

## HYPERICACEAE

*Hypericum aciferum* (Greuter) N.K.B. Robson  
*Hypericum salsugineum*

## IRIDACEAE

*Crocus abantensis*

## JUNCACEAE

*Juncus valvatus* Link  
*Luzula arctica* Blytt #

## LABIATAE

*Dracocephalum austriacum* L.  
*Micromeria taygetea* P. H. Davis  
*Nepeta dirphyia* (Boiss.) Heldr. ex Halacsy  
*Nepeta sphaciotica* P. H. Davis  
*Origanum dictamnus* L.  
*Sideritis incana* subsp. *glauca* (Cav.) Malagarriga  
*Sideritis javalambrensis* Pau  
*Sideritis serrata* Cav. ex Lag.  
*Teucrium lepicephalum* Pau  
*Teucrium turredanum* Losa & Rivas Goday  
*Thymus camphoratus* Hoffmanns. & Link  
*Thymus carnosus* Boiss.  
*Thymus lotocephalus* G. López & R. Morales (*Thymus cephalotos* L.)

## LEGUMINOSAE

*Anthyllis hystrix* Cardona, Contandr. & E. Sierra  
*Astragalus aitosensis* Ivanisch.  
*Astragalus algarbiensis* Coss. ex Bunge  
*Astragalus aquilanus* Anzalone  
*Astragalus centralpinus* Braun-Blanquet  
*Astragalus kungurensis* Boriss.  
*Astragalus maritimus* Moris  
*Astragalus peterfii* Jav.  
*Astragalus physocalyx* Fischer  
*Astragalus tremolsianus* Pau  
*Astragalus setosulus* Gontsch.  
*Astragalus tanaiticus* C. Koch.  
*Astragalus verrucosus* Moris  
*Cytisus aeolicus* Guss. ex Lindl.  
*Genista dorycnifolia* Font Quer  
*Genista holopetala* (Fleischm. ex Koch) Baldacci  
*Genista tetragona* Bess.  
*Glycyrrhiza iconica*  
*Hedysarum razoumovianum* Fisch. et Helm.  
*Melilotus segetalis* (Brot.) Ser. subsp. *fallax* Franco  
*Ononis hackelii* Lange  
*Sphaerophysa kotschyana*  
*Thermopsis turcica*  
*Trifolium banaticum* (Heuffel) Majovsky  
*Trifolium pachycalyx*  
*Trifolium saxatile* All.  
*Trigonella arenicola*  
*Trigonella halophila*  
*Trigonella polycarpa*  
*Vicia bifoliolata* J.D. Rodriguez

## LENTIBULARIACEAE

*Pinguicula nevadensis* (Lindb.) Casper

## LILIACEAE

*Allium grosii* Font Quer  
*Allium regelianum* A. Beck.  
*Allium vuralii*  
*Androcymbium rechingeri* Greuter  
*Asparagus lycaonicus*  
*Asphodelus bento-rainhae* P. Silva  
*Chionodoxa luciliae*  
*Colchicum davidovii* Stef.  
*Colchicum fominii* Bordz.  
*Colchicum micranthum*  
*Fritillaria montana* Hoppe.  
*Hyacinthoides vicentina* (Hoffmans. & Link) Rothm.  
*Lilium jankae* A. Kerner  
*Lilium rhodopaeum* Delip.  
*Muscari gussonei* (Parl.) Tod.  
*Tulipa hungarica* Borbas

#### LINACEAE

*Linum dolomiticum* Borbas  
*Linum muelleri* Moris (*Linum maritimum muelleri*)

#### LYTHRACEAE

*Lythrum flexuosum* Lag.

#### MALVACEAE

*Kosteletzkya pentacarpos* (L.) Ledeb.

#### NAJADACEAE

*Najas flexilis* (Willd.) Rostk. & W.L. Schmidt  
*Najas tenuissima* (A. Braun) Magnus

#### OLEACEAE

*Syringa josikaea* Jacq. fil.

#### ORCHIDACEAE

*Calypso bulbosa* L.  
*Cephalanthera cucullata* Boiss. & Heldr.  
*Cypripedium calceolus* L.  
*Dactylorhiza chuhensis*  
*Gymnigritella runei* Teppner & Klein  
*Liparis loeselii* (L.) Rich.  
*Ophrys isaura*  
*Ophrys lunulata* Parl.  
*Ophrys lycia*  
*Platanthera obtusata* (Pursh) subsp. *oligantha* (Turez.) Hulten  
*Stenisiella satyrioides* (Stev.) Schlechter.

#### PAEONIACEAE

*Paeonia cambessedesii* (Willk.) Willk.  
*Paeonia parnassica* Tzanoudakis  
*Paeonia clusii* F.C. Stern subsp. *rhodia* (Stearn) Tzanoudakis  
*Paeonia tenuifolia* L.

#### PALMAE

*Phoenix theophrasti* Greuter

#### PAPAVERACEAE

*Corydalis gotlandica* Lidén  
*Papaver laestadianum* (Nordh.) Nordh.  
*Papaver radicum* Rottb. subsp. *hyperboreum* Nordh.

#### PLANTAGINACEAE

*Plantago algarbiensis* Sampaio (*Plantago bracteosa* (Willk.) G. Sampaio)  
*Plantago almogravensis* Franco

#### PLUMBAGINACEAE

*Armeria berlengensis* Daveau  
*Armeria helodes* Martini & Pold  
*Armeria neglecta* Girard  
*Armeria pseudarmeria* (Murray) Mansfeld  
*Armeria rouyana* Daveau  
*Armeria soleiroliae* (Duby) Godron  
*Armeria velutina* Welw. ex Boiss. & Reuter  
*Limonium anatolicum*

*Limonium dodartii* (Girard) O. Kuntze subsp. *lusitanicum* (Daveau) Franco  
*Limonium insulare* (Beg. & Landi) Arrig. & Diana  
*Limonium lanceolatum* (Hoffmans. & Link) Franco  
*Limonium multiflorum* Erben  
*Limonium pseudolaetum* Arrig. & Diana  
*Limonium strictissimum* (Salzmann) Arrig.  
*Limonium tamaricoides*

## POLYGONACEAE

*Persicaria foliosa* (H. Lindb.) Kitag.  
*Polygonum praelongum* Coode & Cullen  
*Rheum rhaponticum* L  
*Rumex rupestris* Le Gall

## PRIMULACEAE

*Androsace mathildae* Levier  
*Androsace pyrenaica* Lam.  
*Cyclamen kuznetsovii* Kotov et Czernova  
*Cyclamen mirabile*  
*Primula apennina* Widmer  
*Primula nutans* Georgi  
*Primula palinuri* Petagna  
*Primula scandinavica* Bruun #  
*Soldanella villosa* Darracq.

## RANUNCULACEAE

*Aconitum corsicum* Gayer (*Aconitum napellus* subsp. *corsicum*)  
*Aconitum flerovii* Steinb.  
*Adonis distorta* Ten.  
*Anemone uralensis* Nevski.  
*Aquilegia bertolonii* Schott  
*Aquilegia kitaibelii* Schott  
*Aquilegia pyrenaica* D.C. subsp. *cazorlensis* (Heywood) Galiano  
*Consolida samia* P.H. Davis  
*Pulsatilla grandis* Wend. (*Pulsatilla halleri* (All.) Willd. subsp. *grandis* (Wend.) Meikle  
*Pulsatilla patens* (L.) Miller  
*Pulsatilla vulgaris* Hill. subsp. *gotlandica* (Johanss.) Zaemelis & Paegle  
*Ranunculus lapponicus* L.  
*Ranunculus weyleri* Mares

## RESEDACEAE

*Reseda decursiva* Forssk.

## ROSACEAE

*Agrimonia pilosa* Ledebour  
*Potentilla emilii-popii* E. I. Nayardy  
*Potentilla delphinensis* Gren. & Godron  
*Potentilla silesiaca* Uechtr.  
*Pyrus anatolica*  
*Sorbus teodori* Liljefors

## RUBIACEAE

*Galium cracoviense* Ehrend.  
*Galium globuliferum*  
*Galium litorale* Guss.  
*Galium moldavicum* (Dobrescu) Franco  
*Galium viridiflorum* Boiss. & Reuter

## SALICACEAE

*Salix salvifolia* Brot. subsp. *australis* Franco

## SANTALACEAE

*Thesium ebracteatum* Hayne

## SAXIFRAGACEAE

*Saxifraga berica* (Beguinot) D.A. Webb  
*Saxifraga florulenta* Moretti  
*Saxifraga hirculus* L. #  
*Saxifraga osloënsis* Knaben  
*Saxifraga tombeanensis* Boiss. ex Engl.

## SCROPHULARIACEAE

*Antirrhinum charidemi* Lange



*Bruchia vogesiaca* Schwaegr.  
*Bryhnia novae-angliae* (Sull & Lesq.) Grout  
*Bryoerythrophyllum campylocarpum* (C. Müll.) Crum. (*Bryoerythrophyllum machadoanum* (Sergio) M.O. Hill)  
*Buxbaumia viridis* (Moug.) Moug. & Nestl.  
*Cephalozia macounii* (Aust.) Aust.  
*Cynodontium suecicum* (H. Arn. & C. Jens.) I. Hag.  
*Dichelyma capillaceum* (Dicks) Myr.  
*Dicranum viride* (Sull. & Lesq.) Lindb.

*Distichophyllum carinatum* Dix. & Nich.  
*Drepanocladus (Hamatocaulis) vernicosus* (Mitt.) Warnst.  
*Encalypta mutica* (I. Hagen)  
*Hamatocaulis lapponicus* (Norrl.) Hedenäs  
*Herzogiella turfacea* (Lindb.) I. Wats.  
*Hygrohypnum montanum* (Lindb.) Broth.  
*Jungermannia handelii* (Schiffn.) Amak.  
*Mannia triandra* (Scop.) Grolle  
*Marsupella profunda* Lindb.  
*Meesia longiseta* Hedw.  
*Nothothylas orbicularis* (Schwein.) Sull.  
*Orthothecium lapponicum* (Schimp.) C. Hartm.  
*Orthotrichum rogeri* Brid.  
*Petalophyllum ralfsii* (Wils.) Nees & Gott.  
*Plagiomnium drummondii* (Bruch & Schimp.) T. Kop.  
*Riccia breidlerii* Jur.  
*Riella helicophylla* (Bory & Mont.) Mont.  
*Scapania massolongi* (K. Müll.) K. Müll.  
*Sphagnum pylaisii* Brid.  
*Tayloria rudolphiana* (Garov) B. & S.  
*Tortella rigens* (N. Alberts)

## **SPECIES FROM THE MACARONESIAN REGION** **ESPÈCES DE LA REGION MACARONÉSIENNE**

### **PTERIDOPHYTA**

#### **HYMENOPHYLLACEAE**

*Hymenophyllum maderensis* Gibby & Lovis

#### **DRYOPTERIDACEAE**

*Polystichum drepanum* (Sw.) C. Presl.

#### **ISOETACEAE**

*Isoetes azorica* Durieu & Paiva ex Milde

#### **MARSILEACEAE**

*Marsilea azorica* Launert & Paiva

### **ANGIOSPERMAE**

#### **ASCLEPIADACEAE**

*Caralluma burchardii* N. E. Brown

*Ceropegia chrysantha* Svent.

#### **BORAGINACEAE**

*Echium candicans* L. fil.

*Echium gentianoides* Webb & Coincy

*Myosotis azorica* H. C. Watson

*Myosotis maritima* Hochst. in Seub.

#### **CAMPANULACEAE**

*Azorina vidalii* (H. C. Watson) Feer

*Musschia aurea* (L. f.) DC.

*Musschia wollastonii* Lowe

#### **CAPRIFOLIACEAE**

*Sambucus palmensis* Link

#### **CARYOPHYLLACEAE**

*Spergularia azorica* (Kindb.) Lebel

#### **CELASTRACEAE**

*Maytenus umbellata* (R. Br.) Mabb.

#### **CHENOPODIACEAE**

*Beta patula* Ait.

#### **CISTACEAE**

*Cistus chinamadensis* Bañares & Romero

*Helianthemum bystropogophyllum* Svent.

COMPOSITAE

Andryala crithmifolia Ait.  
Argyranthemum lidii Humphries  
Argyranthemum thalassophyllum (Svent.) Hump.  
Argyranthemum winterii (Svent.) Humphries  
Atractylis arbuscula Svent. & Michaelis  
Atractylis preauxiana Schultz.  
Calendula maderensis DC.  
Cheirolophus duranii (Burchard) Holub  
Cheirolophus ghomerytus (Svent.) Holub  
Cheirolophus junonianus (Svent.) Holub  
Cheirolophus massonianus (Lowe) Hansen & Sund.  
Cirsium latifolium Lowe  
Helichrysum gossypinum Webb  
Helichrysum monogynum Burt & Sund.  
Hypochoeris oligocephala (Svent. & Bramw.) Lack  
Lactuca watsoniana Trel.  
Onopordum nogalesii Svent.  
Onopordum carduelinum Bolle  
Pericallis hadrosoma (Svent.) B. Nord.  
Phagnalon benettii Lowe  
Stemmacantha cynaroides (Chr. Son. in Buch) Ditt  
Sventenia bupleuroides Font Quer  
Tanacetum ptarmiciflorum Webb & Berth

CONVOLVULACEAE

Convolvulus caput-medusae Lowe  
Convolvulus lopez-socasii Svent.  
Convolvulus massonii A. Dietr.

CRASSULACEAE

Aeonium gomeraense Praeger  
Aeonium saundersii Bolle  
Aichryson dumosum (Lowe) Praeg.  
Monanthes wildpretii Banares & Scholz  
Sedum brissemoretii Raymond-Hamet

CRUCIFERAE

Crambe arborea Webb ex Christ  
Crambe laevigata DC. ex Christ  
Crambe sventenii R. Petters ex Bramwell & Sund.  
Parolinia schizogynoides Svent.  
Sinapidendron rupestre (Ait.) Lowe

CYPERACEAE

Carex malato-belizii Raymond

DIPSACACEAE

Scabiosa nitens Roemer & J. A. Schultes

ERICACEAE

Erica scoparia L. subsp. azorica (Hochst.) D. A. Webb

EUPHORBIACEAE

Euphorbia handiensis Burchard  
Euphorbia lambii Svent.  
Euphorbia stygiana H. C. Watson

GERANIACEAE

Geranium maderense P. F. Yeo

GRAMINEAE

Deschampsia maderensis (Haack. & Born.) Buschm.  
Phalaris maderensis (Menezes) Menezes

GLOBULARIACEAE

Globularia ascanii D. Bramwell & Kunkel  
Globularia sarcophylla Svent.

LABIATAE

Sideritis cystosiphon Svent.  
Sideritis discolor (Webb ex de Noe) Bolle  
Sideritis infernalis Bolle  
Sideritis marmorea Bolle

*Teucrium abutiloides* L'Hér.

*Teucrium betonicum* L'Hér.

#### LEGUMINOSAE

*Anagyris latifolia* Brouss. ex. Willd.

*Anthyllis lemanniana* Lowe

*Dorycnium spectabile* Webb & Berthel

*Lotus azoricus* P. W. Ball

*Lotus callis-viridis* D. Bramwell & D. H. Davis

*Lotus kunkelii* (E. Chueca) D. Bramwell & al.

*Teline rosmarinifolia* Webb & Berthel.

*Teline salsoloides* Arco & Acebes.

*Vicia dennesiana* H. C. Watson

#### LILIACEAE

*Androcymbium psammophilum* Svent.

*Scilla maderensis* Menezes

*Semele maderensis* Costa

#### LORANTHACEAE

*Arceuthobium azoricum* Wiens & Hawksw.

#### MYRICACEAE

*Myrica rivas-martinezii* Santos.

#### OLEACEAE

*Jasminum azoricum* L.

*Picconia azorica* (Tutin) Knobl.

#### ORCHIDACEAE

*Goodyera macrophylla* Lowe

#### PITTOSPORACEAE

*Pittosporum coriaceum* Dryand. ex. Ait.

#### PLANTAGINACEAE

*Plantago malato-belizii* Lawalree

#### PLUMBAGINACEAE

*Limonium arborescens* (Brouss.) Kuntze

*Limonium dendroides* Svent.

*Limonium spectabile* (Svent.) Kunkel & Sunding

*Limonium sventenii* Santos & Fernandez Galvan

#### POLYGONACEAE

*Rumex azoricus* Rech. fil.

#### RHAMNACEAE

*Frangula azorica* Tutin

#### ROSACEAE

*Bencomia brachystachya* Svent.

*Bencomia sphaerocarpa* Svent.

*Chamaemeles coriacea* Lindl.

*Dendriopoterium pulidoi* Svent.

*Marcetella maderensis* (Born.) Svent.

*Prunus lusitanica* L. subsp. *azorica* (Mouillef.) Franco

*Sorbus maderensis* (Lowe) Dode

#### SANTALACEAE

*Kunkeliella subsucculenta* Kammer

#### SCROPHULARIACEAE

*Euphrasia azorica* H.C. Watson

*Euphrasia grandiflora* Hochst. in Seub.

*Isoplexis chalcantha* Svent. & O'Shanahan

*Isoplexis isabelliana* (Webb & Berthel.) Masferrer

*Odontites holliana* (Lowe) Benth.

*Sibthorpia peregrina* L.

#### SOLANACEAE

*Solanum lidii* Sunding

Ammi trifoliatum (H. C. Watson) Trelease  
 Bupleurum handiense (Bolle) Kunkel  
 Chaerophyllum azoricum Trelease  
 Ferula latipinna Santos  
 Melanoselinum decipiens (Schrader & Wendl.) Hoffm.  
 Monizia edulis Lowe  
 Oenanthe divaricata (R. Br.) Mabb.  
 Sanicula azorica Guthnick ex Seub.

Viola paradoxa Lowe

Echinodium spinosum (Mitt.) Jur.  
Thamnobryum fernandesii Sergio

Ursus arctos #<sup>1</sup>  
Ursus maritimus

*Mustelidae*

Gulo gulo #

Lutra lutra #

Mustela lutreola

*Felidae*

Caracal caracal

Lynx lynx #<sup>1</sup>

Lynx pardinus

Panthera pardus

*Odobenidae*

Odobenus rosmarus

*Phocidae*Halichoerus grypus #<sup>2</sup>

Monachus monachus

Phoca hispida bottnica<sup>2</sup>

Phoca hispida saimensis

Phoca hispida ladogensis

Phoca vitulina #<sup>2</sup>

## ARTIODACTYLA

*Cervidae*

Cervus elaphus corsicanus

Rangifer tarandus fennicus<sup>2</sup>*Bovidae*

Capra aegagrus (natural populations/populations naturelles)

Capra pyrenaica pyrenaica

Gazella subgutturosa

Gazella dorcas

Ovis gmelini musimon (Ovis ammon musimon) (natural populations - Corsica and Sardinia / populations naturelles - Corse et Sardaigne)<sup>2</sup>

Rupicapra pyrenaica ornata (Rupicapra rupicapra ornata)

Rupicapra rupicapra balcanica<sup>2</sup>

## CETACEA

*Delphinidae*

Tursiops truncatus #

*Phocoenidae*

Phocoena phocoena #

**Birds/Oiseaux**

## GAVIIFORMES

*Gaviidae*

Gavia adamsii

Gavia arctica

Gavia immer

Gavia stellata

## PODICIPEDIFORMES

*Podicipedidae*

Podiceps auritus

## PROCELLARIIFORMES

*Hydrobatidae*

Hydrobates pelagicus #

Oceanodroma castro

Oceanodroma leucorhoa #

Pelagodroma marina

*Procellariidae*

Bulweria bulwerii

Calonectris diomedea (Procellaria diomedea)

Puffinus assimilis

Puffinus yelkouan mauretanicus (Puffinus puffinus mauretanicus)

Puffinus yelkouan yelkouan (Puffinus puffinus yelkouan)<sup>1</sup>

Pterodroma feae

Pterodroma madeira

## PELECANIFORMES

*Phalacrocoracidae*Phalacrocorax aristotelis desmarestii<sup>2</sup>

Phalacrocorax pygmaeus

*Pelecanidae*

Pelecanus crispus

Pelecanus onocrotalus

CICONIIFORMES

*Ardeidae*

*Ardea purpurea*  
*Ardeola ralloides*  
*Botaurus stellaris*  
*Casmerodius albus* (*Egretta alba*)  
*Egretta garzetta*  
*Ixobrychus minutus*  
*Nycticorax nycticorax*

*Ciconiidae*

*Ciconia nigra*  
*Ciconia ciconia*

*Threskiornithidae*

*Plegadis falcinellus*  
*Platalea leucorodia*  
*Phoenicopteridae*  
*Phoenicopterus ruber*

ANSERIFORMES

*Anatidae*

*Anser albifrons flavirostris* <sup>2</sup>  
*Anser erythropus*  
*Aythya nyroca* <sup>2</sup>  
*Branta leucopsis*  
*Branta ruficollis*  
*Bucephala islandica*  
*Cygnus bewickii* (*Cygnus columbianus bewickii*) #  
*Cygnus cygnus* #  
*Histrionicus histrionicus*  
*Marmaronetta angustirostris* (*Anas angustirostris*)  
*Mergus albellus*  
*Oxyura leucocephala*  
*Tadorna ferruginea*

FALCONIFORMES

*Accipitridae*

*Accipiter brevipes*  
*Accipiter gentilis arrigonii*  
*Accipiter nisus granti*  
*Aegypius monachus*  
*Aquila adalberti*  
*Aquila chrysaetos*  
*Aquila clanga*  
*Aquila heliaca*  
*Aquila nipalensis*  
*Aquila pomarina*  
*Buteo rufinus*  
*Circus gallicus*  
*Circus aeruginosus*  
*Circus cyaneus*  
*Circus macrourus*  
*Circus pygargus*  
*Elanus caeruleus*  
*Gypaetus barbatus*  
*Gyps fulvus*  
*Haliaeetus albicilla*  
*Hieraaetus fasciatus*  
*Hieraaetus pennatus*  
*Milvus migrans*  
*Milvus milvus*  
*Neophron percnopterus*  
*Pernis apivorus*

*Pandionidae*

*Pandion haliaetus*

*Falconidae*

*Falco biarmicus*  
*Falco columbarius* #  
*Falco eleonorae*  
*Falco naumanni*  
*Falco peregrinus*  
*Falco rusticolus*  
*Falco vespertinus*

## GALLIFORMES

*Tetraonidae*Bonasa bonasia <sup>2</sup>Lagopus mutus helveticus <sup>2</sup>Lagopus mutus pyrenaicus <sup>2</sup>Tetrao tetrix tetrix <sup>2</sup>Tetrao urogallus <sup>2</sup> (only T.u. cantabricus in App II / seulement T.u.cantabricus est à l'annexe II)*Phasianidae*Alectoris barbara <sup>2</sup>Alectoris graeca saxatilis <sup>2</sup>Alectoris graeca whitakeri <sup>2</sup>Perdix perdix hispaniolensis <sup>2</sup>Perdix perdix italica <sup>2</sup>

## GRUIFORMES

*Turnicidae*

Turnix sylvatica

*Rallidae*

Crex crex

Fulica cristata

Porphyrio porphyrio

Porzana parva

Porzana porzana

Porzana pusilla

*Gruidae*

Grus grus

*Otididae*

Chlamydotis undulata

Otis tarda

Tetrax tetrax

## CHARADRIIFORMES

*Charadriidae*Charadrius asiaticus <sup>2</sup>

Charadrius leschenaultii

Charadrius morinellus (Eudromias morinellus)

Chettusia gregaria <sup>2</sup>

Hoplopterus spinosus

Pluvialis apricaria # <sup>2</sup>*Scolopacidae*

Gallinago media

Limosa lapponica

Numenius tenuirostris

Philomachus pugnax <sup>2</sup>

Tringa glareola

Xenus cinereus (Tringa cinereus) <sup>2</sup>*Recurvirostridae*

Himantopus himantopus

Recurvirostra avosetta

*Phalaropodidae*

Phalaropus fularius

Phalaropus lobatus

*Burhinidae*

Burhinus oedicnemus

*Glareolidae*

Cursorius cursor

Glareola nordmanni

Glareola pratincola

*Laridae*

Chlidonias hybridus

Chlidonias leucopterus

Chlidonias niger

Gelochelidon nilotica

Larus audouinii

Larus genei

Larus melanocephalus

Pagophila eburnea

Sterna albifrons

Sterna caspia (Hydroprogne caspia)

Sterna dougallii

Sterna hirundo

Sterna paradisaea (macrura)

Sterna sandvicensis



*Alcidae*

*Uria aalge ibericus*<sup>2</sup>

COLUMBIFORMES

*Pteroclididae*

*Pterocles alchata*

*Pterocles orientalis*

*Columbidae*

*Columba bollii*

*Columba junoniae*

*Columba palumbus azorica*<sup>2</sup>

*Columba trocaz*<sup>2</sup>

STRIGIFORMES

*Strigidae*

*Aegolius funereus*

*Asio flammeus*

*Bubo bubo*

*Glaucidium passerinum*

*Ketupa zeylonensis*

*Nyctea scandiaca*

*Strix nebulosa*

*Strix uralensis*

*Surnia ulula*

CAPRIMULGIFORMES

*Caprimulgidae*

*Caprimulgus europaeus*

APODIFORMES

*Apodidae*

*Apus caffer*

CORACIIFORMES

*Alcedinidae*

*Alcedo atthis*

*Halcyon smyrnensis*

*Coraciidae*

*Coracias garrulus*

PICIFORMES

*Picidae*

*Dendrocopos leucotos*

*Dendrocopos major canariensis*

*Dendrocopos major thanneri*

*Dendrocopos medius*

*Dendrocopos syriacus*

*Dryocopus martius*

*Picoides tridactylus*

*Picus canus*

PASSERIFORMES

*Alaudidae*

*Calandrella brachydactyla*

*Chersophilus duponti*

*Galerida theklae*

*Lullula arborea*<sup>2</sup>

*Melanocorypha calandra*

*Melanocorypha yeltoniensis*

*Motacillidae*

*Anthus campestris*

*Laniidae*

*Lanius collurio*

*Lanius minor*

*Troglodytidae*

*Troglodytes troglodytes fridariensis*

*Muscicapidae*

*Turdinae*

*Luscinia svecica* (*Cyanosylvia svecica*)

*Oenanthe cypriaca* (*Oenenathe pleschanka cypriaca*)

*Oenanthe leucura*

*Saxicola dacotiae*

*Sylviinae*

*Acrocephalus melanopogon*

*Acrocephalus paludicola*

Hippolais olivetorum  
 Sylvia nisoria  
 Sylvia rueppelli  
 Sylvia sarda  
 Sylvia undata  
*Muscicapinae*  
 Ficedula albicollis  
 Ficedula parva  
 Ficedula semitorquata  
*Sittidae*  
 Sitta krueperi  
 Sitta whiteheadi  
*Emberizidae*  
 Emberiza caesia  
 Emberiza cineracea  
 Emberiza hortulana <sup>2</sup>  
*Fringillidae*  
 Bucanetes githagineus (Rhodopechys githaginea)  
 Fringilla coelebs ombrosa <sup>2</sup>  
 Fringilla teydea  
 Loxia scotica  
 Pyrrhula murina <sup>2</sup>  
*Corvidae*  
 Pyrrhocorax pyrrhocorax

## Reptiles

### CHELONIA (TESTUDINES)

*Testudinidae*  
 Testudo graeca  
 Testudo hermanni  
 Testudo marginata  
*Cheloniidae*  
 Caretta caretta  
 Chelonia mydas  
*Emydidae*  
 Emys orbicularis  
 Mauremys caspica  
 Mauremys leprosa  
*Tryonichidae*  
 Rafetus euphraticus  
 Tryonix triunguis

### SAURIA

*Lacertidae*  
 Gallotia galloti insulanagae  
 Gallotia simonyi  
 Lacerta bonnali (Lacerta monticola)  
 Lacerta clarkorum  
 Lacerta monticola (Archaeolacerta monticola)  
 Lacerta schreiberi  
 Podarcis lilfordi  
 Podarcis pityusensis  
*Scincidae*  
 Chalcides simonyi (Chalcides occidentalis)  
*Gekkonidae*  
 Phyllodactylus europaeus

### OPHIDIA (SERPENTES)

*Colubridae*  
 Coluber cypriensis  
 Elaphe quatuorlineata #  
 Elaphe situla #  
*Viperidae*  
 Macrovipera schweizeri (Vipera lebetina schweizeri)  
 Vipera albizona  
 Vipera barani  
 Vipera kaznakovi  
 Vipera pontica  
 Vipera ursinii  
 Vipera wagneri

## **Amphibians/Amphibiens**

### **CAUDATA**

#### *Salamandridae*

Chioglossa lusitanica

Mertensiella luschani (Salamandra luschani)

Salamandra atra aurorae<sup>2</sup>

Salamandrina terdigitata

Triturus carnifex (Triturus cristatus carnifex)

Triturus cristatus (Triturus cristatus cristatus)#

Triturus dobrogicus (Triturus cristatus dobrogicus)

Triturus karelinii (Triturus cristatus karelinii)#

Triturus montandoni

#### *Proteidae*

Proteus anguinus

#### *Plethodontidae*

Hydromantes ambrosii (Speleomantes ambrosii)<sup>2</sup>

Hydromantes flavus (Speleomantes flavus)

Hydromantes genei (Speleomantes genei)

Hydromantes imperialis (Speleomantes imperialis)

Hydromantes strinatii (Speleomantes strinatii)<sup>2</sup>

Hydromantes supramontes (Speleomantes supramontes)

### **ANURA**

#### *Discoglossidae*

Alytes muletensis

Bombina bombina#

Bombina variegata#

Discoglossus galganoi (incl. Discoglossus jeanneae)

Discoglossus montalentii

Discoglossus sardus

Neurergus crocatus

Neurergus strauchi

#### *Ranidae*

Rana holtzi

Rana latastei

#### *Pelobatidae*

Pelobates fuscus insubricus

## **Fish/Poissons**

### **OSTEICHTHYES**

#### **PETROMYZONIFORMES**

##### *Petromyzonidae*

Eudontomyzon spp.<sup>2</sup>

Lampetra fluviatilis<sup>1,2</sup> #

Lampetra planeri<sup>1,2</sup> #

Lethenteron zanandreaei (Lampetra zanandreaei)

Petromyzon marinus<sup>1,2</sup> #

#### **ACIPENSERIFORMES**

##### *Acipenseridae*

Acipenser naccarii

Acipenser sturio

#### **SALMONIFORMES**

##### *Salmonidae*

Hucho hucho (natural polulations/populations naturelles)<sup>2</sup>

Salmo macrostigma<sup>2</sup>

Salmo marmoratus<sup>2</sup>

Salmo salar (only in freshwater/uniquement en eau douce) #<sup>1,2</sup>

##### *Coregonidae*

Coregonus oxyrhynchus<sup>1</sup> #

#### **CYPRINIFORMES**

##### *Cyprinidae*

Alburnus albidus (Alburnus vulturius)<sup>2</sup>

Anaocypris hispanica<sup>2</sup>

Aspius aspius #<sup>1,2</sup>

Barbus capito

Barbus comiza <sup>2</sup>  
 Barbus meridionalis <sup>2</sup>  
 Barbus plebejus <sup>2</sup>  
 Chalcalburnus chalcoides <sup>2</sup>  
 Chondrostoma genei <sup>2</sup>  
 Chondrostoma lusitanicum <sup>2</sup>  
 Chondrostoma polylepis <sup>1, 2</sup>  
 Chondrostoma soetta <sup>2</sup>  
 Chondrostoma toxostoma <sup>2</sup>  
 Gobio albipinnatus <sup>2</sup>  
 Gobio uranoscopus <sup>2</sup>  
 Iberocypris palaciosi <sup>2</sup>  
 Ladigesocypris ghigii <sup>2</sup>  
 Leuciscus lucumonis <sup>2</sup>  
 Leuciscus souffia <sup>2</sup>  
 Phoxinellus spp. <sup>2</sup>  
 Rhodeus sericeus amarus # <sup>2</sup>  
 Rutilus alburnoides <sup>2</sup>  
 Rutilus arcasii <sup>2</sup>  
 Rutilus frisii meidingeri <sup>2</sup>  
 Rutilus lemmingii <sup>2</sup>  
 Rutilus macrolepidotus <sup>2</sup>  
 Rutilus pigus <sup>2</sup>  
 Rutilus rubilio <sup>2</sup>  
 Scardinius graecus <sup>2</sup>  
*Cobitidae*  
 Cobitis taenia <sup>1, 2</sup> #  
 Cobitis trichonica <sup>2</sup>  
 Misgurnus fossilis <sup>2</sup>  
 Sabanejewia aurata <sup>2</sup>  
 Sabanejewia larvata (Cobitis larvata et Cobitis conspersa) <sup>2</sup>

#### SILURIFORMES

*Siluridae*  
 Silurus aristotelis <sup>2</sup>

#### ATHERINIFORMES

*Cyprinodontidae*  
 Aphanius iberus  
 Aphanius fasciatus  
 Valencia hispanica  
 Valencia letourneuxi

#### SCORPAENIFORMES

*Cottidae*  
 Cottus gobio <sup>1, 2</sup> #  
 Cottus petiti

#### PERCIFORMES

*Percidae*  
 Gymnocephalus schraetzer <sup>2</sup>  
 Romanichthys valsanicola <sup>2</sup> (proposed for Appendix II/proposition pour l'Annexe II)  
 Zingel spp. <sup>2</sup>  
*Gobiidae*  
 Knipowitschia panizzae (Padogobius panizzae) <sup>2</sup>  
 Padogobius nigricans <sup>2</sup>  
 Pomatoschistus canestrini <sup>2</sup>

#### CLUPEIFORMES

*Clupeidae*  
 Alosa spp. # <sup>2</sup>

### INVERTEBRATES/INVERTEBRES

#### Arthropods/Arthropodes

#### INSECTA

*Mantodea*  
 Apteromantis aptera  
*Odonata*  
 Coenagrion hylas (Coenagrion freyi)  
 Coenagrion mercuriale

*Cordulegaster trinacriae*  
*Gomphus graslinii*  
*Leucorrhinia pectoralis*  
*Lindenia tetraphylla*  
*Macromia splendens*  
*Ophiogomphus cecilia*  
*Oxygastra curtisii*  
*Orthoptera*  
*Baetica ustulata*  
*Coleoptera*  
*Agathidium pulchellum*  
*Boros schneideri*  
*Buprestis splendens*  
*Carabus menetriesi pacholei*<sup>2</sup>  
*Carabus olympiae*  
*Cerambyx cerdo*  
*Corticaria planula*<sup>2</sup>  
*Cucujus cinnaberinus*  
*Dytiscus latissimus*  
*Graphoderus bilineatus*  
*Limoniscus violaceus*<sup>2</sup>  
*Lucanus cervus*<sup>2</sup>  
*Macroplea pubipennis*<sup>2</sup>  
*Mesosa myops*<sup>2</sup>  
*Morimus funereus*<sup>2</sup>  
*Osmoderma eremita*  
*Oxyporus mannerheimii*<sup>2</sup>  
*Pytho kolwensis*<sup>2</sup>  
*Rosalia alpina*  
*Stephanopachys linearis*<sup>2</sup>  
*Stephanopachys substriatus*<sup>2</sup>  
*Xyletinus tremulicola*<sup>2</sup>  
*Hemiptera*  
*Aradus angularis*<sup>2</sup>  
*Lepidoptera*  
*Agriades glandon aquilo*<sup>2</sup>  
*Callimorpha (Euplagia, Panaxia) quadripunctaria* #<sup>2</sup>  
*Clossiana improba*<sup>2</sup>  
*Coenonympha oedippus*  
*Erebia calcaria*  
*Erebia christi*  
*Erebia medusa polaris*<sup>2</sup>  
*Eriogaster catax*  
*Euphydryas (Eurodryas, Hypodryas) aurinia*  
*Graellsia isabellae*<sup>2</sup>  
*Hesperia comma catena*<sup>2</sup>  
*Hypodryas maturna*  
*Lycena dispar*  
*Maculinea nausithous*  
*Maculinea teleius*  
*Melanargia arge*  
*Papilio hospiton*  
*Plebicula golgus*  
*Xestia borealis*<sup>2</sup>  
*Xestia brunneopicta*<sup>2</sup>  
  
**CRUSTACEA**  
*Decapoda*  
*Austropotamobius pallipes*<sup>2</sup>  
  
**ARACHNIDA**  
*Pseudoscorpiones*  
*Anthrenochernes stellae*<sup>2</sup>

# **Molluscs/Mollusques**

**GASTROPODA**  
*Dytocardia*  
*Gibbula nivosa* (Med.)  
*Stylommatophora*  
*Caseolus calculus*  
*Caseolus commixta*  
*Caseolus sphaerula*  
*Discus guerinianus*  
*Discula leacockiana*

Discula tabellata  
Elona quimperiana  
Geomalacus maculosus  
Geomitra moniziana  
Helicopsis striata austriaca <sup>2</sup>  
Idiomela (Helix) subplicata <sup>2</sup>  
Leiostyla abbreviata  
Leiostyla cassida  
Leiostyla corneocostata  
Leiostyla gibba  
Leiostyla lamellosa  
Vertigo angustior <sup>2</sup>  
Vertigo genesii <sup>2</sup>  
Vertigo geyeri <sup>2</sup>  
Vertigo moulinsiana <sup>2</sup>

**BIVALVIA***Unionoida*

Margaritifera durrovensis (Margaritifera margaritifera) <sup>2</sup>  
Margaritifera margaritifera <sup>2</sup>  
Unio crassus

## Appendix 11

### **Ministerial Statement concerning the Pan-European Ecological Network (5<sup>th</sup> Ministerial Conference “Environment for Europe”, Kyiv, May 2003)**

We, the European Ministers of Environment and Heads of Delegations of the States participating in the process of the Pan-European Biological and Landscape Diversity:

*Consider that the Pan-European Ecological Network is a major means for implementing the aim of the Pan-European Biological and Landscape Strategy for the conservation and management of species, ecosystems, habitats, and landscapes;*

Are convinced that the Pan-European Ecological Network has the potential to be used as a spatial planning tool for Europe;

Express our strong support to the development of the Pan-European Ecological Network and its establishment by 2015;

Engage ourselves to provide appropriate resources to the implementation of this major instrument;

**Encourage financial institutions and mechanisms to prioritise green investments in relevant parts of the Pan-European Ecological Network and to avoid investments in these areas that will harm biological diversity and landscapes;**

Welcome the maintenance or development of a sustainable relationship between agriculture and biological diversity in and around relevant parts of the Pan-European Ecological Network;

Welcome the indicative map of the Pan-European Ecological Network for Central and Eastern European region as a communication tool for promoting the establishment of the network in this region, and encourage the further extension of the map towards other regions in Europe;

#### **Encourage:**

- the States participating in the process of the Pan-European Biological and Landscape Diversity Strategy to give a priority to the development of the Network by supporting the programme of activity of the intergovernmental body (the Council of Europe) entrusted with it, developing national ecological networks comprising both areas of national and international importance and promoting programmes for the implementation of transboundary networks;
- the Central and Eastern Europe States and the Newly Independent States to give particular attention to the implementation of the Pan-European Ecological Network, in synergy with the Bern Convention Emerald Network and Natura 2000, as a way to protect their rich landscape and biological diversity and express the wish that enough resources be allocated to the relevant programmes;

#### **Invite:**

- the institutions and intergovernmental organisations engaged in the implementation of the Pan-European Ecological Network, in particular the Council of Europe and its Parliamentary Assembly and the European Centre for Nature Conservation (ECNC), to pursue and develop the work already undertaken;
- UNESCO to co-operate for the implementation of the Pan-European Ecological Network, in particular through its programme Man and Biosphere, Biosphere Reserves and World Heritage Sites;
- the Ministerial Conference on the Protection of Forests in Europe to co-operate in the implementation of the Pan-European Ecological Network;
- the European Conference of Ministers responsible for Regional Planning (CEMAT) to take into account the building-up of the Pan-European Ecological Network and its integration in the priorities and programme of activities for regional and spatial development in Europe;
- the European Conference of Ministers responsible for Culture to take into account the protection of all aspects of landscapes with a view of maintaining their biological and landscape diversity, in co-operation with the national authorities responsible for the protection of natural environment and landscapes;
- the local and regional authorities to implement the Pan-European Ecological Network at their level and be closely involved in development of transnational networks, and involve all local stakeholders;
- the Committee of Ministers of the Council of Europe, the European Union, the Parliamentary Assembly of the Council of Europe, the Congress of Local and Regional Authorities of Europe of the Council of Europe, to contribute to the development of the Pan-European Ecological Network by providing appropriate resources to the programmes and activities to be implemented in this framework.

## Appendix 12

### Calendar for the implementation of the Emerald Network

2003-2004 <b>Phase II.A.</b>	<p>Pilot projects for Azerbaijan, Bosnia and Herzegovina, Morocco, Senegal, Tunisia, Federal Republic of Yugoslavia</p> <p>Second implementation phase in all of the countries having carried out a pilot project, aimed to identify at least 30% of the potential ASCIs to be identified;</p> <p>Continuation of the designation of sites in Switzerland and Iceland, which started the network, without going through a pilot project programme;</p> <p>Work on identifying sites in the countries which have not been participating in the pilot project programme: Andorra, Liechtenstein, Monaco and Norway;</p> <p>Start of verification of the validity of data.</p>
2005-2006 <b>Phase II.B.</b>	<p>Identification and designation of all of the potential ASCIs in the Emerald Network in all of the states concerned;</p> <p>Establishment of the national lists;</p> <p>Continuation of verification of the validity of data received;</p> <p>Start of registering of ASCIs and notification to governments.</p>
2007-2009 <b>Phase III.A.</b>	<p>Examination and analysis of the scientific data to detect possible gaps;</p> <p>Publication of the lists of the Emerald Network of areas of special conservation interest;</p> <p>Establishment of a first European list of ASCIs;</p> <p>Continuation of unfinished work in phase II;</p> <p>Negotiation with states concerning possible designation of new ASCIs;</p> <p>Start of drafting and implementing management plans for ASCIs.</p>
2010 <b>Phase III.B.</b>	<p>Continuation on unfinished work in previous phases;</p> <p>Designation of ASCIs for Emerald Network completed;</p> <p>Update of Resolutions Nos. 4 and 6;</p> <p>Drafting and implementing management plans for 100% of ASCIs.</p>



## Appendix 13

# Implementation of Recommendation 16 of the Bern Convention

## EMERALD NETWORK STANDARD DATA-ENTRY FORM

FOR AREAS OF SPECIAL CONSERVATION INTEREST (ASCI's)

As amended from the NATURA 2000 standard data-entry form

### 1. SITE IDENTIFICATION

1.1. TYPE

--

1.2. SITE CODE

--	--	--	--	--	--	--	--

1.3. COMPILATION DATE

--	--	--	--	--	--

Y Y Y Y M M

1.4. UPDATE

--	--	--	--	--	--

Y Y Y Y M M

1.5. RELATION WITH OTHER EMERALD SITES:

EMERALD SITE CODES


EMERALD SITE CODES


1.6. RESPONDENT(S):

--

1.7. SITE NAME:

--

1.8. SITE INDICATION AND DESIGNATION DATE:

DATE SITE PROPOSED AS EMERALD SITE:

--	--	--	--	--	--

Y Y Y Y M M

DATE CONFIRMED AS EMERALD SITE

--	--	--	--	--	--

Y Y Y Y M M

## 2.SITE LOCATION

### 2.1. SITE CENTRE LOCATION:

LONGITUDE

--	--	--	--	--	--

W/E (Greenwich)

LATITUDE

--	--	--	--	--	--

### 2.2. AREA (ha):

--	--	--	--	--	--	--	--	--	--

### 2.3. SITE LENGTH (Km):

--	--	--	--	--	--	--	--

### 2.4. ALTITUDE (m):

MINIMUM

--	--	--	--	--

MAXIMUM

--	--	--	--	--

MEAN

--	--	--	--	--

### 2.5. ADMINISTRATIVE REGION:

CODE

(Appendix A)


REGION NAME


%COVER


Marine area not covered by a NUTS-region
--

--	--	--

### 2.6. BIOGEOGRAPHIC REGION:

☐

Anatolian

☐

Arctic

☐

Alpine

☐

Atlantic

☐

Boreal

☐

Continental

☐

Macaronesia

☐

Mediterranean

☐

Pannonic

☐

Black Sea

☐

Steppic

### 3.1. HABITAT types present on the site and site assessment for them :

[illegible]

### 3.1.b. HABITAT RECORDING FOR SURFACES COVERED BY OTHER IMPORTANT HABITAT TYPES:

[illegible]

### 3.2. SPECIES

Covered by Resolution No 6 (1998)

and

site assessment for them:



CODE					NAME	POPULATION				SITE ASSESSMENT																
						RESIDENT	MIGRATORY			Population				Conservation				Isolation				Global				
							Repro- duction	Winter	Stage																	
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B	C	A	B	C	A	B	C	D
										A	B	C	D	A	B	C	A	B								

[illegible]

CODE				NAME	POPULATION				SITE ASSESSMENT											
					RESIDENT	MIGRATORY			Population		Conservation		Isolation		Global					
						Repro- duction	Winter	Stage	A	B	C	D	A	B	C	D	A	B	C	D

*Please copy page if necessary*

CODE					NAME	POPULATION				SITE ASSESSMENT											
						RESIDENT	MIGRATORY			Population	Conservation	Isolation	Global								
							Repro- duction	Winter	Stage												
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D
										A	B	C	D	A	B	C	D	A	B	C	D

Please copy page if necessary





### 3.3. Other Important Species of Flora and Fauna

[illegible]

(B = Birds, M = Mammals, A = Amphibians, R = Reptiles, F = Fishes, I = Invertebrates, P = Plants)

*Please copy page if necessary*

#### 4.1. GENERAL SITE CHARACTER:

Habitat classes	% cover
Marine areas, Sea inlets	
Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	
Salt Marshes, Salt pastures, Salt Steppes	
Coastal sand dunes, Sand beaches, Machair	
Shingle, Sea cliffs, Islets	
Inland water bodies (Standing water, Running water)	
Bogs, Marshes, Water fringed vegetation, Fens	
Heath, Scrub, Maquis and Garigue, Phrygana	
Dry grassland, Steppes	
Humid grassland, Mesophile grassland	
Alpine and sub-Alpine grassland	
Extensive cereal cultures (including Rotation cultures with regular fallowing)	
Ricefields	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Broad-leaved evergreen woodland	
Mixed woodland	
Artificial forest monoculture (e.g. Plantations of poplar or Exotic trees)	
Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	
Inland rocks, Scree, Sands, Permanent Snow and Ice	
Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	
<b>TOTAL HABITAT COVER</b>	<b>100 %</b>

**Other site characteristics:**

#### 4.2. QUALITY AND IMPORTANCE:

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### 4.3. VULNERABILITY:

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[illegible]

## 5. SITE PROTECTION STATUS AND RELATION WITH CORINE Biotopes:

### 5.1. DESIGNATION TYPES at National and Sub-national level:

CODE %COVER CODE %COVER CODE %COVER







## 5.2. RELATION OF THE DESCRIBED SITE WITH OTHER SITES:

**Designated at National or Sub-national level:**

[illegible]

**Designated at the International level:**

TYPE	NAME of the Site	OVERLAP	
		TYPE	%COVER
RAMSAR CONVENTION:	1		
	2		
	3		
	4		
BIOGENETIC RESERVE:	1		
	2		
	3		
EURODIPLOMA SITE:	-		
BIOSPHERE RESERVE:	-		
BARCELONA CONVENTION:	-		
HELSINKI CONVENTION:			
WORLD HERITAGE SITE:	-		
OTHER:	-		

### 5.3. RELATION OF THE DESCRIBED SITE WITH CORINE BIOTOPES SITES:

[illegible]

## **6. HUMAN ACTIVITIES IN AND AROUND THE SITE**

### **6.1. GENERAL IMPACTS AND ACTIVITIES AND PROPORTION OF THE SURFACE AREA OF THE SITE AFFECTED:**

#### **IMPACTS AND ACTIVITIES WITHIN THE SITE:**

CODE			INTENSITY			% OF SITE			INFLUENCE			CODE			INTENSITY			% OF SITE			INFLUENCE		
			A	B	C				+	0	-				A	B	C				+	0	-
			A	B	C				+	0	-				A	B	C				+	0	-
			A	B	C				+	0	-				A	B	C				+	0	-
			A	B	C				+	0	-				A	B	C				+	0	-
			A	B	C				+	0	-				A	B	C				+	0	-
			A	B	C				+	0	-				A	B	C				+	0	-

#### **IMPACTS AND ACTIVITIES AROUND THE SITE:**

CODE			INTENSITY			INFLUENCE			CODE			INTENSITY			INFLUENCE		
			A	B	C	+	0	-				A	B	C	+	0	-
			A	B	C	+	0	-				A	B	C	+	0	-
			A	B	C	+	0	-				A	B	C	+	0	-
			A	B	C	+	0	-				A	B	C	+	0	-
			A	B	C	+	0	-				A	B	C	+	0	-
			A	B	C	+	0	-				A	B	C	+	0	-

### **6.2. SITE MANAGEMENT:**

#### **BODY RESPONSABLE FOR THE SITE MANAGEMENT:**

#### **SITE MANAGEMENT AND PLANS:**

## **7. MAP OF THE SITE**

- **Physical map:**


## REFERENCE TO AVAILABILITY OF BOUNDARIES IN DIGITISED FORM

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- **Map of designated sites described in 5:**

Provide this information on a map with the same characteristics as above !

- **Aerial photograph(s) included:**

☐ NO


## 8. SLIDES

[illegible]