

Strasbourg, 30 May 2012  
[PA02e\_2012.doc]

**T-PVS/PA (2012) 2**

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE  
AND NATURAL HABITATS

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

---

4<sup>th</sup> meeting  
18-19 September 2012  
Council of Europe, Strasbourg, France

**The Emerald Network:  
A Network of Areas of Special Conservation Interest for Europe**

**Explanatory document and compilation of relevant texts**

*Document prepared by  
the Directorate of Democratic Governance, Culture and Diversity*

---

*This document will not be distributed at the meeting. Please bring this copy.  
Ce document ne sera plus distribué en réunion. Prière de vous munir de cet exemplaire*

## Table of contents

1. Introduction .....	4
2. Legal support of the Emerald Network .....	4
3. Areas of special conservation interest (ASCIs) .....	5
4. Overall description of the Emerald Network constitution process .....	10
5. Relations of the Emerald Network with Natura 2000 and the Pan-European Ecological Network.....	10
6. Progress in the setting-up of the Emerald Network .....	12
Appendix 1: Articles 1, 2, 3, 4, 6.b and 9 of the Convention.....	14
Appendix 2: Resolution No. 1 (1989) of the Standing Committee on the provisions relating to the conservation of habitats .....	16
Appendix 3: Recommendation No. 14 (1989) of the Standing Committee on species habitat conservation and on the conservation of endangered natural habitats.....	18
Appendix 4: Recommendation No. 15 (1989) of the Standing Committee on the conservation of endangered natural habitat types.....	19
Appendix 5: Recommendation No. 16 (1989) of the Standing Committee on areas of special conservation interest.....	20
Appendix 6: Recommendation No. 25 (1991) of the Standing Committee on the conservation of natural areas outside protected areas proper .....	21
Appendix 7: Resolution No. 3 (1996) of the Standing Committee concerning the setting up of a Pan-European Ecological Network.....	25
Appendix 8: Resolution No. 4 (1996) of the Standing Committee listing endangered natural habitat requiring specific conservation measures .....	26
Appendix 9: Resolution No. 5 (1998) of the Standing Committee concerning the rules for the Network of areas of special conservation interest (Emerald Network).....	34
Appendix 10: Resolution No. 6 (1998) of the Standing Committee listing the species requiring specific habitat conservation measures .....	36
Appendix 11: Ministerial Statement concerning the Pan-European Ecological Network (5th Ministerial Conference “Environment for Europe”, Kyiv, May 2003) .....	67
Appendix 12: Calendar for the implementation of the Emerald Network 2011-2020.....	68

Appendix 13: Standart data-entry form .....	71
Appendix 14: Criteria for assessing the National Lists of proposed Areas of Special Conservation Interest (ASCIs) at biogeographical level and procedure for examining and approving Emerald Candidates sites.....	85
Appendix 15: Information form for species and habitats to be added to the Bern Convention lists .....	91
Appendix 16: European biogeogrpahical regions‘ map.....	- 97 -
Appendix 17: Recommendation No. 157 (2011) on the status of candidate Emerald sites and guidelines on the criteria for their nomination.....	98

## 1. Introduction

In June 1989 the Standing Committee to 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".

## 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 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 the 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 shall 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 and 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 and 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"*.

As explained above, 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.

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

Resolution No. 3 (1996), Recommendation No. 16 (1989) and Resolution No. 5 (1998) have provided initial but narrow guidance on how the ASCIs should be designated. 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"*.

Following the decision taken by the above mentioned Group of Experts, that in principle the designation process would be done in such a way that it would be compatible with that of the Natura 2000 Network, a more complete guidance revealed necessary on the procedure to be followed for the designation of the ASCIs. In 2006, a first attempt was made to agree on criteria for a simplified biogeographic approach to the evaluation of Emerald sites, on the basis of the criteria adopted by the Habitats Committee in 1997 (Hab. 97/2 rev. 4 18/11/97). Meanwhile, the EU accumulated experience within the different Biogeographical seminars and the procedure was gradually amended accordingly.

After several years of discussion, in 2010, the Standing Committee adopted the Criteria for assessing the National Lists of proposed ASCIs at biogeographical level and procedure for examining and approving Emerald candidate sites<sup>1</sup>. This document provides the fundamental basis for the identification and scientific evaluation of the sufficiency of the sites proposed by the Contracting Parties for joining the Emerald Network. The Emerald Network constitution process was described through three different stages or "Phases" of implementation (see also Chart 1):

**Phase I:** Participating countries assess their natural resources and identify species and habitats to be protected according to the relevant resolutions of the Bern Convention. They subsequently select potential sites which are suitable for ensuring the long-term survival of the "Emerald" species and habitats and they send a database containing scientific information on the proposed sites to the Bern Convention's Secretariat. The proposed sites can be officially nominated candidate Emerald sites by the Standing Committee, as provided for in Recommendation No. 157 (2011) on the status of candidate Emerald sites and guidelines on the criteria for their nomination.

---

<sup>1</sup> Criteria for assessing the National Lists of proposed ASCIs at biogeographical level and procedure for examining and approving Emerald candidate sites, adopted in December 2010 by the Standing Committee

**Phase II:** An evaluation of the efficiency of the proposed sites is done on a species by species and habitat by habitat base for each biogeographical region. Ideally the evaluation would only start if a complete inventory of proposed sites exists for a certain area. Realistically, this would mean that over 80 % of the finally proposed sites would already be available for the evaluation. Once the scientific value of the proposed sites is assessed, the candidate Emerald sites are submitted to the Standing Committee and will eventually be approved so to formally integrate the Emerald Network.

**Phase III:** Consists of the national designation of the adopted ASCI's and the implementation of management, reporting and monitoring measures, under the responsibility of national authorities.

In order to designate ASCIs, any government should deposit a Standard Data Form for each individual site proposed with the Secretariat of the Council of Europe, through the Common Data Repository of the EEA. The Standard data form is based on the database designated for Natura 2000 and the data has been modified to cover the larger geographical area and the 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 addition, in accordance with Resolution No.5 (1998) -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. The need for additional designation is further clarified in the document on the Criteria for assessing the National Lists of proposed ASCIs at biogeographical level and procedure for examining and approving Emerald candidate sites. Through the biogeographic process of assessment of the sites' proposals (Phase II), the need for further identification of potential sites might be concluded, for ensuring a sufficient protection of some species and habitats. On the contrary, if a government wishes to designate an area which does not meet the criteria, the Standing Committee may advice the government to withdraw the proposal. If the government nevertheless maintains the designation, the Standing Committee may decide not to accept it.

Aside from describing and guiding the biogeographical process in details, the document on the Criteria for assessing the National Lists of proposed ASCIs provides for the status of "official candidate sites", to be given by the Bern Convention Standing Committee to all proposed sites which have passed successfully the initial quality-check of the country database. Only then, the evaluation of sufficiency of the proposed sites can be initiated at biogeographical level.

### **Which species and habitats are to be protected through the ASCIs?**

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.

In 2011, on the demand of the Council of Europe, the European Topic Centre for Biological Diversity started a comparison exercise between the Bern Convention lists of habitats and species requiring special conservation measures [(Res. No 4 (1996) and Res. No. 6 (1998)] and the EU Habitats and Birds Directives lists of threatened species and habitats [Annex I and II of the HD and Annex I of the Birds Directive]. Due to the successive enlargements of the European Union (1995, 2004 and 2007), the list of species and habitats for which Member States have to designate Natura 2000 sites has grown over time to take into account the new ecological context and characteristics of the new countries. Resolutions 4 and 6 of the Bern Convention have not followed this evolution.

The main aim of this comparison exercise is therefore to keep the Emerald and Natura 2000 Networks as coherent as possible, also because the Emerald Network approach is helping the EU candidate countries (in particular the countries from the Balkan region) to prepare for the Natura 2000 implementation and the *acquis communautaire* in this field..

In December 2011, a revised Annex I of Resolution 6 (1998) consistent with the relevant annexes of the Birds and the Habitats Directives was adopted by the Standing Committee to the Bern Convention. A comparison exercise will also be developed between the lists of habitats targeted by Resolution 4 (1996) of the Bern Convention and the Annex I of the Habitats Directive in 2012, possibly leading to the adoption of a new list of species under Resolution 4.

### **What duties 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.”*

#### **What reporting on the management of Emerald sites?**

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)”*.

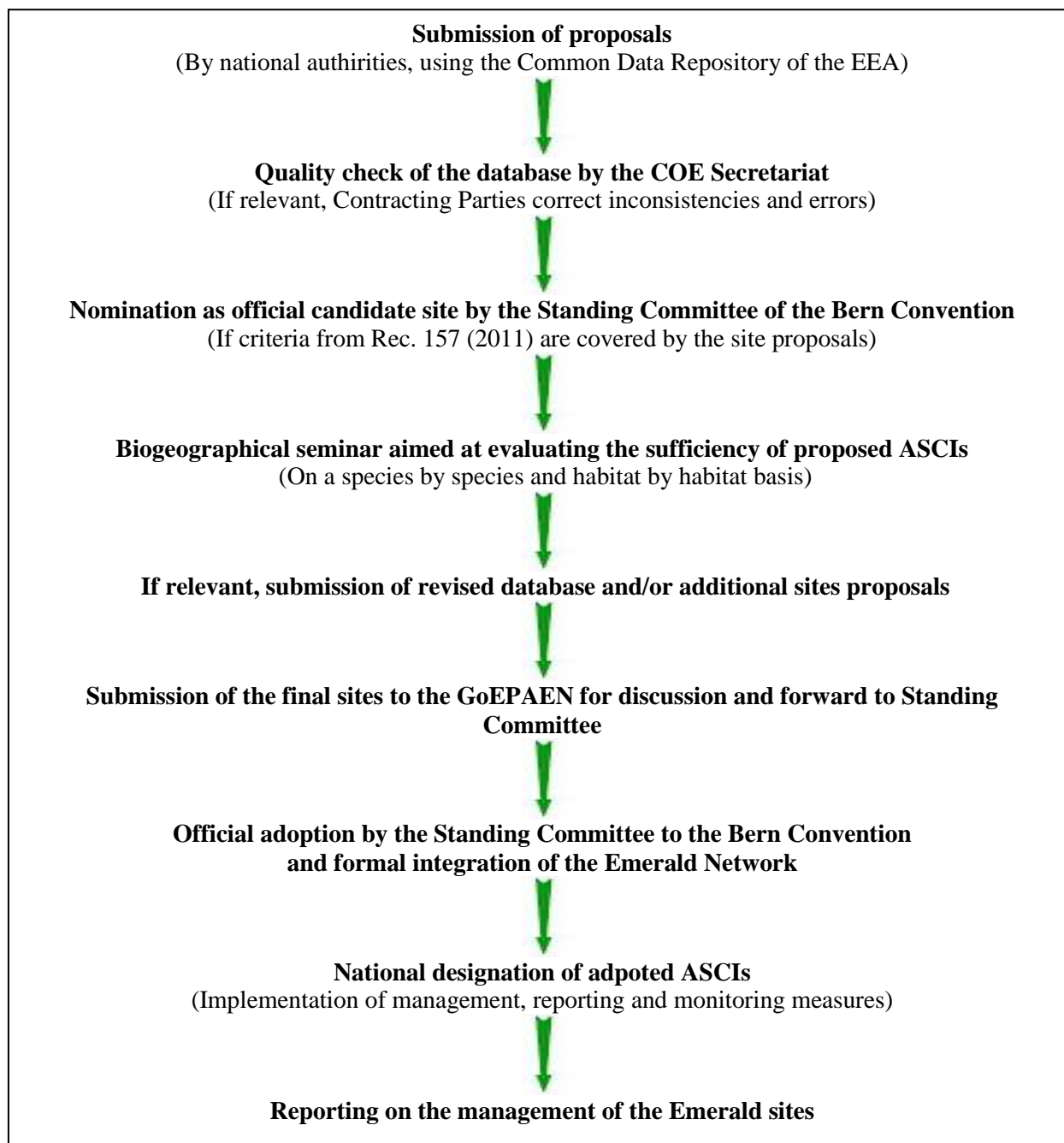
Building the Emerald Network is designed to be a dynamic process, which will need regular updates of the information contained and the way the states comply with the recommendation. Paragraph 2 of Recommendation No. 16 invites states to *“review regularly or continually in a systematic fashion their performance in the implementation of [the designation of ASCIs].”* However, recent progress in the setting-up of the Emerald Network in the years 2000 has proved it is becoming urgent that clearer guidelines on the reporting of the management of the Emerald sites are developed.

#### **What access to information on ASCIs?**

The information on ASCIs shall be public and stored in an open database, except for the information communicated as confidential. The group of experts, under the aegis of the Standing Committee, will publish regularly lists of designated ASCIs and their character and will make that information available in electronic form. For Contracting Parties of the Convention, which are also member states of the European Community, the data on Natura 2000 sites is accessible publicly through the EEA online databases.

#### 4. Overall description of the Emerald Network constitution process

**Chart 2:** Overall description of the different phases of the Emerald Network constitution process



#### 5. 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*" (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 is 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. The member States of the European Union satisfy with the habitat requirements of the Bern Convention through the designation of sites to the Natura 2000 Network and their Special Areas of Conservation of the Natura 2000 are considered as the Areas of Special Conservation Interest of the Emerald Network, as foreseen in Resolution No. 5.

The building of the Emerald Network benefits substantially from the work carried out in the European Union on Natura 2000 as in the last decade the Emerald constitution process and methodology got inspired and followed the Natura 2000 examples and best practices. Coherence between the Emerald and Natura 2000 is essential for ensuring the whole of Europe holds a homogeneous network of areas and is additionally 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, the setting-up of the Emerald Network supported the former EU-candidate states to join the European Union, by doing 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 between the Council of Europe and the European Commission, in terms of technical and financial matters derived from the building of both networks. Nowadays, efforts on setting-up the Emerald Network are concentrated on Bern Convention Contracting Parties in the EU neighbouring area. In a sense, the Emerald Network extends the EU nature conservation standards outside its borders and its success will be that of nature conservation in the Pan-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 geographic extent and their biological and landscape diversity.

In 2011, the Council of Europe initiated a reflection and discussion process on the future strategic development of the PEEN. In 2012, an Action Plan is going to be debated at the Group of Experts on Protected Areas and Ecological Networks of the Council of Europe and hopefully adopted the same year by the Standing Committee to the Bern Convention.

## **6. Progress in the setting-up of the Emerald Network**

With the adoption in December 1998 of Resolution No. 5 (1998) “Rules for the Emerald network”, Resolution No. 4 (1996) on habitats requiring specific conservation measures, 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 was 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 had 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.

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.

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.

In addition, in 2011, the first Emerald biogeographical Seminar took place for the same six West Balkan countries. These countries were the ones which initiated Phase II of the Emerald Network constitution process consisting of the evaluation of the sufficiency of their site proposals. The exercise was particularly successful and useful for the countries, as it helped them identify the areas (species and habitats) on which they have to make more efforts in the coming years.

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 was to identify 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 were expected to be identified.

Table 1 below presents the overall statistics of the Emerald network coverage up to December 2011, after the implementation of the two regional projects was finalised. A new project with the 7 Eastern and Central European countries and the South Caucasus is currently under planning, aimed at initiating Phase II of the Network setting-up process there.

Table 1: Overall statistics on the Emerald Network coverage outside the EU by end of 2011

Country	The Emerald Network coverage		
	Number of sites	Total AREA (ha)	% country coverage
Albania <sup>1</sup>	25	522 430,00	18,20
Armenia <sup>2</sup>	9	228 814,28	7,68
Azerbaijan <sup>2</sup>	10	992 515,42	11,46
Belarus <sup>2</sup>	12	912 241,00	4,39
Bosnia-Herzegovina <sup>1</sup>	29	250 455,00	4,90
Belarus <sup>2</sup>	12	912 241,00	4,39
Croatia <sup>1,4</sup>	957	2 666 762,00	38,70
FYR of Macedonia <sup>1</sup>	35	754 383,00	29,30
Georgia <sup>2</sup>	20	586 831,50	8,42
Moldova <sup>2</sup>	17	414 230,00	12,24
Montenegro <sup>1</sup>	32	240 077,00	17,10
Morocco <sup>3</sup>	11	572 820,00	1,28
Norway <sup>3</sup>	93	3 350 369,00	8,69
Russia <sup>2</sup>	740	28 225 414,30	7,13
Serbia <sup>1</sup>	61	1 021 078,00	11,60
Switzerland <sup>3</sup>	37	64 216,00	1,55
Ukraine <sup>2</sup>	149	4 348 432,54	7,20

<sup>1</sup> Emerald Candidate sites, as nominated by the Standing Committee to the Bern Convention on 2 December 2011 [T-PVS/PA (2011)06]

<sup>2</sup> Proposed Emerald sites, final results of the 3-year Joint EU/COE Programme (2009-2011)

<sup>3</sup> Emerald Candidate sites (pilot project results), as nominated by the Standing Committee to the Bern Convention on 2 December 2011 [T-PVS/PA (2011)06]

<sup>4</sup> For Croatia, the total area in the tabular data has a high degree of overlapping area between the different types of sites; this overlapping area is eliminated in the total area as taken from the GIS layer; for the % coverage, only the terrestrial area is counted (2 187 100 ha), without the marine part of the sites

## **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>2</sup>**

##### *I. 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.

##### *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;

---

<sup>2</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.

- 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.

### **Revised Annex I of Resolution 4 (1996) of the Bern Convention on endangered natural habitat types using the EUNIS habitat classification** (Adopted by the Standing Committee on 9 December 2010)

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

<u>A</u>	<u>Marine habitats</u>
A1	Littoral rock and other hard substrata
A1.1	High energy littoral rock
! A1.11	Mussel and/or barnacle communities
A1.14	Mediterranean and Black Sea communities of lower mediolittoral rock very exposed to wave action
! A1.141	Association with [ <i>Lithophyllum byssoides</i> ]
A1.2	Moderate energy littoral rock
! A1.22	Mussels and fucoids on moderately exposed shores
A1.4	Features of littoral rock
! A1.44	Communities of littoral caves and overhangs
A2	Littoral sediment
! A2.2	Littoral sand and muddy sand
! A2.3	Littoral mud
! A2.4	Littoral mixed sediments
! A2.5	Coastal saltmarshes and saline reedbeds
	includes the following subtypes separately listed in or split units from the 1998 version:
A2.521	Atlantic and Baltic brackish saltmarsh communities
A2.531	Atlantic upper shore communities
A2.542	Atlantic lower shore communities
A2.5514	[ <i>Salicornia veneta</i> ] swards
A2.5515	Black Sea annual [ <i>Salicornia</i> ], [ <i>Suaeda</i> ] and [ <i>Salsola</i> ] saltmarshes
A2.553	Atlantic [ <i>Sagina maritima</i> ] communities
A2.6	Littoral sediments dominated by aquatic angiosperms
! A2.61	Seagrass beds on littoral sediments
! A2.621	[ <i>Eleocharis</i> ] beds

A2.7	Littoral biogenic reefs
! A2.72	Littoral mussel beds on sediment
! A3	Infralittoral rock and other hard substrata includes the following subtypes separately listed in or split units from the 1998 version:
A3.71	Robust faunal cushions and crusts in surge gullies and caves
A3.74	Caves and overhangs in infralittoral rock
! A4	Circalittoral rock and other hard substrata includes the following subtypes separately listed in or split units from the 1998 version:
A4.24	Mussel beds on circalittoral rock
A4.26	Mediterranean coralligenous communities moderately exposed to hydrodynamic action
A4.32	Mediterranean coralligenous communities sheltered from hydrodynamic action
A4.71	Communities of circalittoral caves and overhangs
! A5	Sublittoral sediment includes the following subtypes separately listed in or split units from the 1998 version:
A5.627	Baltic mussel beds in the infralittoral photic zone
A6	Deep-sea bed
A6.9	Vents, seeps, hypoxic and anoxic habitats of the deep sea
A6.91	Deep-sea reducing habitats
! A6.911	Seeps in the deep-sea bed
<u>B</u>	<u>Coastal habitats</u>
B1	Coastal dunes and sandy shores
! B1.3	Shifting coastal dunes
! B1.4	Coastal stable dune grassland (grey dunes)
! B1.5	Coastal dune heaths
! B1.6	Coastal dune scrub
! B1.7	Coastal dune woods
! B1.8	Moist and wet dune slacks
! B1.9	Machair
B2	Coastal shingle
! B2.3	Upper shingle beaches with open vegetation
<u>C</u>	<u>Inland surface waters</u>
C1	Surface standing waters
! C1.1	Permanent oligotrophic lakes, ponds and pools includes the following subtype separately listed in or split unit from the 1998 version:
C1.14	Charophyte submerged carpets in oligotrophic waterbodies
C1.2	Permanent mesotrophic lakes, ponds and pools
C1.22	Free-floating vegetation of mesotrophic waterbodies
! C1.222	Floating [ <i>Hydrocharis morsus-ranae</i> ] rafts
! C1.223	Floating [ <i>Stratiotes aloides</i> ] rafts
! C1.224	Floating [ <i>Utricularia australis</i> ] and [ <i>Utricularia vulgaris</i> ] colonies
! C1.225	Floating [ <i>Salvinia natans</i> ] mats
! C1.226	Floating [ <i>Aldrovanda vesiculosa</i> ] communities
C1.24	Rooted floating vegetation of mesotrophic waterbodies
C1.241	Floating broad-leaved carpets
! C1.2416	[ <i>Nelumbo nucifera</i> ] beds
! C1.25	Charophyte submerged carpets in mesotrophic waterbodies
C1.3	Permanent eutrophic lakes, ponds and pools
C1.34	Rooted floating vegetation of eutrophic waterbodies

- C1.341 Shallow-water floating communities
- ! C1.3411 [Ranunculus] communities in shallow water
- ! C1.3413 [Hottonia palustris] beds in shallow water
  
- C1.4 Permanent dystrophic lakes, ponds and pools
- ! C1.44 Charophyte submerged carpets in dystrophic waterbodies
  
- ! C1.5 Permanent inland saline and brackish lakes, ponds and pools
  
- C1.6 Temporary lakes, ponds and pools
- ! C1.66 Temporary inland saline and brackish waters
- ! C1.67 Turlough and lake-bottom meadows
  
- C2 Surface running waters
  
- C2.1 Springs, spring brooks and geysers
- ! C2.12 Hard water springs
  
- C3 Littoral zone of inland surface waterbodies
  
- C3.4 Species-poor beds of low-growing water-fringing or amphibious vegetation
- ! C3.41 Euro-Siberian perennial amphibious communities
- C3.42 Mediterraneo-Atlantic amphibious communities
- ! C3.421 Short Mediterranean amphibious communities
- ! C3.422 Tall Mediterranean amphibious communities
- C3.43 Central Eurasian amphibious communities
- ! C3.431 Ponto-Pannonic riverbank dwarf sedge communities
  
- C3.5 Periodically inundated shores with pioneer and ephemeral vegetation
- C3.51 Euro-Siberian dwarf annual amphibious swards
- ! C3.511 Freshwater dwarf [Eleocharis] communities
- ! C3.512 Dune-slack [Centaurium] swards
- ! C3.5132 Swards of small [Cyperus] species
- ! C3.5133 Wet ground dwarf herb communities
- ! C3.55 Sparsely vegetated river gravel banks
  
- C3.6 Unvegetated or sparsely vegetated shores with soft or mobile sediments
- ! C3.62 Unvegetated river gravel banks
  
- D Mires, bogs and fens
  
- D1 Raised and blanket bogs
  
- ! D1.2 Blanket bogs
  
- D2 Valley mires, poor fens and transition mires
  
- D2.2 Poor fens and soft-water spring mires
- D2.22 [Carex nigra], [Carex canescens], [Carex echinata] fens
- ! D2.226 Peri-Danubian black-white-star sedge fens
- ! D2.3 Transition mires and quaking bogs  
includes the following subtype separately listed in or split unit from the 1998 version:  
D2.3H Wet, open, acid peat and sand, with [Rhynchospora alba] and [Drosera]
  
- D3 Aapa, palsa and polygon mires
- ! D3.1 Palsa mires
- ! D3.2 Aapa mires
- ! D3.3 Polygon mires
  
- D4 Base-rich fens and calcareous spring mires
  
- ! D4.1 Rich fens, including eutrophic tall-herb fens and calcareous flushes and soaks

!	D4.2	Basic mountain flushes and streamsides, with a rich arctic-montane flora
	D5	Sedge and reedbeds, normally without free-standing water
!	D5.2	Beds of large sedges normally without free-standing water
	D6	Inland saline and brackish marshes and reedbeds
!	D6.1	Inland saltmarshes includes the following subtypes separately listed in or split units from the 1998 version:
	D6.15	Interior Iberian [ <i>Microcnemum</i> ] and [ <i>Salicornia</i> ] swards
	D6.16	Interior central European and Anatolian [ <i>Salicornia</i> ], [ <i>Microcnemum</i> ], [ <i>Suaeda</i> ] and [ <i>Salsola</i> ] swards
	E	<u>Grasslands and lands dominated by forbs, mosses or lichens</u>
	E1	Dry grasslands
	E1.1	Inland sand and rock with open vegetation
	E1.11	Euro-Siberian rock debris swards
!	E1.112	[ <i>Sempervivum</i> ] or [ <i>Jovibarba</i> ] communities on rock debris
!	E1.2	Perennial calcareous grassland and basic steppes
!	E1.3	Mediterranean xeric grassland
	E1.7	Closed non-Mediterranean dry acid and neutral grassland
!	E1.71	[ <i>Nardus stricta</i> ] swards
	E1.8	Closed Mediterranean dry acid and neutral grassland
!	E1.83	Mediterraneo-montane [ <i>Nardus stricta</i> ] swards
!	E1.B	Heavy-metal grassland
	E2	Mesic grasslands
	E2.2	Low and medium altitude hay meadows
!	E2.25	Continental meadows
	E3	Seasonally wet and wet grasslands
!	E3.1	Mediterranean tall humid grassland includes the following subtypes separately listed in or split units from the 1998 version:
	E3.111	[ <i>Serapias</i> ] grassland
!	E3.4	Moist or wet eutrophic and mesotrophic grassland
!	E3.5	Moist or wet oligotrophic grassland
	E5	Woodland fringes and clearings and tall forb stands
	E5.4	Moist or wet tall-herb and fern fringes and meadows
	E5.41	Screens or veils of perennial tall herbs lining watercourses
	E5.411	Watercourse veils (other than of [ <i>Filipendula</i> ])
!	E5.4111	[ <i>Angelica archangelica</i> ] fluvial communities
!	E5.4112	[ <i>Angelica heterocarpa</i> ] fluvial communities
!	E5.4113	[ <i>Althaea officinalis</i> ] screens
!	E5.414	Continental river bank tall-herb communities dominated by [ <i>Filipendula</i> ]
!	E5.415	Eastern nemoral riverbanks with tall herb communities
	E5.42	Tall-herb communities of humid meadows
!	E5.423	Continental tall-herb communities of humid meadows
!	E5.424	Eastern nemoral Tall-herb communities of humid meadows

E6	Inland salt steppes
! E6.1	Mediterranean inland salt steppes
! E6.2	Continental inland salt steppes includes the following subtype separately listed in or split unit from the 1998 version: E6.23 Central Eurasian solonchak grassland with [Crypsis]
E7	Sparsely wooded grasslands
! E7.3	Dehesa
<u>F</u>	<u>Heathland, scrub and tundra</u>
F2	Arctic, alpine and subalpine scrub
F2.2	Evergreen alpine and subalpine heath and scrub
F2.22	Alpine acidocline [Rhododendron] heaths
! F2.224	Carpathian [Rhododendron kotschy] heaths
! F2.225	Balkan [Rhododendron kotschy] heaths
! F2.26	[Bruckenthalia] heaths
F3	Temperate and mediterranean-montane scrub
F3.2	Submediterranean deciduous thickets and brushes
F3.24	Subcontinental and continental deciduous thickets
! F3.241	Central European subcontinental thickets
F4	Temperate shrub heathland
! F4.1	Wet heaths
! F4.2	Dry heaths
! F4.3	Macaronesian heaths
F5	Maquis, arborescent matorral and thermo-Mediterranean brushes
F5.5	Thermo-Mediterranean scrub
! F5.52	[Euphorbia dendroides] formations
! F5.54	[Chamaerops humilis] brush
! F5.55	Mediterranean pre-desert scrub
! F5.56	Thermo-Mediterranean broom fields (retamares)
! F5.5B	Cabo de Sao Vicente brushes
F6	Garrigue
! F6.7	Mediterranean gypsum scrubs
! F6.8	Xero-halophile scrubs
! F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9	Riverine and fen scrubs
! F9.1	Riverine scrub
! F9.3	Southern riparian galleries and thickets (Excluding F9.35: Riparian stands of invasive shrubs)
<u>G</u>	<u>Woodland, forest and other wooded land</u>
G1	Broadleaved deciduous woodland
G1.1	Riparian and gallery woodland, with dominant [Alnus], [Betula], [Populus] or [Salix]
! G1.11	Riverine [Salix] woodland
! G1.12	Boreo-alpine riparian galleries
! G1.13	Southern [Alnus] and [Betula] galleries

- G1.2 Mixed riparian floodplain and gallery woodland
- ! G1.21 Riverine [Fraxinus] - [Alnus] woodland, wet at high but not at low water
- G1.22 Mixed [Quercus] - [Ulmus] - [Fraxinus] woodland of great rivers
- ! G1.221 Great medio-European fluvial forests
- ! G1.223 Southeast European [Fraxinus] - [Quercus] - [Alnus] forests
- ! G1.224 Po [Quercus] - [Fraxinus] - [Alnus] forests
  
- G1.3 Mediterranean riparian woodland
- ! G1.36 Ponto-Sarmatic mixed [Populus] riverine forests
- ! G1.37 Irano-Anatolian mixed riverine forests
- ! G1.38 [Platanus orientalis] woods
- ! G1.39 [Liquidambar orientalis] woods
  
- G1.4 Broadleaved swamp woodland not on acid peat
- G1.41 [Alnus] swamp woods not on acid peat
- G1.411 Meso-eutrophic swamp alder woods
- ! G1.4115 Eastern Carpathian [Alnus glutinosa] swamp woods
- ! G1.414 Steppe swamp [Alnus glutinosa] woods
- ! G1.44 Wet-ground woodland of the Black and Caspian Seas
  
- G1.5 Broadleaved swamp woodland on acid peat
- ! G1.51 Sphagnum [Betula] woods
  
- ! G1.6 [Fagus] woodland
  
- ! G1.7 Thermophilous deciduous woodland (excluding G1.7D *Castanea sativa* woodland)  
includes the following subtypes separately listed in or split units from the 1998 version:  
G1.7B [Quercus pyrenaica] woodland  
G1.7C Mixed thermophilous woodland
  
- ! G1.8 Acidophilous [Quercus]-dominated woodland
  
- G1.A Meso- and eutrophic [Quercus], [Carpinus], [Fraxinus], [Acer], [Tilia], [Ulmus] and related woodland
- ! G1.A1 [Quercus] - [Fraxinus] - [Carpinus betulus] woodland on eutrophic and mesotrophic soils
- ! G1.A4 Ravine and slope woodland
- ! G1.A7 Mixed deciduous woodland of the Black and Caspian Seas
  
- ! G2 Broadleaved evergreen woodland (excluding G2.8 Highly artificial broadleaved evergreen forestry plantations and G2.9 Evergreen orchards and groves)
  
- G3 Coniferous woodland
  
- G3.1 [Abies] and [Picea] woodland
- ! G3.15 Southern Apennine [Abies alba] forests
- ! G3.16 Moesian [Abies alba] forests
- ! G3.17 Balkano-Pontic [Abies] forests
- ! G3.19 [Abies pinsapo] forests
- ! G3.1B Alpine and Carpathian subalpine [Picea] forests
- ! G3.1C Inner range montane [Picea] forests
- ! G3.1D Hercynian subalpine [Picea] forests
- G3.1E Southern European [Picea abies] forests
- ! G3.1E1 Southeastern Moesian [Picea abies] forests
- ! G3.1E3 Montenegrine [Picea abies] forests
- ! G3.1E4 Pelagonide [Picea abies] forests
- ! G3.1E5 Balkan Range [Picea abies] forests
- ! G3.1G [Picea omorika] forests
- ! G3.1H [Picea orientalis] forests
  
- G3.2 Alpine [Larix] - [Pinus cembra] woodland
- ! G3.21 Eastern Alpine siliceous [Larix] and [Pinus cembra] forests
- ! G3.22 Eastern Alpine calcicolous [Larix] and [Pinus cembra] forests
- ! G3.25 Carpathian [Larix] and [Pinus cembra] forests

- ! G3.26 [Larix polonica] forests
- G3.3 [Pinus uncinata] woodland
- ! G3.31 [Pinus uncinata] forests with [Rhododendron ferrugineum]
- ! G3.32 Xerocline [Pinus uncinata] forests
- G3.4 [Pinus sylvestris] woodland south of the taiga
- ! G3.41 Caledonian forest
- G3.42 Middle European [Pinus sylvestris] forests
- G3.423 Western Eurasian steppe pine forests
- ! G3.4232 Sarmatic steppe [Pinus sylvestris] forests
- ! G3.4233 Carpathian steppe [Pinus sylvestris] woods
- ! G3.4234 Pannonic steppe [Pinus sylvestris] woods
- G3.44 Spring heath [Pinus sylvestris] forests
- ! G3.442 Carpathian relict calcicolous [Pinus sylvestris] forests
- ! G3.4C Southeastern European [Pinus sylvestris] forests
- ! G3.4E Ponto-Caucasian [Pinus sylvestris] forests
- G3.5 [Pinus nigra] woodland
- ! G3.51 Alpino-Apennine [Pinus nigra] forests
- ! G3.52 Western Balkanic [Pinus nigra] forests
- ! G3.53 [Pinus salzmannii] forests
- ! G3.54 Corsican [Pinus laricio] forests
- ! G3.55 Calabrian [Pinus laricio] forests
- ! G3.56 [Pinus pallasiana] and [Pinus banatica] forests
- ! G3.6 Subalpine mediterranean [Pinus] woodland
- G3.7 Lowland to montane mediterranean [Pinus] woodland (excluding [Pinus nigra])
- G3.71 Maritime [Pinus pinaster ssp. atlantica] forests
- ! G3.711 Charente [Pinus pinaster ssp. atlantica] - [Quercus ilex] forests
- ! G3.712 Aquitanian [Pinus pinaster ssp. atlantica] - [Quercus suber] forests
- ! G3.714 Iberian [Pinus pinaster ssp. atlantica] forests
- ! G3.72 [Pinus pinaster ssp. pinaster] ([Pinus mesogeensis]) forests
- ! G3.73 [Pinus pinea] forests
- G3.74 [Pinus halepensis] forests
- ! G3.741 Iberian [Pinus halepensis] forests
- ! G3.742 Balearic [Pinus halepensis] forests
- ! G3.743 Provenço-Ligurian [Pinus halepensis] forests
- ! G3.744 Corsican [Pinus halepensis] woods
- ! G3.745 Sardinian [Pinus halepensis] woods
- ! G3.746 Sicilian [Pinus halepensis] woods
- G3.747 Italic [Pinus halepensis] forests
- ! G3.7471 Gargano [Pinus halepensis] forests
- ! G3.7472 Metapontine [Pinus halepensis] forests
- ! G3.7473 Umbrian [Pinus halepensis] forests
- ! G3.748 Hellenic [Pinus halepensis] forests
- ! G3.749 Illyrian [Pinus halepensis] forests
- ! G3.74A East Mediterranean [Pinus halepensis] forests
- ! G3.75 [Pinus brutia] forests
- ! G3.8 Canary Island [Pinus canariensis] woodland
- ! G3.9 Coniferous woodland dominated by [Cupressaceae] or [Taxaceae]  
includes the following subtypes separately listed in or split unit from the 1998 version:  
G3.9C [Cedrus] woodland
- ! G3.D Boreal bog conifer woodland
- ! G3.E Nemoral bog conifer woodland
- H Inland unvegetated or sparsely vegetated habitats



!	H1	Terrestrial underground caves, cave systems, passages and waterbodies
	H2	Screes
	H2.6	Calcareous and ultra-basic screes of warm exposures
	H2.61	Peri-Alpine thermophilous screes
!	H2.613	Paris Basin screes
	X	<u>Habitat complexes</u>
!	X01	Estuaries
!	X02	Saline coastal lagoons
!	X03	Brackish coastal lagoons
!	X04	Raised bog complexes
!	X18	Wooded steppe
!	X29	Salt lake islands
!	X35	New EUNIS complex ! "Inland Sand Dunes"

## **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;

### **Revised appendix 1: Species requiring specific habitat conservation measures**

(Adopted by the Standing Committee on 2 December 2011)

#### **PLANTS / PLANTES**

##### **PTERIDOPHYTA**

##### **ASPLENIACEAE**

*Asplenium adulterinum* Milde

*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.

*Echium russicum* J.F. Gmelin

*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.

*Onosma tornensis* Javorka

*Omphalodes kuzinskyanae* Willk.

*Omphalodes littoralis* Lehm.  
*Solenanthus albanicus* (Degen & al.) Degen & Baldacci  
*Symphytum cycladense* Pawl.

#### CAMPANULACEAE

*Adenophora lilifolia* (L.) Ledeb  
*Asyneuma giganteum* (Boiss.) Bornm.  
*Campanula bohémica* Hruby  
*Campanula damboldtiana*  
*Campanula gelida* Kovanda  
*Campanula lycica*  
*Campanula romanica* Savul.  
*Campanula sabatia* De Not.  
*Campanula serrata* (Kit.) Hendrych  
*Campanula zoysii* Wulfen  
*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  
*Cerastium dinaricum* G.Beck & Szysz.  
*Dianthus arenarius* L. subsp. *arenarius*  
*Dianthus arenarius* subsp. *bohemicus* (Novak) O.Schwarz  
*Dianthus cintrani* Boiss. & Reuter subsp. *cintrani* Boiss. & Reuter  
*Dianthus diutinus* Kit.  
*Dianthus hypanicus* Andr.  
*Dianthus lumnitzeri* Wiesb.  
*Dianthus marizii* (Samp.) Samp.  
*Dianthus moravicus* Kovanda  
*Dianthus nitidus* Waldst. et Kit.  
*Dianthus plumarius* subsp. *regis-stephani* (Rapcs.) Baksay  
*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* Gryn. et Klok.  
*Moehringia jankae* Griseb. ex Janka  
*Moehringia lateriflora* (L.) Fenzl.  
*Moehringia tommasinii* Marches.  
*Moehringia villosa* (Wulfen) Fenzl  
*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  
*Cremnophyton lanfrancoi* Brullo et Pavone  
*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 pyrenaeus* Desf. ex DC  
*Aster sorrentinii* (Tod) Lojac.  
*Carduus myriacanthus* Salzm. ex DC.  
*Carlina onopordifolia* Besser  
*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 immanuelis-loewii* Degen  
*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  
*Cirsium brachycephalum* Juratzka  
*Crepis crocifolia* Boiss. & Heldr.  
*Crepis granatensis* (Willk.) B. Blanca & M. Cueto  
*Crepis pusilla* (Sommier) Merxmüller  
*Crepis tectorum* L. subsp. *nigrescens*  
*Dendranthema zawadskyi* (Herb.) Tzvel.  
*Erigeron frigidus* Boiss. ex DC.  
*Helichrysum melitense* (Pignatti) Brullo et al  
*Hymenostemma pseudanthemis* (Kunze) Willd.  
*Hyoseris frutescens* Brullo et Pavone  
*Jurinea cyanoides* (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.  
*Palaeocyanus crassifolius* (Bertoloni) Dostal  
  
*Santolina impressa* Hoffmanns. & Link  
*Santolina semidentata* Hoffmanns. & Link  
*Saussurea alpina* subsp. *esthonica* (Baer ex Rupr) Kupffer  
*Senecio elodes* Boiss. ex DC.  
*Senecio jacobea* L. subsp. *gotlandicus* (Neuman) Sterner  
*Senecio nevadensis* Boiss. & Reuter  
*Serratula lycopifolia* (Vill.) A.Kern  
*Serratula tanaitica* P. Smirn.  
*Sonchus erzincanicus* Matthews  
*Tephrosieris longifolia* (Jacq.) Griseb et Schenk subsp. *moravica*

#### CONVOLVULACEAE

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

#### CRUCIFERAE

*Alyssum pyrenaicum* Lapeyr.  
*Arabis kennedyae* Meikle  
*Arabis sadina* (Samp.) P. Cout.  
*Arabis scopoliana* Boiss  
*Armoracia macrocarpa* (Waldst. & Kit.) Kit. ex Baumg  
*Biscutella neustriaca* Bonnet  
*Biscutella vincentina* (Samp.) Rothm.  
*Boleum asperum* (Pers.) Desvaux  
*Brassica glabrescens* Poldini  
*Brassica hilarionis* Post  
*Brassica insularis* Moris  
*Brassica macrocarpa* Guss.  
*Brassica sylvestris* (L.) Mill. subsp. *taurica* Tzvel.  
*Braya linearis* Rouy  
*Cochlearia polonica* Frohlich  
*Cochlearia tatarae* Borbas  
*Coincya rupestris* Rouy  
*Coronopus navasii* Pau  
*Crambe koktebelica* (Junge) N. Busch.  
*Crambe litwinonowii* K. Gross.  
*Crambe tatarica* Sebeok



*Diplotaxis ibicensis* (Pau) Gomez-Campo  
*Diplotaxis siettiana* Maire  
*Diplotaxis vicentina* (P. Cout.) Rothm.  
*Draba cacuminum* Elis Ekman  
*Draba cinerea* Adams  
*Draba doreri* Heuffel.  
*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 turczaninowii* Lipsky.  
*Rhynchosinapis erucastrum* (L.) Dandy ex Clapham subsp. *cintrana* (Coutinho) Franco & P. Silva (*Coincya cintrana* (P. Cout.) Pinto da Silva)  
*Schivereckia podolica* (Besser) Andrz.  
*Sisymbrium cavanillesianum* Valdes & Castroviejo  
*Sisymbrium supinum* L.  
*Thlaspi caricense*  
*Thlaspi jankae* A.Kern.

#### CYPERACEAE

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

#### DIOSCOREACEAE

*Borderea chouardii* (Gaussen) Heslot

#### DIPSACACEAE

*Dipsacus cephalarioides*

#### DROSERACEAE

*Aldrovanda vesiculosa* L.

#### ELATINACEAE

*Elatine gussonei* (Sommier) Brullo *et al.*

#### ERICACEAE

*Rhododendron luteum* Sweet  
*Vaccinium arctostaphylos* L.

#### EUPHORBIACEAE

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

#### GENTIANACEAE

*Centaurium rigualii* Esteve  
*Centaurium somedanum* Lainz  
*Gentianella bohémica* Skalicky  
*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  
Stipa zalesskii Wilensky  
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

Crocus cyprius Boiss. et Kotschy

Crocus hartmannianus Holmboe

Gladiolus palustris Gaud.

Iris aphylla L. subsp. hungarica Hegi

Iris humilis Georgi subsp. arenaria (Waldst. et Kit.) A. et D. Löve

#### 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.

Phlomis brevibracteata Turrit

Phlomis cypria Post

Salvia veneris Hedge

*Sideritis cypria* Post  
*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 macrocarpus* DC. subsp. *lefkarensis*  
*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 crystallina* Sm.  
*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 lochiai* Meikle in Kew Bull.  
*Chionodoxa luciliae*  
*Colchicum arenarium* Waldst. et Kit.  
*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.  
*Scilla litardierei* Breist.  
*Scilla morrisii* Meikle  
*Tulipa cypria* Stapf  
*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

*Anacamptis urvilleana* Sommier et Caruana Gatto  
*Calypso bulbosa* L.  
*Cephalanthera cucullata* Boiss. & Heldr.  
*Cypripedium calceolus* L.  
*Dactylorhiza chuhensis*  
*Dactylorhiza kalopissii* E.Nelson  
*Gymnigritella runei* Teppner & Klein  
*Himantoglossum adriaticum* Baumann  
*Himantoglossum caprinum* (Bieb.) V.Koch  
*Liparis loeselii* (L.) Rich.  
*Ophrys isaura*  
*Ophrys kotschyi* H.Fleischm. et Soo  
*Ophrys lunulata* Parl.  
*Ophrys lycin*  
*Ophrys melitensis* (Salkowski) J et P Devillers-Terschuren  
*Platanthera obtusata* (Pursh) subsp. *oligantha* (Turez.) Hulten  
*Stenisiella satyrioides* (Stev.) Schlechter.

## OROBANCHACEAE

*Orobanche densiflora* Salzm. ex Reut.

## PAEONIACEAE

*Paeonia cambessedesii* (Willk.) Willk.  
*Paeonia clusii* F.C. Stern subsp. *rhodia* (Stearn) Tzanoudakis  
*Paeonia parnassica* Tzanoudakis  
*Paeonia officinalis* L. subsp. *banatica* (Rachel) Soo  
*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 soleirolii (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 fatrense Halda et Sojak
- Cyclamen kuznetsovii Kotov et Czernova
- Cyclamen mirabile
- Primula apennina Widmer
- Primula carniolica Jacq.
- Primula nutans Georgi
- Primula palinuri Petagna
- Primula scandinavica Bruun #
- Soldanella villosa Darracq.

RANUNCULACEAE

- Aconitum corsicum Gayer (Aconitum napellus subsp. corsicum)
- Aconitum flerovii Steinb.
- Aconitum firmum (Reichenb.) Neilr subsp. moravicum Skalicky
- 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
- Delphinium caseyi B.L.Burt
- Pulsatilla grandis Wend. (Pulsatilla halleri (All.) Willd. subsp. grandis (Wend.) Meikle)
- Pulsatilla patens (L.) Miller
- Pulsatilla pratensis (L.) Miller subsp. hungarica Soo
- Pulsatilla slavica G.Reuss.
- Pulsatilla subslavica Futak ex Goliasova
- Pulsatilla vulgaris Hill. subsp. gotlandica (Johanss.) Zaemelis & Paegle
- Ranunculus kykkoensis Meikle
- 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*  
*Pyrus magyarica* Terpo  
*Sorbus teodori* Liljefors

#### RUBIACEAE

*Galium cracoviense* Ehrend.  
*Galium globuliferum*  
*Galium litorale* Guss.  
*Galium moldavicum* (Dobrescu) Franco  
*Galium sudeticum* Tausch  
*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  
*Chaenorrhinum serpyllifolium* (Lange) Lange subsp. *lusitanicum* R. Fernandes  
*Euphrasia genargentea* (Feoli) Diana  
*Euphrasia marchesettii* Wettst. ex Marches.  
*Linaria algarviana* Chav.  
*Linaria coutinhoi* Valdés  
*Linaria ficalhoana* Rouy  
*Linaria flava* (Poiret) Desf.  
*Linaria hellenica* Turrill  
*Linaria loeselii* Schweigger  
*Linaria pseudolaxiflora* Lojacono  
*Linaria ricardoi* Cout.  
*Linaria tursica* B. Valdes & Cabezudo  
*Linaria tonzigii* Lona  
*Odontites granatensis* Boiss.  
*Pedicularis sudetica* Willd.  
*Rhinanthus oesilensis* (Ronniger & Saarsoo) Vassilcz  
*Tozzia carpathica* Wol.  
*Verbascum basivelatum*  
*Verbascum degenii*  
*Verbascum litigiosum* Samp.  
*Verbascum purpureum* (Janka) Huber-Morath  
*Verbascum stepporum*  
*Veronica micrantha* Hoffmanns. & Link  
*Veronica euxina* Turrill  
*Veronica oetaea* L.-A. Gustavsson  
*Veronica turrilliana* Stoj. et Stef.

#### SOLANACEAE

*Atropa baetica* Willk.

#### THYMELAEACEAE

*Daphne arbuscula* Celak  
*Daphne petraea* Leybold  
*Daphne rodriguezii* Texidor

#### ULMACEAE

*Zelkova abelicea* (Lam.) Boiss.

#### UMBELLIFERAE

*Angelica heterocarpa* Lloyd  
*Angelica palustris* (Besser) Hoffm.  
*Apium bermejoi* Llorens  
*Apium repens* (Jacq.) Lag.  
*Athamanta cortiana* Ferrarini  
*Bupleurum capillare* Boiss. & Heldr.  
*Bupleurum kakiskalae* Greuter  
*Eryngium alpinum* L.  
*Eryngium viviparum* Gay  
*Ferula halophila*  
*Ferula sadleriana* Lebed.  
*Hladnikia pastinacifolia* Reichenb.  
*Laserpitium longiradium* Boiss.  
*Naufraga balearica* Constans & Cannon  
*Oenanthe conioides* Lange  
*Petagnia saniculifolia* Guss.  
*Rouya polygama* (Desf.) Coincy  
*Seseli intricatum* Boiss.  
*Seseli leucospermum* Waldst. et Kit  
*Thorella verticillatinundata* (Thore) Briq.

#### VALERIANACEAE

*Centranthus kellereri* (Stoj. Stef. et Georg.) Stoj. et Stef.  
*Centranthus trinervis* (Viv.) Beguinot

#### VIOLACEAE

*Viola delphinantha* Boiss.  
*Viola hispida* Lam.  
*Viola jaubertiana* Mares & Vigineix  
*Viola rupestris* F.W. Schmidt subsp. *relicta* Jalas

#### BRYOPHYTA

*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.  
Ochyraea tatrensis Vana  
Orthothecium lapponicum (Schimp.) C. Hartm.  
Orthotrichum rogeri Brid.  
Petalophyllum ralfsii (Wils.) Nees & Gott.  
Plagiomnium drummondii (Bruch & Schimp.) T. Kop.  
Riccia breidleri Jur.  
Riella helicophylla (Bory & Mont.) Mont.  
Scapania massolongi (K. Müll.) K. Müll.  
Sphagnum pylaisii Brid.  
Tayloria rudolphiana (Garov) B. & S.  
Tortella rigens (N. Albers)

**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* (Haeck. & 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

UMBELLIFERAE

*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.

VIOLACEAE

*Viola paradoxa* Lowe

BRYOPHYTA

*Echinodium spinosum* (Mitt.) Jur.  
*Thamnobryum fernandesii* Sergio

**VERTEBRATES/VERTÉBRÉS**

**Mammals/Mammifères**

INSECTIVORA

*Talpidae*  
*Desmana moschata*  
*Galemys pyrenaicus*

CHIROPTERA

*Pteropidae*  
*Rousettus aegyptiacus*  
*Rhinolophidae*  
*Rhinolophus blasii*  
*Rhinolophus euryale*  
*Rhinolophus ferrumequinum*  
*Rhinolophus hipposideros*  
*Rhinolophus mehelyi*  
*Vespertilionidae*  
*Barbastella barbastellus*

*Eptesicus bottae*  
*Miniopterus schreibersi*  
*Myotis bechsteini*  
*Myotis blythii*  
*Myotis capaccinii*  
*Myotis dasycneme*  
*Myotis emarginatus*  
*Myotis myotis*

## RODENTIA

*Castoridae*  
*Castor fiber* # <sup>1, 2</sup>  
*Cricetidae*  
*Mesocricetus newtoni*  
*Gliridae*  
*Myomimus roachi* (*Myomimus bulgaricus*)  
*Microtidae*  
*Microtus cabreræ*  
*Microtus oeconomus arenicola* # <sup>2</sup>  
*Microtus tatricus*  
*Spalax graecus*  
*Muridae*  
*Microtus oeconomus mehelyi*  
*Sciuridae*  
*Marmota marmota latirostris*  
*Pteromys volans* (*Sciuropterus ruscicus*)#  
  
*Spermophilus citellus* (*Citellus citellus*)#  
*Spermophilus suslicus* (*Citellus suslicus*) #  
*Zapodidae*  
*Sicista subtilis*

## CARNIVORA

*Canidae*  
*Alopex lagopus* #  
*Canis lupus* # <sup>1</sup>  
*Cuon alpinus*  
*Ursidae*  
*Ursus arctos* # <sup>1</sup>  
*Ursus maritimus*  
*Mustelidae*  
*Gulo gulo* #  
*Lutra lutra* #  
*Mustela eversmanni*  
*Mustela lutreola*  
*Vormela peregusna*  
*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*

*Bison bonasus* <sup>2</sup>  
*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>  
*Ovis orientalis ophion* (*Ovis gmelini ophion*)  
*Rupicapra pyrenaica ornata* (*Rupicapra rupicapra ornata*)  
*Rupicapra rupicapra balcanica* <sup>2</sup>  
*Rupicapra rupicapra tatrica*

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 puffinus mauretanicus* (*Puffinus mauretanicus*)  
*Puffinus yelkouan*  
*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*

Phoenicopus 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  
Polysticta stelleri  
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  
Circaetus gallicus  
Circus aeruginosus  
Circus cyaneus  
Circus macrourus  
Circus pygargus  
Elanus caeruleus  
Gypaetus barbatus  
Gyps fulvus  
Haliaeetus albicilla  
Hieraetus fasciatus  
Hieraetus pennatus  
Milvus migrans  
Milvus milvus  
Neophron percnopterus  
Pernis apivorus

*Pandionidae*

Pandion haliaetus

*Falconidae*

Falco biarmicus

Falco cherrug

Falco columbarius #

Falco eleonora

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

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 alexandrinus

Charadrius asiaticus <sup>2</sup>

Charadrius leschenaultii

Charadrius morinellus (Eudromias morinellus)

Chettusia gregaria <sup>2</sup>

Hoplopterus spinosus

Pluvialis apricaria # <sup>2</sup>

*Scolopacidae*

Calidris alpina schinzii

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 fulicarius
  - Phalaropus lobatus
- Burhinidae*
  - Burhinus oedicephalus
- Glareolidae*
  - Cursorius cursor
  - Glareola nordmanni
  - Glareola pratincola
- Laridae*
  - Chlidonias hybridus
  - Chlidonias leucopterus
  - Chlidonias niger
  - Gelochelidon nilotica
  - Larus audouinii
  - Larus genei
  - Larus melanocephalus
  - Larus minutus
  - 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  
*Certhiidae*  
Certhia brachydactyla dorotheae  
*Motacillidae*  
Anthus campestris  
*Laniidae*  
Lanius collurio  
Lanius minor  
Lanius nubicus  
*Paridae*  
Parus ater cypriotes  
*Troglodytidae*  
Troglodytes troglodytes fridariensis  
*Muscicapidae Turdinae*  
Luscinia svecica (Cyanosylvia svecica)  
Oenanthe cypriaca (Oenenathe pleschanka cypriaca)  
Oenanthe pleschanka  
Oenanthe leucura  
Saxicola dacotiae  
*Sylviinae*  
Acrocephalus melanopogon  
Acrocephalus paludicola  
Hippolais olivetorum  
Sylvia melanothorax  
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

*Tryonychidae*  
 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 #  
 Natrix natrix cypriaca

*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  
Triturus vulgaris ampelensis

*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 zanandreai (Lampetra zanandreai)  
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> #

*Umbridae*

*Umbra krameri*

CYPRINIFORMES

*Cyprinidae*

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

*Anaecypris 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 kessleri*

*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>

*Pelecus cultratus*

*Phoxinellus* spp. <sup>2</sup>

*Phoxinus phoxinus*

*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> (*Chondrostoma lemmingi*)

*Rutilus macrolepidotus* <sup>2</sup>

*Rutilus pigus* <sup>2</sup>

*Rutilus rubilio* <sup>2</sup>

*Scardinius graecus* <sup>2</sup>

*Cobitidae*

*Cobitis elongata*

*Cobitis taenia* <sup>1, 2</sup> #

*Cobitis trichonica* <sup>2</sup>

*Misgurnus fossilis* <sup>2</sup>

*Sabanejewia aurata* <sup>2</sup> (*Cobitis aurata*)

*Sabanejewia larvata* (*Cobitis larvata* et *Cobitis conspersa*) <sup>2</sup>

SILURIFORMES

*Siluridae*

*Silurus arctotilis* <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 baloni  
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  
Coenagrion ornatum  
Cordulegaster heros  
Cordulegaster trinacriae  
Gomphus graslinii  
Leucorrhinia pectoralis  
Lindenia tetraphylla  
Macromia splendens  
Ophiogomphus cecilia  
Oxygastra curtisii

*Orthoptera*

Baetica ustulata  
Brachytrupes megacephalus  
Isophya costata  
Isophya harzi  
Isophya stysi  
Myrmecophilus baronii  
Odontopodisma rubripes  
Paracaloptenus caloptenoides  
Pholidoptera transsylvanica  
Stenobothrus (Stenobothrodes) eurasius

*Coleoptera*

Agathidium pulchellum  
Bolbelasmus unicornis  
Boros schneideri  
Buprestis splendens  
Carabus hampei  
Carabus hungaricus  
Carabus menetriesi pacholei<sup>2</sup>  
Carabus olympiae  
Carabus variolosus  
Carabus zawadzskii  
Cerambyx cerdo  
Corticaria planula<sup>2</sup>  
Cucujus cinnaberinus  
Dorcadion fulvum cervae  
Duvalius gebhardti

Duvalius hungaricus  
 Dytiscus latissimus  
 Graphoderus bilineatus  
 Leptodirus hochenwarti  
 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>  
 Phryganophilus ruficollis  
 Pilemia tigrina  
 Probaticus subrugosus  
 Propomacrus cypriacus  
 Pseudogaurotina excellens  
 Pseudoseriscius cameroni  
 Pytho kolwensis <sup>2</sup>  
 Rosalia alpine  
 Rhysodes sulcatus  
 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>  
 Arytrura musculus  
 Callimorpha (Euplagia, Panaxia) quadripunctaria # <sup>2</sup>  
 Catopta thrips  
 Chondrosoma fiduciarium  
 Clossiana improba <sup>2</sup>  
 Coenonympha oedippus  
 Colias myrmidone  
 Cucullia mixta  
 Dioszeghyana schmidtii  
 Erannis ankeraria  
 Erebia calcaria  
 Erebia christi  
 Erebia medusa polaris <sup>2</sup>  
 Eriogaster catax  
 Euphydryas (Eurodryas, Hypodryas) aurinia  
 Glyphipterix loricatella  
 Gortyna borelii lunata  
 Graellsia isabellae <sup>2</sup>  
 Hesperia comma catena <sup>2</sup>  
 Hypodryas maturna  
 Leptidea morsei  
 Lignyoptera fumidaria  
 Lycaena dispar  
 Lycaena helle  
 Maculinea nausithous  
 Maculinea teleius  
 Melanargia arge  
 Nymphalis vaualbum  
 Papilio hospiton  
 Phyllometra culminaria  
 Plebicula golgus  
 Polymixis rufocincta isolata  
 Polyommatus eroides  
 Pseudophilotes bavius  
 Xestia borealis <sup>2</sup>

Xestia brunneopicta <sup>2</sup>  
Xylomoia strix

#### CRUSTACEA

##### *Decapoda*

Austropotamobius pallipes <sup>2</sup>  
Austropotamobius torrentium

##### *Isopoda*

Armadillidium ghardalamensis

#### ARACHNIDA

##### *Pseudoscorpiones*

Anthrenochernes stellae <sup>2</sup>

#### Molluscs/Mollusques

#### GASTROPODA

##### *Cycloneritimorpha*

Theodoxus transversalis

##### *Dytocardia*

Gibbula nivosa (Med.)

##### *Hygrophila*

Anisus vorticulus

##### *Mesogastropoda*

Paladilhia hungarica

Sadleriana pannonica

##### *Stylommatophora*

Caseolus calculus

Caseolus commixta

Caseolus sphaerula

Chilostoma banaticum

Discus guerinianus

Discula leacockiana

Discula tabellata

Elona quimperiana

Geomalacus maculosus

Geomitra moniziana

Helicopsis striata austriaca <sup>2</sup>

Hygromia kovacsi

Idiomela (Helix) subplicata <sup>2</sup>

Lampedusa imitatrix

Lampedusa melitensis

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

##### *Dreissenidae*

Congeria kusceri

**LIST OF SPECIES IDENTIFIED AS CANDIDATES BY THE STANDING COMMITTEE FOR POTENTIAL AMENDMENT OF ANNEX I OF RESOLUTION 6, OR, OF APPENDICES I OR II OF THE BERN CONVENTION IF NEED BE**

**LISTE D'ESPÈCES IDENTIFIÉES PAR LE COMITÉ PERMANENT EN TANT QUE CANDIDATES ÉVENTUELLES POUR L'AMENDEMENT DE L'ANNEXE 1 DE SA RÉOLUTION n°6, OU, LE CAS ÉCHÉANT, DES ANNEXES I OU II DE LA CONVENTION**

**VERTEBRATES/VERTÉBRÉS**

**Mammals/Mammifères**

**RODENTIA**

*Gliridae*

*Dryomis laniger*

**CETACEA**

*Balaenopteridae*

*Balaenoptera physalus* (Med.)

*Physeteridae*

*Physeter macrocephalus* (Med.)

**Birds/Oiseaux**

**PASSERIFORMES**

*Alaudidae*

*Melanocorypha bimaculata*

*Sylvidae*

*Sylvia mystacea*

*Hippolais languida*

*Phylloscopus lorenzii*

*Fringillidae*

*Serinus pusillus*

*Turdidae*

*Irania gutturalis*

*Oenanthe finschii*

*Prunellidae*

*Prunella atrogularis*

*Prunella ocularis*

**CORACIFORMES**

*Alcedinidae*

*Ceryle rudis*

**Reptiles**

**SAURIA**

*Chamaeleonidae*

*Chamaeleo chamaeleon*

*Lacertidae*

*Lacerta dugesii*

*Lacerta parva*

*Lacerta princeps*

*Podarcis filfolensis*

**OPHIDIA**

*Colubridae*

*Coluber gyarusensis*

*Viperidae*

*Vipera darevski*

**Amphibians/Amphibiens**

**CAUDATA**



*Salamandridae*

Euproctus platycephalus

ANURA

*Discoglossidae*

Alytes dickhilleni

**Fish/Poissons**

**OSTEICHTHYES**

ACIPENSERIFORMES

*Acipenseridae*

Acipenser nudiventris

SALMONIFORMES

*Salmonidae*

Salmothymus ohridanus

CYPRINIFORMES

*Cyprinidae*

Aulopyge hugeli

Chondrostoma kneri

Chondrostoma lemingi

Chondrostoma phoxinus<sup>2</sup>

Leucaspis stymphalicus

Leuciscus illyricus

Leuciscus microlepis

Leuciscus polylepis

Leuciscus svallize

Leuciscus turskyi

Leuciscus ukliva

Pachychilon pictum

Pomatoschistus tortonesei (Med.)

Pseudophoxinus marathonicus (Leucaspis marathonicus)

Pseudophoxinus stymphalicus (Leucaspis stymphalicus)

Rutilus macedonicus

Rutilus racovitza

*Cobitidae*

Cobitis aurata

Cobitis caspia

Cobitis caucasia

Cobitis hassi

Cobitis paludicola

Cobitis romanica

Sabanejewia calderoni

SCORPAENIFORMES

*Cottidae*

Cottus ferruginosus

PERCIFORMES

*Percidae*

Gymnocephalus acerina

Percarina demidoffi

*Gobiidae*

Caspiosoma caspium

**INVERTEBRATES/INVERTÉBRÉS**

**Arthropods/Arthropodes**

ARACHNIDA

*Araneae*

Macrothele calpeiana

**Molluscs/Mollusques**

GASTROPODA

*Dyotocardia*

Patella ferruginea (Med.)

BIVALVIA

*Unionoida*

Margaritifera auricularia

## **Appendix 11: Ministerial Statement concerning the Pan-European Ecological Network (5th 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 2011-2020

Timing	Strategic issues	Phase I	Phase II	Phase III
2011-2012	<ul style="list-style-type: none"> <li>Update Res. 6 (1998) and Res. 4 (1996); Submission to the Standing Committee at its 31<sup>st</sup> and 32<sup>nd</sup> meeting (2011-2012), according to timely presented proposals.</li> <li>Collection of background information on presence and distribution of species and habitats in collaboration with EEA.</li> <li>Development of guidelines on management, monitoring and reporting tools in line with existing Natura 2000's tools.</li> </ul>	<ul style="list-style-type: none"> <li>Negotiation of a Pilot projects for Tunisia;</li> <li>Implementation of a second pilot project for Morocco;</li> <li>Feasibility analysis for a second pilot project in Turkey and/or possible planning for completion of Phase I;</li> <li>Negotiation of completion of Phase I in Bosnia-Herzegovina</li> <li>Completion of Phase I for Armenia, Azerbaijan, Georgia and Moldova through the ENP project by the end of 2011;</li> <li>Fulfilment of 80 % of Phase I for Ukraine;</li> <li>Fulfilment of at least 50 % of Phase I for Belarus and the European part of the Russian Federation;</li> <li>Completion of Phase I for Switzerland, Norway and Iceland;</li> <li>Negotiations for the identification of sites in the countries which have not been participating in the pilot project's programme: Andorra, Liechtenstein, Monaco, Kazakhstan (the European part).</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of proposed Emerald sites in 6 West-Balkan countries: Albania, Bosnia-Herzegovina, Croatia, Montenegro, "the former Yugoslav Republic of Macedonia" and Serbia; gap analysis;</li> <li>Negotiation with West-Balkan countries concerning possible designation of new ASCIs;</li> <li>Start of assessment of proposed Emerald sites for Armenia, Azerbaijan, Georgia and Moldova (2012);</li> <li>Start pre-evaluation of the first set of proposed Emerald sites for countries asking for it (Switzerland, Norway,...)</li> </ul>	
2013-2014	<ul style="list-style-type: none"> <li>Finalisation of collection of background information on species and habitats of European interest.</li> <li>Drafting and</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of the pilot project in Tunisia;</li> <li>Completion of the Emerald Network in Morocco;</li> <li>Implementation of a full Emerald project in Turkey;</li> <li>Completion of Phase I for Belarus, the</li> </ul>	<ul style="list-style-type: none"> <li>Completion of the assessment of the proposed Emerald sites in Armenia, Azerbaijan, Moldova and Georgia</li> <li>Start of assessment of proposed sites in Belarus, the Russian Federation and Ukraine in coordination with the evaluation for sites in Moldova and</li> </ul>	<ul style="list-style-type: none"> <li>Official designation of the Emerald Network in the West-Balkan</li> <li>Implementation of management, monitoring and reporting tools in the West-Balkan area.</li> </ul>

	<p>adoption of monitoring tools and management plans, based on international guidelines; setting-up of a coherent Pan-European Ecological Network;</p>	<p>European part of the Russian Federation and Ukraine;</p> <ul style="list-style-type: none"> <li>• Development of principles of the establishment of the Emerald Network (as Core Areas of the PEEN) in Asian parts of the Russian Federation and Kazakhstan, in Kirghizistan, Tadjikistan, Turkmenistan, Uzbekistan (further activities in this field of actions will be planned if appropriate)</li> </ul>	<p>South Caucasus, if appropriate;</p> <ul style="list-style-type: none"> <li>• Assessment of proposed Emerald sites in Switzerland, Iceland and Norway.</li> <li>• Assessment of proposed Emerald sites in other countries according to achievements in Phase I (Andorra, Liechtenstein, Monaco, Kazakhstan (the European part))</li> </ul>	
2015-2016	<ul style="list-style-type: none"> <li>• Continuation of drafting and implementing management plans and monitoring for designated ASCI's.</li> </ul>		<ul style="list-style-type: none"> <li>• Finalisation of the evaluation of proposed Emerald sites in Belarus, the Russian Federation and Ukraine</li> <li>• Assessment of proposed Emerald sites in participating African countries</li> </ul>	<ul style="list-style-type: none"> <li>• Designation of the Emerald Network in Moldova and South Caucasus;</li> <li>• Start designation of Emerald sites in Belarus, the Russian Federation and Ukraine;</li> <li>• Designation of the Emerald Network in Norway, Iceland and Switzerland;</li> <li>• Re-assessment of all agreed Emerald sites according to new knowledge.</li> <li>• Designation of the Emerald Network in other countries according to achievements in Phase II (Andorra, Liechtenstein, Monaco, Kazakhstan (the European part))</li> </ul>
2017-2019				<ul style="list-style-type: none"> <li>• Publication of the lists of the Emerald Network of areas of special conservation interest;</li> <li>• Finalise the designation of Emerald sites in the whole Pan-European area, as well as in participating African countries;</li> <li>• Full assessment of the Pan-European Emerald Network in view of the long-term survival of the species and habitats of European concern;</li> <li>• Assessment of the adequacy of the</li> </ul>

				Bern Convention's Appendices and Resolution n° 4 and n°6
2020	<ul style="list-style-type: none"><li>• The Emerald Network of Areas of Special Conservation Interest is fully operational to guarantee the long-term survival of all species and habitats of European Interest, including appropriate management, monitoring and reporting tools, compatible with NATURA2000</li><li>• Procedures for continuous updating of the data and evaluation of the long-term survival of the species and habitats have been put in place</li></ul>			

# 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

## LONGITUDE

--	--	--	--

LATITUDE

--	--

--	--

--	--

### 2.3. SITE LENGTH (Km):

						,		
--	--	--	--	--	--	---	--	--

			,			
--	--	--	---	--	--	--

MINIMUM

--	--	--	--

MAXIMUM

--	--	--	--

MEAN

--	--	--	--

## CODE

REGION NAME

%COVER

[illegible][illegible]


Marine area not covered by a NUTS-region

--	--	--

Anatolian

Arctic

Alpine

--	--

Atlantic

10

Boreal

10

Continental

Macaronesia

Mediterranean



Pannonic

11

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:



### 3.2.c. MAMMALS listed on Resolution No 6 (1998)

[illegible]

### 3.2.d. AMPHIBIANS AND REPTILES listed on Resolution No 6 (1998)

[illegible]

### 3.2.e. FISHERIES listed on Resolution No 6 (1998)

[illegible]

*Please copy page if necessary*

### 3.2.f. INVERTEBRATES listed on Resolution No 6 (1998)

[illegible]

*Please copy page if necessary*

### 3.2.g. PLANTS listed on Resolution No 6 (1998)

[illegible]

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. SITE DESCRIPTION**

#### 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 Garrigue, 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:

--

### 4.3. VULNERABILITY:

--



--

--

[illegible][illegible]

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

[illegible]

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

[illegible]

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:	-			

[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 RESPONSIBLE FOR THE SITE MANAGEMENT:**

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

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

- **Physical map:**


## REFERENCE TO AVAILABILITY OF BOUNDARIES IN DIGITISED FORM

--

- **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]

## **Appendix 14: Criteria for assessing the National Lists of proposed Areas of Special Conservation Interest (ASCIs) at biogeographical level and procedure for examining and approving Emerald Candidates sites**

### **1. Background**

The creation of the Emerald Network of areas of special conservation interest was agreed by the Standing Committee of the Bern Convention in 1989, through the adoption of Recommendation No.16 (1989) on the Areas of Special Conservation Interest (ACSI). The Recommendation advocates Contracting Parties to take, either by legislation or otherwise, 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.

Article 4 of the Bern Convention is the most relevant article, as it states that Contracting Parties “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 Appendices I and II, and the conservation of endangered natural habitats”.

Nonetheless, the real implementation of the Emerald Network only started in 1998, through the adoption by the Standing Committee of Resolution No 3 (1996) concerning the setting up of a pan-European Ecological Network, and Resolution No 5(1998), concerning the rules for the Network of Areas of Special Conservation Interest (Emerald Network).

Resolution No. 3 (1996) encourages "Contracting Parties and observer states to designate ASCIs", thus inviting all the European Union states, European states which are not members of the European Union and some African states to join the Emerald Network. Participation in the Emerald Network is therefore optional, as Contracting Parties and Observers States benefit from the “soft law” approach characteristic of Council of Europe recommendations and resolutions. However, it is important to note that the obligations on the Contracting Parties to protect natural habitats are rigorous requirements clearly set out in the Convention and forming part of binding international law.

The European Union, as such, is a Contracting Party to the Bern Convention. Implementation of the Bern Convention by EU member states is achieved mainly through full compliance with the Habitats and Birds Directives and the requirements of the Bern Convention with regard to habitats are met by designating sites for the Natura 2000 Network. According to Resolution No. 5 (1998) of the Bern Convention Standing Committee on rules applying to the network of Areas of Special Conservation Interest, “*for Contracting Parties which are Member States of the European Union, Emerald Network sites are those of the Natura 2000*”. The provisions of the Birds and Habitats Directives are thus the only procedures that apply to these countries. As indicated both in the EU Habitats Directive and in the Bern Convention, the ultimate goal for the creation of such a sites network is the “long term survival and maintenance of a favourable conservation status of the species and habitats of European Interest”.

In order to ensure a full complementarity and consistency between the EU Natura 2000 and the Emerald networks, the Group of Experts on Protected Areas and Ecological Networks (GoEPAEN) recommended that any evaluation of the proposed Emerald sites should be based on the same rules and procedures as developed for Natura 2000, i.e using a biogeographic approach. At the same time, in full recognition of the resources and time needed to implement such a process, the GoEPAEN called for a simplified approach without losing the essence of the evaluation.

In 2006, a first attempt was made to agree criteria for a simplified biogeographic approach to the evaluation of Emerald sites as described in document T-PVS/Emerald (2007) 03, on the basis of the criteria adopted by the Habitats Committee in 1997 (Hab. 97/2 rev. 4 18/11/97). Meanwhile, the EU accumulated experience within the different Biogeographical seminars and the procedure was gradually amended accordingly. The present paper aims at revising document T-PVS/Emerald (2007) 03, taking into account recent developments in the implementation of the Natura 2000 network and proposing a process to be applied in the preparation of the Pan-European list of ASCIs under the Bern Convention. It is relevant to the implementation of phases II and III of the Emerald process as described in T-PVS/Emerald (2010)5.

Although the constitution of Emerald Network is still ongoing, three different stages or “Phases” of implementation can be identified:

**Phase I:** Participating countries assess their natural resources and identify species and habitats to be protected according to the relevant resolutions of the Bern Convention. They subsequently select potential sites which are suitable for ensuring the long-term survival of the “Emerald” species and habitats, and they send a database containing scientific information on the proposed sites to the Bern Convention’s Secretariat.

**Phase II:** An evaluation of the efficiency of the proposed sites which has to be done on a species by species and habitat by habitat base. Ideally the evaluation would only start if a complete inventory of proposed sites exists for a

certain area. Realistically, this would mean that over 80 % of the finally proposed sites would already be available for the evaluation. This exercise is to be conducted in cooperation with the European Environment Agency.

Once the scientific value of the proposed sites is assessed, the candidate sites will be submitted to the Standing Committee and will eventually be approved so to formally integrate the Emerald Network. For EU member states an approved Natura 2000 Network of sites will automatically fulfil the parties' obligations towards the Bern Convention and the Emerald Network.

Phase III: National designation of the adopted ASCI's and implementation of management, reporting and monitoring measures, under the responsibility of national authorities.

Sites proposed as Emerald sites by individual countries will be eligible to become ASCIs only if they contribute to the conservation of habitat types listed in Recommendation 4 and species listed in Recommendation 6 of the Bern Convention and endorsed by the Standing Committee of the Convention.

ASCI selection is guided by Recommendation 16, paragraph 1, which describes six general conditions; all ASCIs should fulfil at least one:

- 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;

Following the principles described in Annex III of the Habitats Directive for setting up Natura 2000 sites under that Directive, two distinct stages in the setting up of the Emerald network can be identified:

- 1) An evaluation of the sufficiency of proposed ASCIs species by species and habitat by habitat (equivalent to Annex III, stage 1 of the Habitats Directive); see section 2;
- 2) An evaluation of the proposed ASCIs site by site at the bio-geographical level (equivalent to Annex III, stage 2 of the Habitats Directive), followed by approval by the GoEPAEN and subsequently adoption at the Standing Committee of the Bern Convention; see section 3.

The Areas of Special Conservation Interest – like the Natura 2000 sites – are regarded as core areas for the Pan-European Ecological Network (PEEN). As such, they represent key components of the Pan-European Network. The introduction of a vast natural infrastructure, of the kind ultimately envisaged by the Pan-European Ecological Network, will make the areas identified for the Emerald Network even more important and will focus attention on their possible linkage with other protected areas. The state of ecological connectivity of a concerned ASCI with other natural areas should be taken into account when assessing its compliance to the criteria of the Recommendation No. 16 (1989). A degree of policy convergence between the various networks concerned (PEEN, Natura 2000 and Emerald) should therefore be encouraged.

## **2. Evaluation of sufficiency of proposed ASCIs for species and habitats**

### **2.1 Overall description of the procedure**

The evaluation of Emerald databases at a national level should be viewed as a cycle consisting of the following steps:

- (1) Submission of proposals in the form of a database by the National Authorities to the Bern Convention Secretariat, using the Common Data Repository of the European Environment Agency;
- (2) Quality check of the database by the Council of Europe Secretariat, followed by correction of incompleteness and errors by parties;
- (3) Nomination as official candidate sites by the Bern Convention Standing Committee
- (4) Preliminary evaluation by EEA-ETC/BD of sufficiency of the proposed list of ASCIs (feature/ country/ bio-geographical region);
- (5) Scientific discussion at the regional bio-geographical seminar and assessments of sufficiency,
- (6) If necessary, proposal of additional Emerald Sites and updating the database by national authorities;
- (7) Submission of revised database;

- (8) Submission of the final sitelist to the GoEPAEN for discussion;
- (9) Submission to the Bern Convention Standing Committee for adoption.

The construction of the Emerald databases at a national level should be viewed as a cycle consisting of the first seven steps of the overall procedure.

Evaluation of the Emerald network is viewed as an iterative process. Conclusions on the sufficiency of national ASCI proposals will result in the need for new proposed Emerald sites or extension of existing sites if the conclusions are found unsatisfactory. An increase in site numbers with time is expected due to improving scientific knowledge and changes in nature. In all cases, re-submitted ASCI proposals will be re-evaluated providing updated conclusions.

## 2.2 Emerald database submission, completeness and quality

Databases should be uploaded to the appropriate folder in the EEA data centre together with an official letter by national authorities noting the delivery of an official database. Second and subsequent deliveries should also include a description of the changes between versions.

Emerald databases should be prepared according to the instructions given in the Emerald Software User Manual (T-PVS/Emerald (2003) 2). Complete databases are essential and for the evaluation process including discussions at the bio-geographical seminars. All species of Resolution 6 and Habitats of Resolution 4 regularly present on a site should be listed and all relevant data-fields completed. Quantitative data on species populations and habitat cover areas at sites should be provided whenever possible. However, species which have been recorded occasionally but which are not regularly occurring (e.g. vagrants) should not be included. It is difficult to give a general rule on listing species for which only historical records exist, for many small, poorly known species, even old records may still be valid (e.g. for bryophytes or small molluscs such as *Vertigo* spp.) unless recent survey shows the species is no longer present or if the habitat has changed and is no longer suitable.

Before evaluation for network sufficiency, submitted databases and associated spatial data will be checked for completeness and quality. After country authorities have received an assessment of database quality, identified gaps and errors should be corrected as quickly as possible and the updated database should be uploaded again to the Common Data Repository of the EEA.

## 2.3 Preliminary evaluation

Preliminary evaluation of sufficiency of national ASCI proposals will be essentially a scientific preparation for the discussions at the bio-geographical seminar. It will be carried out by an independent scientific institution (EEA – ETC/BD). Preliminary evaluation will examine the latest submitted database by the party (but not later than 90 days before the planned bio-geographical seminar) and take into account relevant available scientific information.

### *Establishment of the Reference lists of species and habitats*

Prior to evaluation, a preliminary Reference List of species and habitats of Bern Convention Resolution (1996) No 4 and Resolution (1998) No 6 regularly present in each country per bio-geographical region will be prepared based on current scientific information, in order to show for which features which country is obliged to designate ASCIs. The reference lists should not be considered as checklists of species and habitats occurring in the countries and respective regions, thus they should exclude vagrant or accidental species. An 'X' in the list will mean that countries have an obligation to designate sites for that species or a habitat in a particular bio-geographical region. A question mark (?) will indicate that the status of the species or habitat is not clear and additional research is needed to clarify its status.

### *Evaluation of sufficiency*

The contribution towards favourable conservation status for a given species or habitat type through the designation of a given list of ASCIs will not only depend on the intrinsic quality of those sites, but also on the intensity of the current or proposed conservation measures for each habitat or species including actions outside designated areas. The assessment must be based on the intrinsic value of the proposed sites for each species and habitat type, taking into account their potential contribution to the defined conservation goal, i.e. maintaining or restoring the species and habitats to Favourable Conservation Status".

It is clear that the factors relevant to the assessment of network sufficiency for each species and habitat type will vary greatly from case to case, depending on different factors. In general, there should be a proportionate response by the parties, so that for the rarest habitats and species of European interest there will be a high proportion of the resource included within the Emerald Network, while for those which are more abundant there will be a lower proportion of the resource within the Network.

It would not be realistic to try to establish one single quantitative criterion equally valid for all habitats and species in all situations. The expected assessment of site lists for the bio-geographical region must be based on a case-by-case (feature/country/biogeographical region) discussion, taking into account additional information on different parameters related to each species and habitat type.

### ***Requirements to be met***

Four requirements can be expected to be met by a representative list of sites to be considered as sufficient to enable a favourable conservation status for a given species or habitat type at bio-geographical level:

- 1) it should represent sites from the entire distribution range of every Emerald species and habitat at a national level and bio-geographical level if a party shares more than one region;
- 2) it should reflect the ecological variation of the habitat and of the species (genetic) within the bio-geographical region. In case of species, site proposals must include the whole range of habitats that are needed for the different stages of its life-cycle such as reproduction, migrations, foraging (etc.)
- 3) it should be well-adapted to the specific conservation needs, in particular to those related to the distribution patterns (endemicity, degree of isolation/fragmentation, historical trends, climate change) and to the human pressures, threats and vulnerability of the considered species or habitat type;
- 4) if the first 3 conditions are met it will be expected that site proposals will include significant proportions of habitat area and species populations within the Emerald network versus the overall national resource.

### ***Outcomes of the evaluation and Preparation of draft list of Emerald sites***

A draft list of candidate ASCIs per biogeographical region within the region of concern at the seminar (West-Balkan, Caucasus, etc ...) will be prepared using the data from the respective Emerald databases and according to the table structure shown in the Table 1. Parties will be requested to check information in these lists so to be ready for the final approval at the bio-geographical seminar.

**Table 1.** Contents of the “Draft List of Proposed Emerald Sites”

Column count	Description
A	ASCI code comprising nine characters, the first two being the ISO code for the Member State
B	ASCI name
C	Surface area of ASCI (ha)
D	Centroid coordinates of ASCI (latitude and longitude)
E	Number of species of Resolution 6 at the ASCI
F	Number of habitat types of Resolution 4 at the ASCI

The results of the preliminary evaluation will be: (1) draft Reference Lists for species and habitats; (2) draft Detailed Conclusions and (3) draft lists of proposed Emerald sites. These documents will form the basis of discussions at the bio-geographical seminar.

The evaluation of the Emerald site proposals will also include bird species using the same methodology as for other species, contrary to the Natura 2000 bio-geographical seminars which only consider species covered by the Habitats Directive.

More detailed guidelines for site selection and proposal evaluation for certain taxonomic groups (e.g., birds, fish) or environments (e.g., marine) may have to be further developed when parties involved in the Emerald phase II gain more experience.

## **2.4 Regional Bio-geographical seminar**

Regional bio-geographical seminars will be organised involving all parties represented in a region (e.g. West-Balkan, South Caucasus, etc), provided that they all have submitted Emerald databases of sufficient quality to enable evaluation of sufficiency as described above. The seminars will discuss (1) reference lists; (2) the sufficiency of each species and habitat, according to the agreed reference lists and (3) suitability of sites for inclusion in the final list of ASCIs.

Each seminar will include participants from the Bern Convention Secretariat, the ETC/BD, the Bern Convention parties, independent experts chosen by the Council of Europe and the ETC/BD, an agreed number of representatives of relevant NGOs and observers from the neighbouring countries.

The seminar will be organised as a discussion forum among the stakeholders described above where each species and habitat will be assessed per party and bio-geographical region, according to the agreed Reference List. The discussions will result in an agreed conclusion (see categories in Table 2) on sufficiency/ insufficiency of site proposals for each individual species and habitats present in the countries. Sites which do not host any species of Resolution (1996) No 4 or habitats of Resolution (1998) No 6 will be discussed to assess their suitability for designation as ASCI, referring to the general conditions for site selection described in Recommendation 16. Final detailed conclusions of the seminar, together with the revised Reference Lists and lists of approved sites, will be published on the Council of Europe's Emerald website.



At the later stages of the Emerald network building, after the bio-geographical seminar(s), further assessments may be required due to additional site proposals or modifications of existing sites and bi-lateral meetings may be called between an individual Bern Convention party and Bern Convention secretariat (involving also ETC/BD as an independent jury) to follow the site designation progress in a concerned party.

## 2.5 Actions after the seminar

Final Detailed Conclusions will guide parties on what actions they should undertake in order to improve the Emerald network at national and bio-geographical level. Table 2 shows the type and categories of conclusions that will be used during the seminar and actions that will be required from the parties after the seminar.

Together with dissemination of Final Detailed Conclusions, the Group of Experts on Protected Areas and Ecological Networks and the Bern Convention Secretariat will agree on the date by when parties will be expected to deliver requested amendments and additions to site proposals.

Evaluation of site proposals will be an iterative process and further work will be required as a result of additional site proposals arising from seminar conclusions and/or changes due to improving scientific knowledge.

**Table 2.** Conclusions and their abbreviations used in bio-geographical seminars. Codes can be combined, for example 'IN MOD and CD' would indicate that additional sites are required and that the existing proposals need correcting or completing.

Code	Meaning	Action required
SUF	Sufficient	No further sites needed
IN MAJOR	Insufficient major	No sites proposed at present. A major effort to designate sites is needed.
IN MOD	Insufficient moderate	One or a number of additional sites (or maybe extension to sites) required. IN MOD GEO means that additional site(s) are required in certain region to eliminate geographical gap.
IN MIN	Insufficient minor	No additional sites required but habitat/species should be noted on sites already proposed for other habitats/species
CD	Correction of data	Data needs to be corrected / completed / deleted
Sci Res	Scientific reserve	A definite conclusion is not possible: need to investigate/clarify a scientific issue – interpretation of habitat, controversial presence of species, etc.

## 3. Approval and adoption of sites at the bio-geographical level

Once the iterative process of the evaluation of the Emerald candidate sites has reached a sufficient level of agreement, the last two steps of the overall procedure are undertaken:

- (8) Submission of the final database *sitelist* to GoEPAEN for discussion;
- (9) Submission of the *sitelist* to the Bern Convention Standing Committee for adoption.

The Group of Experts on Protected Areas and Ecological Networks receives the final database of official candidate sites for discussion. The GoEPAEN will then forward the final list to the Standing Committee of the Bern Convention for adoption. This final list will be published using the format as described above (Table 1).

Published EU Community Lists of NATURA 2000 sites are available as examples at:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:030:0001:0042:EN:PDF>

**Figure 1.** Schematic description of the Emerald network evaluation cycle: from database submission to approval of ASCIs.

## Appendix 15: Information form for species and habitats to be added to the Bern Convention lists

DATE: .....

Proposed by:..... (Countries)

Information Form for species or habitats to be included in:

- ☐ **Appendix I:** Strictly protected flora species
- ☐ **Appendix II:** Strictly protected fauna species
- ☐ **Appendix III:** Protected fauna species
- and
- ☐ **Resolution (1998) 6:** Species requiring specific habitat conservation measures
- or
- ☐ **Resolution (1996) 4:** Endangered natural habitats requiring conservation measures

### Species proposal

Latin Name (incl. Author + Year):.....

Latin Synonyms:.....

Source of the scientific name: .....

#### Vernacular name:

English Name: .....

French Name: .....

other: (specify language): .....

#### Systematics:

Phylum: .....

Class: .....

Order:.....

Family:.....

### Habitat proposal

EUNIS Habitat code: .....

Habitat title: .....

Habitat Definition: (only if a new subdivision in the EUNIS classification is suggested)  
.....



## Short Description / Distinguishing Characteristics

### European Interest

Please mark with "X" for which of the following criteria the species or habitat is proposed (as interpreted from the guideline 1 in the Bern Convention's Recommendation 56 (1997), and also indicated in subparagraphs of Article 1 g of the Habitats Directive)

- ☐ *Endangered*, except those species whose natural range is marginal in that territory and which are not endangered or vulnerable in the Western Palearctic Region
- ☐ *Vulnerable*, i.e. believed likely to move into the endangered category in the near future if the causal factors continue operating
- ☐ *Rare*, with small populations that are not at present endangered or vulnerable but at risk. The species is located within restricted geographical areas or are thinly scattered over a more extensive range
- ☐ *Endemic* and requiring attention by reason of the specific nature of its habitat or the potential impact of its exploitation on its habitat or the potential impact of its conservation status

### Remarks:

as described in Recommendation 56 (1997) account will be taken of the category of threat, the vulnerability of the species to changes in its habitat, its particular link with a threatened habitat, the trends and variations in population level and its vulnerability to a possible non sustainable use. Account will be taken of whether the species is declining in the central area of its distribution, or it is only threatened in the border of its range.

**For species only: ecological role (as described in Recommendation 56 (1997):** account will be taken of the ecological role of the species, such as their position or role in the food chain (i.e. raptors, insectivorous species such as bats), their structural role in ecosystems (i.e. corals, heathlands) or the fact that endangered species or endangered ecosystems may be highly dependent on them (i.e. marine phanerogams like *Posidonia oceanica*) or risk to become threatened by their exploitation (like the mollusc *Lithophaga lithophaga*).

**Geographical distribution**

**In addition, include maps with the distribution of the species or habitat (GIS format preferred), with reference to scale and projection.**

- in the country:
- in the Pan-European region:
- in other parts of the world:

**Further comments concerning the geographical distribution :**(e.g. known subtypes, regional varieties, loci typici)

**Estimated population size and trends (guideline 1 from Rec. 56 (1997):**

(Indicate the situation in the country(ies) and, as far as possible, European wide and world wide)  
(according to EEA guidelines for indicating population data)

**Reasons for decline or threats:****Conservation status: (within country, region, pan-European level, etc ...)****Important references / literature / publications:**

(especially those relevant for the taxonomy, conservation status and geographical distribution)

**Further remarks: (any additional important information not given above, relevant for evaluating the proposal)**

**Picture of species or habitat:**

**Contact Person(s) for additional questions concerning this species or habitat:  
(if multi-country proposal, please add relevant persons for each country)**

Name: .....

Institution: .....

Postal Address: .....

Country: ..... Phone No: .....

Fax No: ..... E-mail: .....

**If not identical with Contact Person, author of this data form:**

Name:

Institution:

Postal Address:

Country:

Phone No:

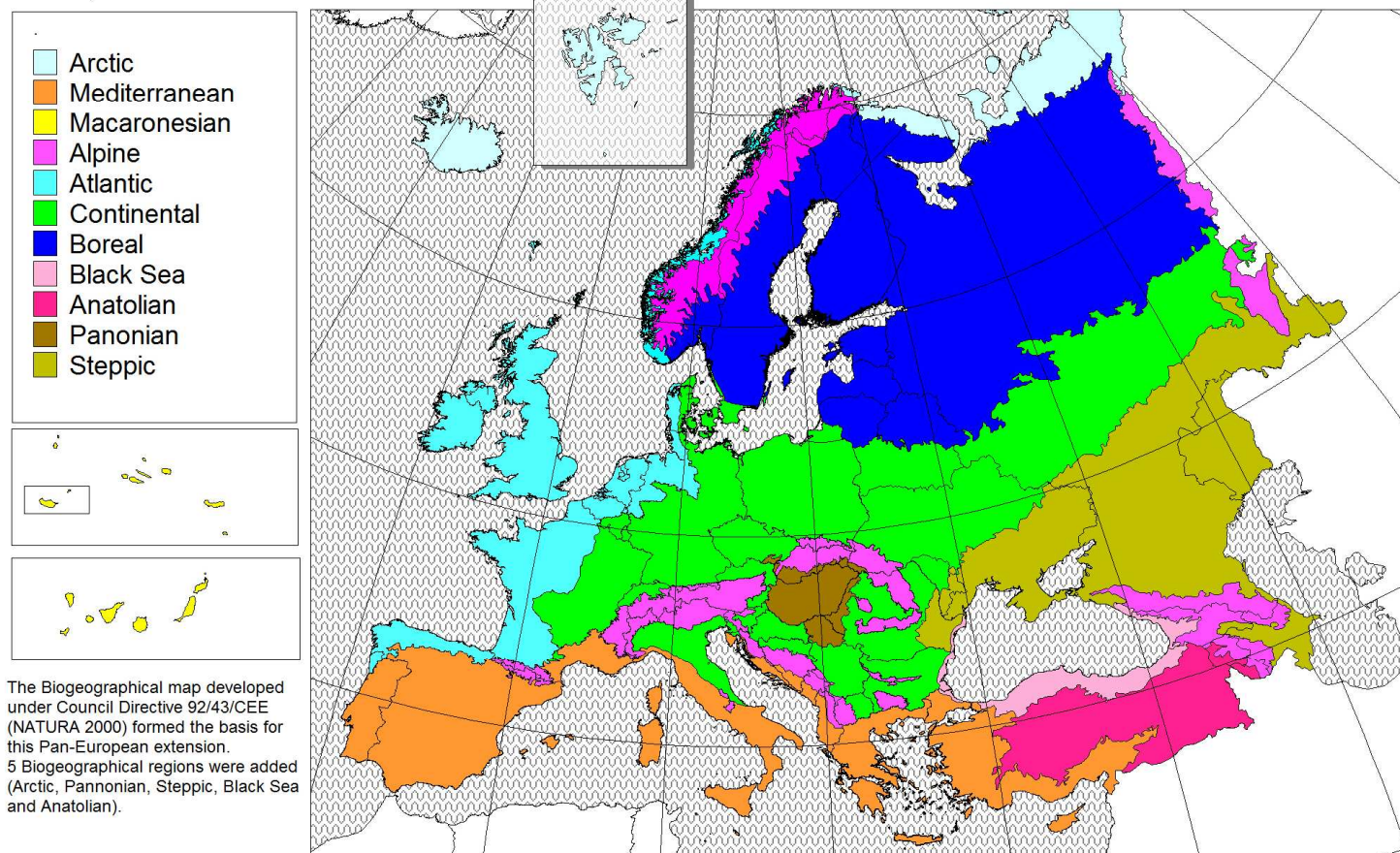
Fax No:

E-mail:



## Appendix 16: European biogeographical regions' map

Emerald Network of Areas of Special Conservation Interest  
 Extention of the Biogeographical Regions map of NATURA 2000 to the European Continent  
 As endorsed by the Standing Committee of the Bern Convention 2010



## **Appendix 17: Recommendation No. 157 (2011) on the status of candidate Emerald sites and guidelines on the criteria for their nomination**

(Adopted by the Standing Committee on 2 December 2011)

The Standing Committee to 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;

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;

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

Recalling its Resolution No. 5 (1998) concerning the rules for the Network of areas of special conservation interest (Emerald Network);

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

Recalling the Calendar for the implementation of the Emerald Network of Areas of Special Conservation Interest (2011-2020) adopted in December 2010, committing Contracting Parties and Observer states to the Bern Convention to the completion of the Emerald Network constitution process by 2020;

Recalling the "Bern Declaration on the conservation and sustainable use of biodiversity in Europe: 2010 and beyond" and in particular its principle 6 which urges Parties to pursue the setting up of the Emerald Network of Areas of Special Conservation Interest, in order that it can be completed in Europe by 2020, at the latest, and developed in other regions with Contracting Parties of the Convention, and recalls the positive implications for local development that may be derived;

Welcoming the Strategic Plan for Biodiversity (2011 – 2020) and the 'Aichi 2020 targets' adopted at the 10<sup>th</sup> COP of the Convention on Biological Diversity and taking note in particular of target 11, committing Parties to conserve at least 17% of terrestrial and inland water and 10% of coastal and marine areas through well managed, ecologically representative and connected protected areas;

Taking note, with appreciation, of the EU 2020 biodiversity Strategy, endorsed by the Council of the European Union in June 2011, and more particularly its target 1, which calls on Member States to fully implement the Birds and Habitats Directives;

Welcoming the efforts of Contracting Parties and Observer states and the support of the European Commission and the European Environment Agency in the development of the Emerald Network, as a contribution to step up averting global biodiversity loss, with regard to the Aichi headline target 11;

Recognising the work of the European Union and its Member States on the development of the Natura 2000 Network and their current efforts on improving the management of the Network and achieving a favourable conservation status for threatened species and habitats;

Welcoming the considerable efforts of Contracting Parties on the implementation of the Calendar for the implementation of the Emerald Network (2011 – 2020) in view of the identification of potential Emerald sites on their territory;

Considering the *Criteria for assessing the National Lists of proposed ASCIs at biogeographical level and procedure for examining and approving Emerald candidate sites* adopted by the Standing Committee to the Bern Convention on 9<sup>th</sup> December 2010, as well as the official "candidate Emerald site" status it provides for;

Conscious that the ecological quality of proposed Emerald sites should be preserved as soon as they are officially nominated as 'candidate Emerald sites' by the Standing Committee to the Bern Convention;

Recommends that Contracting Parties:

1. Take the necessary protection and conservation measures in order to maintain the ecological characteristics of the candidate Emerald sites;
2. Ensure that, if and when appropriate, these measures include administrative, management or development plans corresponding to the ecological requirements for the long term survival of species and habitats present in the proposed

Emerald sites, in particular those of the Bern Convention Resolutions No. 4 (1996) and No. 6 (1998) or specified by Recommendation 16 (1989) and that these are set in place at the latest once ASCIs have officially been adopted by the Standing Committee to the Bern Convention;

3. Ensure that the site proposals submitted to the Standing Committee to the Bern Convention for official nomination as candidate Emerald sites comply with the minimum criteria proposed in the guidance set out in Appendix 1 to the present Recommendation.

Invites Contracting Parties, the European Commission and the European Environment Agency to consider listing biodiversity among the programme priorities for the neighbourhood policy.

## **APPENDIX I**

### **Guidance**

This guidance draws on the discussions of the Group of Experts on Protected Areas and Ecological Networks at its 3<sup>rd</sup> meeting (2011) as well as on the expert opinion of the European Topic Centre on Biological Diversity. It complements the provisions of the *Criteria for assessing the National Lists of proposed ASCIs at biogeographical level and procedure for examining and approving Emerald candidate sites*, adopted by the Standing Committee to the Bern Convention at its 30<sup>th</sup> meeting in 2010.

National sites' proposals can be submitted to the Standing Committee to the Bern Convention for official nomination as Emerald candidate sites once they fulfil the following minimum criteria:

- a. Are described according to the Emerald standard data form (Appendix I to resolution No. 5 (1998) of the Standing Committee to the Bern Convention);
- b. Contain at least one habitat and/or species listed in the Revised Annex I of Resolution No. 4 (1996) of the Standing Committee to the Bern Convention and/or in Resolution No. 6 (1998) of the Standing Committee to the Bern Convention and/or specified by Recommendation No. 16 (1989);
- c. Provide information on site name, site code and site area, together with the site boundary in an agreed GIS format (in the case of an individual cave, the central coordinate of the cave entrance should be provided).