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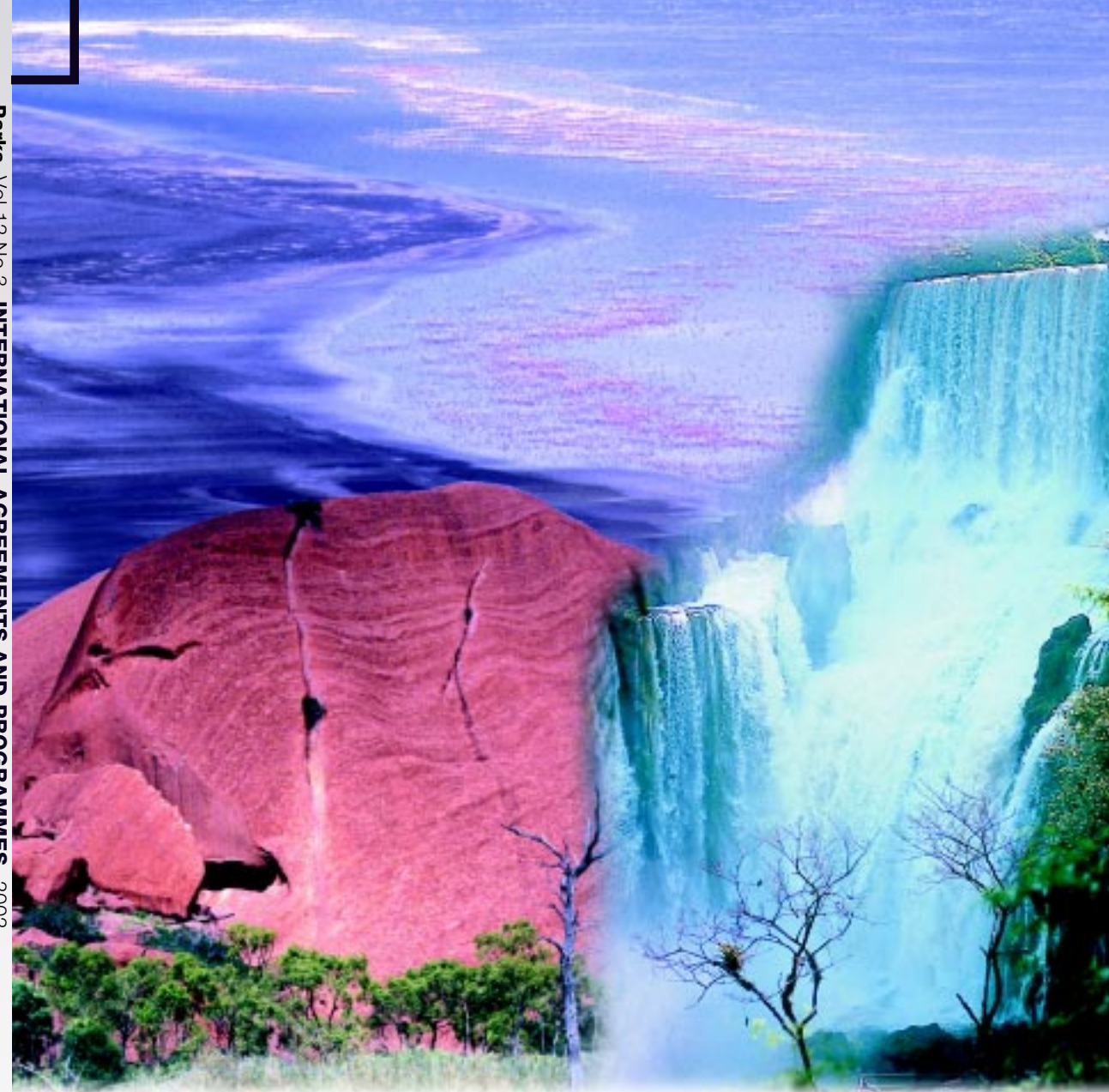
Editors: JEREMY HARRISON AND KAREN SIMPSON

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Right: Iguacu National Park and World Heritage Site, Brazil.

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Editorial

JEREMY HARRISON AND KAREN SIMPSON



PROTECTED AREAS form part of each nation's strategy for dealing with the conservation and sustainable use of biodiversity and landscape. These areas vary considerably in their objectives, the extent to which they are integrated into the wider landscape, and the effectiveness with which they are managed. Nevertheless they provide powerful evidence of a nation's commitment to conservation and sustainable development.

This is one of the reasons why in 1959 the United Nations called on IUCN to establish a list of national parks and equivalent reserves, working in collaboration with the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and Food and Agriculture Organisation (FAO). Information on nationally designated protected areas has been regularly compiled since then, with the United Nations Environment Programme (UNEP) taking an increasing role in recent years. (UNEP did not exist when the original mandate was given).

In 1959 there were no international agreements or programmes that either designated or recognised specific protected areas, although both the 1933 Convention relative to the Preservation of Fauna and Flora in their Natural State (African Convention) and the 1940 Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (Western Hemisphere Convention) recognised the importance of protected areas in general terms and encouraged their establishment. However, since then, a range of international agreements and programmes designate or recognise specific protected areas. For example, the Convention for the Protection of the World Cultural and Natural Heritage (World Heritage Convention) and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) are both concerned with the protection of specific sites, and at least 11 other global and regional agreements and programmes recognise or designate specific protected areas.

Although information on each of these agreements and programmes, and on the sites that they recognise, is readily available, there are few information sources that compile such information in one place, or provide the information in a comparative manner. Consequently it is often difficult for those involved in protected areas management to clearly understand how these different initiatives relate to each other. It is therefore our intention in this edition of *Parks* to provide information on seven international agreements and programmes in a comparative manner.

It is worth noting that within Europe there is one site, part of which is designated or recognised by all seven initiatives; and many more that are covered by three or more initiatives. Meanwhile nomination and reporting formats and procedures vary widely, even though often the same information is required from the same people. This is why this volume includes an additional paper on harmonisation initiatives and, in particular, issues relating to nomination, information management and reporting.

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International agreements and programmes on protected areas

JEREMY HARRISON

There is a range of international conventions and programmes in place that designate or recognise sites, giving them an international status. Several of these are described in this edition of *Parks*, but by no means all. This article examines in general terms the differences between these approaches, and makes recommendations on actions that can be taken to ensure that the different approaches are complementary, and applied in a manner that ensures coordination and synergy rather than duplication and potential confusion.

INTERNATIONAL AGREEMENTS that recognise or designate specific protected areas are a relatively recent phenomenon. During the first part of the last century at least two international agreements recognised the importance of protected areas in general terms and encouraged their establishment. Both the 1933 Convention Relative to the Preservation of Fauna and Flora in their Natural State (African Convention) and the 1940 Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (Western Hemisphere Convention) included clauses which called on Party nations to establish protected areas. However neither recognised specific sites.

Since then a range of international agreements and programmes designate or recognise specific protected areas. For example, the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) are both concerned with protection of specific sites. A range of other global and regional agreements and programmes also recognise or designate specific protected areas. These include those initiatives identified in Table 1.

Information on each of these agreements and programmes, and on the sites that they recognise, is readily available. However, there is currently no single source of information on all

Table 1. Major international initiatives recognising or designating specific sites.

Initiative	Geographical coverage	Thematic coverage
World Heritage Convention	Global	
Ramsar Convention	Global	Wetlands
UNESCO MAB Biosphere Reserves	Global	
Helsinki Convention	Baltic	Marine and coastal
Barcelona Convention and SPA Protocol	Mediterranean	Marine and coastal
Cartagena Convention and SPAW Protocol	Caribbean	Marine and coastal
Antarctic Treaty and Madrid Protocol	Antarctic	
Bern Convention	Europe	Listed species/habitats
EU Birds Directive	European Union	Listed species
EU Habitats Directive	European Union	Listed species/habitats
Council of Europe Biogenetic Reserves	Europe	
Council of Europe European Diploma	Europe	
ASEAN Declaration on Heritage Parks and Reserves	South East Asia	

of them, and no global comparative analysis, although information is available on the relationship between specific instruments (for example, Ramsar sites and Biosphere Reserves).

In general terms, the different initiatives either have a different geographical coverage or serve different purposes. Beltran and Delbaere (1998) identified three different types of initiative in their analysis of the relevance of the international agreements and programmes in Europe. A quick review of the agreements and programmes listed in Table 1 using these categories yields the following:

- **Systematically developing a network** – a number of the international initiatives listed in Table 1 aim towards systematically developing networks for the protection of identified species and habitats, and ensuring the protection of key features. This would include the following: Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (Birds Directive); Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive); the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention); the Ramsar Convention; the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention); the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention); and the Antarctic Treaty.
- **Recognising excellence** – three of the instruments listed in Table 1 aim to provide for recognition of excellence, namely the World Heritage Convention, the European Diploma and the ASEAN Declaration on Heritage Parks and Reserves. None of the instruments aim at systematic protection of species or ecosystems (although the World Heritage Convention is reviewing the coverage of different natural and cultural features).
- **Promoting research and education** – two programmes listed in Table 1 are oriented towards representativeness in order to facilitate opportunities for research, specifically the Man and the Biosphere Programme (MAB) of UNESCO and the Council of Europe's Biogenetic Reserves programme. Biosphere Reserves additionally have a focus on education and training, and on the integration of conservation objectives into the management of surrounding lands.

Comparison of initiatives and collaboration between them

While each of the different conventions and programmes serves a different purpose, a key issue to be addressed is the problems, or opportunities, which arise from multiple designations under several international and/or regional agreements. For example, it is possible for the same site to be a Wetland of International Importance, inscribed on the World Heritage List, a Biosphere Reserve, and, if in Europe, to be listed under the EU Habitats Directive. There is one site in Europe that is involved with *seven* different international agreements and programmes that recognise specific sites!

In itself this is not a bad outcome, but it is not necessarily helpful if all the designations are applied and understood independently at either national or international levels, rather than being appropriately related. Clearly, if well used, designations offer the potential to be useful management tools and signals for international attention – if poorly managed, however, they can only lead to confusion and inevitably devaluation of the 'label'.

There have been reviews of the relationships between some of the international initiatives discussed, for example Fernández-Galiano (this volume) reviews the relationship between the Emerald Network (Bern Convention) and Natura 2000. Collaborative programmes exist at both national and international levels between and amongst a range of agreements and programmes, and there are in many cases signed agreements. A good example of a collaborative approach is the agreed programme of joint work between Ramsar sites and Biosphere Reserves (Ramsar 2002).

However both joint programmes and the signed agreements are almost exclusively bilateral in nature. It might increase the value of all these international agreements and programmes if a

wide range of stakeholders were to review and discuss the relationships between them, perhaps in the context of an international workshop, with the aim of developing a better understanding of how they relate to each other and how synergies can be achieved. Better understanding of the relationships would improve implementation at all levels.

Nomination and reporting

Each of the different conventions and programmes discussed has a different nomination form and process, and monitoring and reporting requirements vary widely. This is despite the fact that several information elements are common to all nomination and reporting requirements. Furthermore, in monitoring and reporting processes there is rarely any differentiation between information that is likely to change over time (and therefore requires a monitoring approach) and information where there is only a necessity to report a change when it occurs (such as the size of a site, or its legal status).

It would be valuable to undertake a comparative review of the nomination and reporting forms and processes to identify where there are opportunities for harmonisation and streamlining, with a view to recommending changes to the appropriate secretariats and governing bodies. This would also serve to facilitate improved sharing of information on internationally recognised protected areas at all levels, and might even promote more efficient management of information at the national level.

Other international agreements and programmes which include a commitment to establishing protected areas

A number of other international agreements also recognise and promote the importance of protected areas. These agreements and programmes are important in supplementing those discussed earlier because of the influence that they have on the development of national protected areas systems. For example, the African Convention has clearly had an affect on the development of protected areas in Africa, as evidenced by the extent to which the definitions of protected areas used in the Convention text have been incorporated into national protected areas systems.

Foremost amongst these other agreements and programmes is the Convention on Biological Diversity (CBD), Article 8 of which requires countries to “establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity” and to manage them effectively. As this Convention has been ratified by 185 nations and the European

Table 2. *Examples of other conventions and programmes with a commitment to establishing protected areas.*

Initiative	Geographical coverage
■ Article 8a of the Convention on Biological Diversity (CBD)	Global
■ Article X of the African Convention	Africa
■ Article II of the Western Hemisphere Convention	Americas
■ Convention for the Conservation of Biodiversity and Protection of Wilderness Areas in Central America	Central America
■ Article 13 of the ASEAN Declaration	South East Asia
■ Article 14 of the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region	South Pacific
■ Convention on Conservation of Nature in the South Pacific	South Pacific
■ Other regional seas agreements, including South East Pacific and Eastern Africa	various
■ Pan-European Biological and Landscape Diversity Strategy	European



Mt Kenya National Park/Natural Forest World Heritage Site is also a Biosphere Reserve. Photo: Maja Zitkovic.

Community, and since it has an important impact on the disbursement of GEF and other resources, this is a very significant development.

This agreement also has the opportunity to have far more influence on the development and management of protected areas around the world, simply because of the number of Contracting Parties and the level of government commitment to its implementation. Protected areas will be a major theme at the next Conference of Parties in March 2004. This will provide an opportunity for the global community to promote a more coordinated approach to the implementation of a range of agreements as they relate to protected areas, perhaps also taking account of the relationships between internationally recognised protected areas discussed earlier.

The state of the world's protected areas

All of the conventions and programmes discussed in this paper are concerned with protected areas. Protected areas form part of each nation's strategy for dealing with the conservation and sustainable use of biodiversity and landscape. These areas vary considerably in their objectives, the extent to which they are integrated into the wider landscape, and the effectiveness with which they are managed, but they nonetheless provide powerful evidence of a nation's commitment to conservation and sustainable development.

Recognising the importance of protected areas, the UN Economic and Social Council adopted Resolution No. 713 (XXVII) in 1959, which called for the preparation and maintenance of a list of national parks and equivalent reserves. The *United Nations List of Protected Areas* includes all national protected areas that meet certain criteria, and has been regularly compiled by IUCN and UNEP World Conservation Monitoring Centre (UNEP-WCMC) since the 1959 mandate. The next edition will be completed in 2003.

The primary aim of the ongoing work to compile information is to report on the current status of the world's protected areas. This will be achieved through the preparation of the *United Nations List of Protected Areas* coupled with preparation of an assessment of the *State of the World's Parks* based on this definitive list. However, this assessment also serves a further purpose in promoting the harmonisation of information management and reporting for all those international agreements and programmes that themselves promote the establishment and management of protected areas.

These key documents will inform participants in two major events, and provide information to underpin decisions being taken relevant to the future of both national and international protected areas programmes. These are:

- **IUCN World Parks Congress** – the Vth IUCN World Congress on Protected Areas will take place in South Africa in September 2003. This ten-yearly meeting of the world's protected area professionals will include assessment of the world's protected areas, their management and their future needs, and the international mechanisms that support them.
- **CBD Conference of Parties** – protected areas as a tool for conservation and sustainable development will be one of the main issues discussed by the VIIth Conference of Parties to the Convention on Biological Diversity, when they meet in 2004, and will also be discussed at preceding technical meetings.

For 20 years the database used to generate the *United Nations List* and a range of other analyses on protected areas has been developed and managed by UNEP-WCMC, working in close collaboration with IUCN. Recognising the importance of the database as a world standard, it is being redeveloped as the *World Database on Protected Areas* with a broader consortium of stakeholders. Part of the redevelopment process will include ensuring that the information needs of international conventions and programmes are being met.

Conclusions

There is significant international interest in protected areas, as evidenced by the number of international agreements and programmes which are concerned with them. This can give a tremendous boost to national systems of protected areas (for example, through increased funding from national or multilateral sources), and in particular to those sites which additionally receive international recognition for whatever reason. However, the plethora of initiatives recognising individual sites can potentially cause confusion and increase the burden on site and system managers.

Three approaches to increase coordination between initiatives have been referred to in this paper:

- multi-stakeholder review of the relationships between different international initiatives that relate to protected areas, as a potential means to promote their integrated application at the national level;
- review of the nomination and reporting mechanisms for those initiatives that designate or recognise specific sites, so as to seek harmonisation and streamlining which reduces the burden on site and system managers; and
- development of the *UN List* and *State of the World's Parks* as a key tool for reporting to a range of international initiatives on efforts being taken at the national level to comply with international calls for improved protected areas networks.

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The Barcelona Convention and its impact on biodiversity



HUMBERTO DA CRUZ

The Mediterranean Action Plan (MAP) was implemented in 1975 to protect the Mediterranean Sea against pollution. After the implementation of MAP it was observed that much of the pollution originated on land, so the plan was expanded to cover marine and terrestrial ecosystems. It has since evolved to create a more integrated approach to conservation in the region, and legal means have been developed to further this. As part of this integrated approach, a network of Specially Protected Areas of Mediterranean Importance has been created, incorporating coastal and marine sites in the Mediterranean that meet certain criteria including appropriate legal status as well as management and conservation objectives.

THE MEDITERRANEAN ACTION PLAN (MAP) was established in 1975 as the first Regional Seas Programme of the United Nations Environment Programme (UNEP). One year later, the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention) and two annexed Protocols were signed, providing a solid legal support for MAP activities.

Initially MAP's objectives were mainly to assist Mediterranean countries in assessing and controlling marine pollution. To facilitate this work, a Coordinating Unit was created and a specific programme for pollution monitoring and research was established (MEDPOL).

This original focus on pollution was widened considerably when it became evident to the Contracting Parties that marine pollution originated predominantly on land and that the impact of human activities, including pollution, was causing serious damage to the rich biodiversity of the region.

The Genoa Declaration of the Mediterranean Governments in 1985 and, more importantly, the revision of the Barcelona Convention and its Protocols in 1995, provided MAP with new instruments to address problems such as the degradation of coastal areas and coastal area management, the protection and sustainable use of biodiversity, and a more integrated approach to development and environmental issues in the region.

This second phase of MAP was renamed as the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean. Accordingly, the Convention and its Protocols were modified to meet the new objectives.

In this context, a first attempt under MAP to protect the natural heritage of the Mediterranean was advanced with the signature in 1982 of a Protocol Concerning Mediterranean Specially Protected Areas. The scope of this Protocol was considerably widened in a new text (Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean), signed in 1995. This new Protocol entered into force in December 1999, together with its annexes, which were approved on 24 November 1996 by a meeting of plenipotentiaries held in Monaco.

The General Obligations established by the 1995 Protocol are as follows:

1. Each Party shall take the necessary measures to:
 - a) protect, preserve and manage in a sustainable and environmentally sound way areas of particular natural or cultural value, notably by the establishment of specially protected areas; and
 - b) protect, preserve and manage threatened or endangered species of flora and fauna.
2. The Parties shall cooperate, directly or through the competent international organisations, in the conservation and sustainable use of biological diversity in the area to which the Protocol applies.

3. Parties shall identify and compile inventories of the components of biological diversity important for its conservation and sustainable use.
4. The Parties shall adopt strategies, plans and programmes for the conservation of biological diversity and the sustainable use of marine and coastal biological resources and shall integrate them into their relevant sectorial and intersectorial policies.
5. Contracting Parties shall monitor the components of biological diversity and shall identify and monitor processes and categories of activities that have, or are likely to have, a significant adverse impact on the conservation and sustainable use of biological diversity.
6. Each Party shall apply the measures provided for in the Protocol without prejudice to the sovereignty or the jurisdiction of other Parties or other States. Any measures taken by a Party to enforce these measures shall be in accordance with international law.

These newly established obligations transformed MAP's original approach concerning biodiversity (i.e. the creation of a network of Natural Protected Areas) into a more consistent one focusing on:

- the compilation of inventories of the regional components of biological diversity and monitoring of adverse impacts for its conservation;
- the establishment and adequate management of Specially Protected Areas;
- the protection of endangered species; and
- cooperation for conservation and sustainable use of biological diversity in the region.

It is clear that the principal instrument for achieving these objectives is still a comprehensive system of Natural Protected Areas. However, this system must go beyond simply adding to the existing national networks, due to weaknesses in most of them and the need for common criteria and coordinated action.

Consequently a new category has been created – Specially Protected Areas of Mediterranean Importance (SPAMIs) – that will act as the backbone of the whole system. The SPAMI List should include sites that satisfy at least one of the following general criteria:

- be of importance for conserving the components of biological diversity in the Mediterranean;
- contain ecosystems specific to the Mediterranean area or the habitats of endangered species; and/or
- be of special interest at the scientific, aesthetic, cultural or educational levels.

The establishment of the SPAMI List is intended to reinforce, rather than substitute, the existing national networks. Countries are encouraged to create new protected areas in zones subject to national sovereignty or jurisdiction, as well as to implement common approaches for protection measures, planning and management.

The following protection measures are proposed:

1. The strengthening of the application of the other Protocols to the Convention and of other relevant treaties.
2. The prohibition of the dumping or discharge of wastes and other substances likely, directly or indirectly, to impair the integrity of the specially protected area.
3. The regulation of the following:
 - a) passage of ships and of any vessels stopping or anchoring;
 - b) the introduction of any species that is not indigenous to the specially protected area in question, or of genetically modified species, as well as the introduction or reintroduction of species which are or have been present in the specially protected area; and
 - c) any scientific research activity.

4. The regulation or prohibition of the following:
 - a) any activity involving the exploration or modification of the soil or the exploitation of the subsoil of the land, the seabed or its subsoil;
 - b) fishing, hunting, taking of animals, and harvesting or destroying plants, as well as trade in animals, parts of animals, plants or parts of plants, which originate in specially protected areas.
5. the regulation and, if necessary, the prohibition of any other activity or act likely to harm or disturb species or that might endanger the state of conservation of the ecosystems or species, or which might impair the natural or cultural characteristics of the specially protected area; and
6. any other measure aimed at safeguarding ecological and biological processes and the landscape.

The planning, management and monitoring of each SPA should include:

1. the development and adoption of a management plan that specifies the legal and institutional framework and the management and protection measures applicable;
2. continuous monitoring of ecological processes, habitats, population dynamics and landscapes, as well as the impact of human activities;
3. the active involvement of local communities and populations, as appropriate, in the management of specially protected areas, including assistance to local inhabitants who might be affected by the establishment of such areas;
4. the adoption of mechanisms for financing the promotion and management of specially protected areas, as well as the development of activities that ensure that management is compatible with the objectives of such areas;
5. regulation of activities compatible with the objectives for which the specially protected area was established and the terms of the related permits; and
6. the training of managers and qualified technical personnel, as well as the development of an appropriate infrastructure.

In addition, the Parties must ensure that national contingency plans incorporate measures for responding to incidents that could cause damage or constitute a threat to the specially protected areas.

Figure 1. Map showing the recently-created category of Specially Protected Areas of Mediterranean Importance (SPAMIs). (Map taken from MedWaves 45).



For specially protected areas that cover both land and marine areas, the Parties must endeavour to ensure the coordination of the administration and management of the specially protected area as a whole.

Criteria for the choice of areas to be included in the SPAMI List

The criteria for selecting the areas to be included in the SPAMI list are clearly stated in the Protocol, which includes some general principles, the specific features of areas that may be proposed, their legal status, and the required protection, planning and management measures.

General principles

A SPAMI must aim to conserve the natural heritage of the area. The pursuit of other aims, such as the conservation of the cultural heritage, and the promotion of scientific research, education, participation and collaboration, are highly desirable and constitute factors in favour of a site being included on the List, to the extent that they are compatible with the aims of conservation.

No limit is imposed on the total number of areas that can be included in the List or on the number of areas that any individual Party can propose for inscription. Nevertheless, the Parties agree that sites will be selected on a scientific basis and included in the List according to their qualities. Therefore they will have to satisfy the requirements set out in the Protocol and the current agreed criteria.

The listed SPAMIs and their geographical distribution must be representative of the Mediterranean region and its biodiversity. To this end the List will represent the highest possible number of types of habitats and ecosystems.

SPAMIs will constitute the core of a network that aims at the effective conservation of the heritage of the Mediterranean. To achieve this objective, the Parties must cooperate bilaterally and multilaterally to conserve and manage natural sites and should promote the establishment of transboundary SPAMIs.

Sites included in the SPAMI List are intended to act as models for the protection of the natural heritage of the region, and Parties must ensure that listed sites are given adequate legal status, protection measures, and management methods and means.

General features of areas to be included in the SPAMI List

To be eligible for inclusion in the SPAMI List, an area must satisfy one or more of the general criteria identified above.

Regional value is a basic requirement for an area to be included in the SPAMI List. The evaluation of the significance of an area for the Mediterranean region should be based on the following criteria:

1. **Uniqueness** – the area contains unique or rare ecosystems, or rare or endemic species.
2. **Natural representativeness** – “representativeness” is the degree to which an area represents a habitat type, ecological process, biological community, physiographic feature or other natural characteristic. The area must be highly representative of ecological processes, community or habitat types, or other natural characteristics.
3. **Diversity** – the area has a high diversity of species, communities, habitats or ecosystems.
4. **Naturalness** – the area has a high degree of naturalness as a result of the lack or low level of human-induced disturbance and degradation.
5. **Presence of habitats** that are critical to endangered, threatened or endemic species.
6. **Cultural representativeness** – the area is highly representative of the cultural heritage of the Mediterranean region, due to the existence of environmentally sound traditional activities that are integrated with nature and support the well-being of local populations.

To be included in the SPAMI List, an area having scientific, educational or aesthetic interest must have a particular value for research in the field of natural sciences, have particular value for environmental education or awareness, or contain outstanding natural features, landscapes or seascapes, respectively. In addition to the fundamental criteria, a certain number of other characteristics and factors should be considered as favourable for the inclusion of a site in the List. These include:

1. the existence of threats likely to impair the ecological, biological, aesthetic or cultural value of the area;
2. the involvement and active participation of the public in general, and local communities in particular, in the processes of planning and managing the area;
3. the existence of a body representing the public, professional, non-governmental sectors and the scientific community involved in the area;
4. the existence of opportunities for sustainable development; and
5. the existence of an integrated coastal management plan.

Legal status

All areas eligible for inclusion in the SPAMI List must be granted a legal status that guarantees their effective long-term protection.

To be included in the SPAMI List, an area situated in a zone that is already delimited and over which a Party exercises sovereignty or jurisdiction must have a protected status recognised by the Party concerned.

In the case of areas situated partly or wholly on the high seas or in a zone where the limits of national sovereignty or jurisdiction have not yet been defined, the legal status, management plan, applicable measures and the other elements required by the Protocol should be provided by the neighbouring Parties that are involved in the proposal for listing.

Protection, planning and management measures

Conservation and management objectives must be clearly defined in the texts relating to each site, and these constitute the basis for an assessment of the adequacy of the adopted measures and the effectiveness of their implementation when the SPAMI List is revised.

The protection, planning and management measures applicable to each area must be adequate for the achievement of the short and long-term conservation and management objectives for the site and, in particular, must take into account the threats to it.

Protection, planning and management measures must be based on an adequate knowledge of the elements of the natural environment and of the socio-economic and cultural factors that characterise each area. If there are shortcomings in the basic knowledge, an area proposed for inclusion in the SPAMI List must have a programme for the collection of the data and information.

The competence and responsibility with regard to administration and implementation of conservation measures for areas proposed for inclusion in the SPAMI List must be clearly defined in the texts governing each area.

The protection measures for a SPAMI must take account of the following basic elements:

1. strengthening of regulations governing the release or dumping of wastes and other substances that are likely, directly or indirectly, to impair the integrity of the area;
2. strengthening of regulations on the introduction or reintroduction of any species into the area;
3. the regulation of any activity or act likely to harm or disturb a species, or that might endanger the conservation status of the ecosystems or species, or that might impair the natural, cultural or aesthetic characteristics of the area; and
4. the regulation of zones surrounding the area in question.

To be included in the SPAMI List, a protected area must have a management body, endowed with sufficient powers and possessing the means and human resources necessary to prevent and/or control activities likely to be contrary to the aims of the protected area.

There must also be a management plan for the area. The main provisions of this plan must be established from the time of inclusion on the List and implemented immediately. A detailed management plan must be presented within three years of the time of inclusion, and failure to respect this obligation entails the removal of the site from the List.

In addition, an area must have a monitoring programme in order to be included on the List. This programme should provide for the identification and monitoring of a certain number of significant parameters, in order to facilitate assessments of the state and evolution of the area, and the effectiveness of the protection and management measures implemented, so that they may be adapted if necessary.

Listing of sites

Proposals for the listing of sites may be submitted at national, transnational or international level:

1. by the Party concerned, if the area is situated in a zone already delimited, over which it exercises sovereignty or jurisdiction;
2. by two or more neighbouring Parties if the area is situated partly or wholly on the high seas; and/or
3. by the neighbouring Parties in areas where the limits of national sovereignty or jurisdiction have not yet been defined.

Parties submitting proposals for listing must provide MAP with an introductory report containing information on the area's geographical location, physical and ecological characteristics, legal status, management plans and the means for their implementation, and a statement justifying its Mediterranean importance. To facilitate this task, a specific form has been prepared by an expert group and was approved at the last Meeting of the Parties (Monaco, 14–17 November 2001).

'Las Encañizadas' is a traditional Arab fishery with a labyrinthine reed/cane system which traps fish travelling from the Mediterranean into the Menor Sea. Photo: Direccion General del Medio Natural. Gobierno de Murcia.



The procedure for the listing of proposed areas is as follows:

1. For each area, a proposal is submitted to the National Focal Points for Specially Protected Areas (SPAs), for consideration as to whether the proposal is in conformity with the accepted common guidelines and criteria.
2. If a proposal made for an area under national sovereignty satisfies the guidelines and common criteria, the MAP Secretariat informs the Meeting of the Parties, which makes a decision regarding the inclusion of the area in the SPAMI List.
3. If a proposal made by neighbouring Parties for the listing of common or high sea areas satisfies the guidelines and common criteria, the MAP Secretariat informs the Meeting of the Parties. The decision as to whether to include the area in the SPAMI List is taken by consensus of the Contracting Parties, who shall also approve the management measures applicable to the area.

The Parties that nominated a particular area are responsible for implementing the protection and conservation measures specified in their proposals.

The SPAMI List is revised periodically by the Contracting Parties and, for this purpose, the MAP Regional Activity Centre for SPA (SPA/RAC) prepares a report.

In 2001 several countries proposed areas to be included in the List, in accordance with the required procedures. In 2001 the Meeting of the Parties approved the listing of twelve areas. The Meeting also invited countries to propose new areas in order to achieve a balanced representation of the different sub-areas and ecosystems of the region, and to promote cooperation between the SPAMI Network and other relevant Protected Areas Networks.

The value of listing sites

The quality of existing Protected Areas Networks in the region varies considerably. At the national level, the SPAMI listing procedure acts as a catalyst to promote the upgrade of planning and management measures, not only of the particular listed areas but also of all other SPAs.

At the regional level, the SPAMI network facilitates cooperation, information sharing and capacity building. To that effect, the Government of Catalunya has proposed a specialised centre, which will work in close cooperation with SPA/RAC.

Reporting requirements

Article 23 of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean requires Contracting Parties to submit reports on their implementation of the Protocol to Meetings of the Parties, which should include information on the status and state of areas included in the SPAMI List, and any change in the delimitation of the legal status of the SPAMIs.

Within the framework of the new general reporting system of the Barcelona Convention, a format has been prepared for national reporting on measures of a legal and/or administrative nature as regards the implementation of the Specially Protected Areas Protocol. In addition, a format for national reports on the technical implementation of the Protocol has been approved, which includes all technical information required by the various articles of the Protocol, and an appendix for reports on SPAMIs under the jurisdiction of more than one country.

The SPA-RAC is also participating in a feasibility study, coordinated by the UNEP-World Conservation Monitoring Centre (UNEP-WCMC), on the harmonisation of national reporting for five biodiversity-related conventions, namely the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention for the Protection of the World Cultural and Natural Heritage (WHC), the Convention on the Conservation of Migratory Species of Wild Animals (CMS), and the

Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention).

Any resulting harmonisation in reporting for these conventions would potentially affect the periodic report on the technical implementation of the Specially Protected Areas Protocol because the negotiated format would cover common requirements. However, the main biennial report on the implementation of the Barcelona Convention and Protocols would not be affected because this is devoted to specific legal and administrative issues relating to the Protocol.

Sites in danger

Changes in the delimitation or legal status of a SPAMI, or the suppression of all or part of a listed area, would not be appropriate unless there were important reasons for doing so, taking into account the need to safeguard the environment and comply with the obligations laid down in the Protocol. If necessary, a procedure similar to that followed for the creation of the SPAMI and its inclusion in the List will be observed.

For SPAMIs that are endangered by ecological changes or management difficulties, regional and bilateral proposed measures will be used as appropriate.

Collaboration with other agreements

MAP has signed agreements with several other relevant conventions, e.g. CBD, Ramsar, and the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). Contracting Parties have also recently decided to strengthen relations with other networks of protected areas in order to create a significant network of marine and coastal protected areas in the context of the Jakarta Mandate of the CBD.

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Biosphere Reserves – a network for conservation and sustainability



PETER BRIDGEWATER

Biosphere Reserves have existed for more than thirty years, and form a world network of more than 400 sites in over 100 countries. The aim of the network is to conserve biodiversity while meeting the demands for greater understanding and appreciation of the relationship between man and biodiversity. It also aims to cover all terrestrial and marine ecosystems, and ranges from high mountains to areas that are densely populated. Within this network a wide range of research is promoted into issues related to management of the biosphere, and exchanges of information, experience and personnel are promoted.

BIOSPHERE RESERVES are designed to meet one of the most challenging issues that the World is facing today: How to conserve biodiversity and maintain healthy natural systems while, at the same time, meet the material needs and aspirations of an increasing number of people? How can we reconcile conservation of natural resources with their sustainable use? These questions drew considerable political attention at the recent World Summit on Sustainable Development in September 2002.

In fact, the origins of Biosphere Reserves goes back to the Biosphere Conference organised by UNESCO in 1968. This was the first intergovernmental conference that sought to reconcile conservation with the use of natural resources, thereby foreshadowing the present-day notion of sustainable development. The early foundations of the Biosphere Reserve concept derived from this conference. The aim of Biosphere Reserves, as derived from the Conference, was to establish terrestrial and coastal areas representing the main planetary ecosystems in which genetic resources would be protected, and where research on ecosystems, as well as monitoring and capacity building could be carried out as part of an intergovernmental programme.

This programme, subsequently called the “Man and the Biosphere” (MAB) Programme, was officially launched by UNESCO in 1970. One of the MAB projects consisted in establishing a coordinated global network of new protected areas, to be designated as “Biosphere Reserves”, in reference to the programme itself. To date, the programme comprises a network of 408 sites, with approximately 20 sites added annually, although several sites have also been withdrawn due to a lack of conformity with the ideals of the programme.

From the outset, then, the primary concern of this MAB project was essentially a *scientific* one, with the designated areas consisting of *representative ecosystems* and the aim being to achieve the fullest possible *biogeographical cover* of the world, thereby ensuring more systematic conservation of biodiversity than before. At the same time, Biosphere Reserves are ‘beyond’ protected areas. Their conservation objective is supported by research, monitoring and training activities, on the one hand, and, on the other hand, is pursued by systematically involving the cooperation and interests of the local populations concerned.

In 1992, in Rio de Janeiro, the United Nations Conference on Environment and Development brought these issues to the attention of the World’s leaders. Agenda 21 and the Conventions on Biological Diversity, Climate Change and Desertification were agreed upon to serve as guides towards what is now termed sustainable development, incorporating care of the environment (living from the profits of the land without depleting its capital), with greater social equity, including respect for rural communities and their accumulated wisdom. The global community needs working examples that encapsulate the ideas of the Rio Conference. Such examples can

only be of value if they express the social, cultural, spiritual and economic needs of society, and are also based on sound science.

Today, MAB has 30 years of experience, in almost 100 countries, of testing and demonstrating approaches to sustainable development. MAB also has an Intergovernmental Coordinating Council (ICC), which concluded at its seventeenth session (22 March 2002) that Biosphere Reserves are a potentially valuable operational tool for the World Summit on Sustainable Development (held in Johannesburg, September 2002), offering a suitable instrument to address many of the objectives of Agenda 21, including the key objective of poverty eradication. Examples and experiences are described in a recently published illustrated review of Biosphere Reserves 'Special places for people and nature' (UNESCO 2002).

The World Network is formally constituted by a Statutory Framework, which resulted from the work of the International Conference on Biosphere Reserves, held in Seville (Spain) in March 1995 (UNESCO 1996). This Statutory Framework sets out 'the rules of the game' of the World Network and includes a periodic, ten-year review of Biosphere Reserves. The activities of the World Network are guided by the "Seville Strategy for Biosphere Reserves", also drawn up at the Seville Conference. At present, not all existing Biosphere Reserves participate fully in the Network, and these guiding documents will help to improve their functioning in the forthcoming years.

Criteria and definitions for sites

Biosphere Reserves are areas of terrestrial and coastal ecosystems that promote solutions in order to reconcile the conservation of biodiversity with its sustainable use. They are internationally recognised, are nominated by national governments, and remain under the sovereign jurisdiction of the states in which they are located. Although Biosphere Reserves are *not* covered by any international convention, they must meet a set of criteria which allow them to properly fulfil their three functions. Collectively, Biosphere Reserves form a World Network.

Within this network, exchanges of information, experience and personnel are promoted. In some ways, Biosphere Reserves serve as 'living laboratories' for testing out and demonstrating integrated management of land, water and biodiversity. Each Biosphere Reserve is intended to fulfil three basic functions, which are complementary and mutually reinforcing:

- **a conservation function** – to contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- **a development function** – to foster economic and human development which is socio-culturally and ecologically sustainable; and
- **a logistic function** – to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.

Biosphere Reserves are organised into three interrelated zones, known as the core area, the buffer zone and the transition area. Only the core area requires legal protection. In practice, this zonation is applied in many different ways in order to accommodate geographical conditions, socio-cultural settings, available legal protection measures and local constraints. This flexibility can be used creatively and is one of the strongest points of the Biosphere Reserve concept. A number of Biosphere Reserves simultaneously encompass areas protected under other systems (such as national parks or nature reserves) and other internationally recognised sites (such as World Heritage Sites or Ramsar wetland sites).

How are Biosphere Reserves selected?

Biosphere Reserves cover the great variety of natural areas of the biosphere, ranging from high mountains to greatly human-impacted plains, from coastal regions and islands to vast inland forests, from the deserts of the tropics to the tundra of the Polar Regions. To qualify for designation as a Biosphere Reserve, an area should normally:

- be representative of a major biogeographic region, including a gradation of human intervention in these systems;
- contain landscapes, ecosystems, animal and plant species, or varieties which need to be conserved;
- provide an opportunity to explore and demonstrate approaches to sustainable development within the larger region where they are located;
- be of an appropriate size to serve the three functions of Biosphere Reserves mentioned above; and
- have an appropriate zoning system, with a legally constituted core area (or areas) devoted to long-term protection, a clearly identified buffer zone (or zones), and an outer transition area.

Organisational arrangements are provided for the involvement and participation of a suitable range of public authorities, local communities and private interests in the planning and management of the Biosphere Reserve. In the case of large natural areas that straddle national boundaries, countries are encouraged to cooperate in setting up and jointly managing transboundary Biosphere Reserves.

National MAB Committees or focal points are responsible for preparing Biosphere Reserve nominations and for involving the appropriate government agencies, relevant institutions and local authorities in preparing the nomination. Each nomination is examined by a UNESCO Advisory Committee for Biosphere Reserves, for recommendation to the ICC of the MAB Programme. This Council decides upon nominations for designation and the Director-General of UNESCO notifies the State concerned of the decision. Once designated, the appropriate authorities are encouraged to publicise their Biosphere Reserves: for example, with a commemorative plaque and the distribution of informative material indicating this special status.

The listing of sites

Establishing a Biosphere Reserve obviously poses an enormous challenge, namely to set up an appropriate mechanism (for instance, a Committee) to plan and coordinate all of the activities that will take place there. This human dimension of Biosphere Reserves makes them special, since the management essentially becomes a “pact” between the local community and society as a whole. Management needs to be open, evolving and adaptive. Such an approach requires perseverance, patience and imagination. However, it puts the local community in a better position to respond to external political, economic and social pressures, which would otherwise affect the ecological and cultural values of the area.

In 1995, the International Conference on Biosphere Reserves confirmed that Biosphere Reserves do in fact provide examples of this approach (UNESCO 1996). Biosphere Reserves have a new role to play at the global level. Not only will they be a means for the people who live and work within and around them to attain a balanced relationship with the natural world, but they should also explore ways to meet the basic needs of society for a more sustainable future (Bridgewater and Cresswell 1998 and *Parks* 2001).

Some countries have enacted legislation specifically to establish Biosphere Reserves. However, in many cases, advantage is taken of the existence of areas already protected under national law to establish Biosphere Reserves. Ownership arrangements may vary too. The core areas of Biosphere Reserves are mostly public lands, but may also be privately owned or belong to non-governmental organisations. In many cases, the buffer zone is in community or private ownership, and this is also generally the case for the transition area.

The value of site listing

At the site level, Biosphere Reserves bring together many scientists, local officials, representatives of various national institutions and local inhabitants. At the national level, these reserves should

form an integral part of national biodiversity plans for implementing the Convention on Biological Diversity (CBD), bringing together the institutions involved in nature conservation and in the sustainable use of natural resources. At the international level, many international governmental and non-governmental organisations are involved with the functioning of the World Network and the application of the concept at the field level.

There are many projects to promote conservation and appropriate development in Biosphere Reserves, which are supported by the World Bank, the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the Food and Agriculture Organisation of the United Nations (FAO), the World Conservation Union (IUCN), Conservation International and the World Wide Fund for Nature (WWF). There are an increasing number of projects sponsored by private enterprises that are keen to demonstrate their environmental concerns. The Biosphere Reserve platform provides an ideal opportunity for this.

There are, of course, a set of other attributes that make Biosphere Reserves particularly important and useful. They are all able to contribute to:

- **The conservation of biological diversity** – human pressures on land and water resources are drastically reducing the diversity of genes, plant and animal species, ecosystems and landscapes. This threatens human welfare, since this biodiversity is the potential source of foods, fibres, medicines and raw material for industry and development. It constitutes an irreplaceable resource for research, education and recreation for the whole of humankind. The core areas and buffer zones of Biosphere Reserves serve as repositories to safeguard samples of the biodiversity of the world's major biogeographical regions, and also as reference and study sites to help improve our knowledge of biodiversity.
- **Maintaining healthy ecosystems** – Biosphere Reserves, which may represent large areas of land and water, contribute significantly to the maintenance of the life support systems which serve to avoid soil erosion, maintain soil fertility, regulate river flow, recharge aquifers, recycle nutrients, and absorb air and water pollutants.
- **Learning about natural systems and how they are changing** – research may be conducted on the structure and dynamics of the minimally disturbed natural systems of the core areas of Biosphere Reserves, and compared with the functioning of human-affected landscapes in the buffer and transition areas. Such studies, when carried out over the long-term, show how these systems may be changing over time. Setting up similar long-term monitoring plots and harmonising methods and measurements allows comparison of results regionally and worldwide. The information thus obtained allows us to better understand global environmental changes.
- **Learning about traditional forms of land-use** – over a long period of time, people in many parts of the world have devised ingenious land-use practices which do not deplete the natural resources and which can provide valuable knowledge for modern production systems. Biosphere Reserves are areas where such peoples can maintain their traditions, as well as improving their economic well-being through the use of culturally and environmentally appropriate technologies. Moreover, such traditional systems are highly useful for conserving ancient breeds of livestock and old land races of crops, which are invaluable gene pools for modern agriculture.

Who benefits from Biosphere Reserves?

Many benefit, directly and indirectly, from the establishment and maintenance of Biosphere Reserves. The following are examples:

- **local communities** – these range from local indigenous communities to rural societies, including country home-owners. There are various potential benefits to such people, such as the protection of basic land and water resources, a more stable and diverse economic base,

additional employment, more influence in land-use decision-making, reduced conflict with protected area administrations and interest groups, a continued opportunity to maintain existing traditions and lifestyles, and a more healthy environment for these local communities and their children.

- **farmers, foresters and fishermen** – Biosphere Reserves provide access to training and demonstration projects on alternative land-uses and management strategies which maintain natural values (such as soil fertility and water quality), and which make the best use of the available human and financial resources.
- **scientists** – Biosphere Reserves encourage research on, for example, ecological processes or biological diversity. They are areas offering a growing database on which to build new hypotheses and experiments. In addition, Biosphere Reserves provide long-term security for permanent plots and monitoring activities, which serve to identify longer-term trends over short-term fluctuations, as may be caused by changes in climate, etc. Biosphere Reserves also allow for interdisciplinary research and monitoring, comparative studies, and information exchange.
- **Government decision-makers and agencies** – Biosphere Reserves provide government decision-makers and agencies with better information on natural resources, and enhanced technical and institutional capabilities to manage natural resources in a sustainable manner. They help to procure greater public support for nature conservation through demonstrating the practical benefits involved. They serve as working examples to explore how one can sustainably manage natural resources at the local and regional levels, and demonstrate that institutional and legal mechanisms are needed. In doing so, Biosphere Reserves serve as tools to enable countries to meet their obligations under international conventions, such as the CBD and the Convention on Combating Desertification (UNCCD), and Agenda 21.
- **The world community** – through their education and communication activities, Biosphere Reserves demonstrate to the public and the world community practical ways to resolve land-

Aboriginal burning used as a major management tool in Uluru- Kata Tjuta National Park Biosphere Reserve, Australia. Photo: Peter Bridgewater.



use conflicts and to ensure the protection of biological diversity. They offer opportunities for education, recreation and tourism.

Reporting and information management

Biosphere Reserves are subject to periodic reviews, which take place ten years after establishment and every ten years thereafter. The periodic review is designed to help countries that nominated the Biosphere Reserves to ensure there are still in conformity with the aims and objectives of the programme. There is a growing number of examples of countries seeking to de-list reserves that do not conform to the objectives, or to change their boundaries in order to improve their conformity.

Sites in danger

Unlike other sites devoted solely to conservation (for example, World Heritage sites), the very nature of Biosphere Reserves makes it unlikely that a whole site would ever be 'in danger'. However, the existing procedures for reporting and review (including the biennial meeting of the MAB ICC) allows for cases to be discussed where there are potential problems with conservation efforts in the core area.

Collaboration

Although Biosphere Reserves have very different geographical, economic and cultural contexts, they do share a common interest in seeking concrete solutions to reconcile the conservation of biodiversity with the sustainable use of natural resources, for the benefit of local people. The World Network fosters exchanges amongst Biosphere Reserves (for example, research results or experience in resolving specific issues) and facilitates cooperative activities, including scientific research and monitoring, environmental education and specialist training. Cooperation can take the form of exchanges of informative material, articles in the international bulletin, cooperative projects, twinning arrangements, personnel exchanges, organising visits, or correspondence by mail or electronic mail. The World Network is supported by regional or sub-regional networks (such as in East Asia), or thematic networks (for example, for studying biodiversity). The ICC encourages the creation of new sub-networks such as these.

There are specific cooperative arrangements in place with the Convention for the Protection of the World Cultural and Natural Heritage (World Heritage Convention) and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), as well as the Convention on the Conservation of Migratory Species (CMS) and the UNCCD, where the World Network of Biosphere Reserves provides a site-based platform of possibilities to implement those conventions.

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The Emerald Network: Areas of Special Conservation Interest for the whole of Europe



ELADIO FERNÁNDEZ-GALIANO

The Emerald Network was created as a result of stipulations made by the Bern Convention (1979) to create, across Europe (and some parts of Africa), a network of Areas of Special Conservation Interest (ASCI). The development of the network was delayed by political factors, and before its creation Natura 2000 had been implemented within the European Union states to comply with the Birds and Habitats Directives. To avoid creating two parallel conservation networks in Europe it was decided to integrate the Natura 2000 sites into the Emerald Network. The relationship and comparisons between the two networks are described in this article, and the development of the Emerald Network and the ASCIs is also examined in detail.

THE EMERALD NETWORK of Areas of Special Conservation Interest was created in 1989 in order to implement the requirements for habitat conservation in the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention).

The Bern Convention is a biodiversity-related convention covering the whole of Europe and some African States (i.e. Burkino Faso, Morocco, Senegal and Tunisia). It has been signed by 40 European States, the aforementioned African countries, and the European Community.

Articles 1, 2, 3, 4, 6 and 9 of the Convention deal with the protection of natural habitats and, in particular:

- the habitats of species of wild flora and fauna (especially those in Appendices I and II);
- endangered natural habitats; and
- areas of importance for migratory species.

In June 1989 the Standing Committee of the Bern Convention held a meeting exclusively devoted to habitat conservation under the Convention. At that 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.

In Recommendation No. 16 (1989) on Areas of Special Conservation Interest (ASCIs), the Standing Committee recommended that Parties “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 the area satisfies one or more of the conditions listed in the Recommendation.

The creation of the Emerald Network and its relationship to Natura 2000

The Emerald Network was created by virtue of Recommendation No. 16 (1989) and Resolution No. 3 (1996), which are ‘soft law’ instruments. Nevertheless, the obligations to protect the habitats of species and endangered natural habitats are not ‘soft law’, but rather are strict obligations clearly identifiable in the Convention and forming part of international law. The Standing Committee recommended that Contracting Parties implement their obligations regarding natural habitats by taking a number of measures, including the designation of the ASCIs which form the Emerald Network. Obviously the fulfilment of obligations under the Bern

Convention can only be requested from its Contracting Parties, but other European States were also 'invited' to participate in the exercise.

Although the Committee had hoped that all of these recommendations on habitat conservation would be implemented rapidly by Contracting Parties, two major events delayed their implementation. First, the political map of Europe changed fundamentally following the fall of the Berlin wall in October 1989. Consequently the Bern Convention had to change its priorities from establishing a network of areas to extending the Convention to the new democracies of Central and Eastern Europe.

The second event was the preparation by the European Community of a legal instrument aimed at implementing the Bern Convention within the Community, (as a Contracting Party, the European Community is obliged to take "the appropriate and necessary legislative and administrative measures" to implement the Convention.) This instrument, the Directive on the conservation of natural habitats and of wild fauna and flora, was finalised in May 1992. The Directive did not simply adopt the text of the Bern Convention, but went much further in developing the obligations on habitat protection (so much so 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 ensure coherence between the network of 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 decided to wait for the establishment of a proper mechanism by the Directive. However, by January 1996, the Central and Eastern European States that had become Parties to the Convention were requesting the development of the network of ASCIs. In response to this, and noting that the Habitats Directive was already sufficiently advanced to establish Natura 2000, the Standing Committee decided to adopt 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". Furthermore, it "encouraged Contracting Parties and observer states to designate Areas of Special Conservation Interest and to notify them to the Secretariat". Thus Resolution No. 3 (1996) can be regarded as being the second birth of the network.

Karatas nesting beach for marine turtles, which is a potential Emerald Network site in Turkey. Photo: Eladio Fernández-Galiano.



To avoid creating two parallel networks in Europe (i.e. the Emerald Network and the EU Natura 2000 Network), it was decided to integrate all Natura 2000 sites into the Emerald Network. Thus 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”.

The relationship between the Emerald Network and 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 and fauna and their natural habitats. The main differences between them are the territories to which they apply (the Directive applies to Members of the European Union (EU), while the Convention covers the whole of Europe and parts of Africa), and the fact that the Directive is more explicit on the obligations concerning the conservation of natural habitats.

Indeed the Directive is designed to implement the Bern Convention in the European Community and, therefore, is fundamentally compatible with the Convention. Resolution No. 1 and Recommendations Nos. 14, 15 and 16 (all adopted in 1989) and Recommendation No. 25 (1991) clearly influenced the content of the Directive during its preparation. 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” (originally inspired by the United Kingdom’s Sites of Special Scientific Interest) became the Directive’s “Special Areas of Conservation”.

The Directive should be credited for converting 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 EU.

It is obvious that most of the implementation of the Bern Convention will be carried out within the EU by the full implementation of the Directive. Furthermore the Member States of the EU will satisfy the habitat requirements of the Bern Convention through the designation of sites for the Natura 2000 Network. Thus, the SACs of Natura 2000 will also become ASCIs of the Emerald Network, as anticipated in Resolution No. 5. This ensures the coherence of the Network throughout the whole of Europe.

The obvious advantage to this approach is that the building of the Emerald Network will benefit from the work carried out in the EU to build Natura 2000, with remaining work being concentrated in States that are not members of the EU. In this way it will be possible to extend to the whole of Europe a homogeneous network of conservation areas, thus 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, challenges and ambitions of the Council of Europe.

Additionally, it may also assist some States that are candidates for membership of the EU to do in advance part of the preparatory work necessary to comply with the Habitats Directive. It seems evident that if a State designates a coherent network of ASCIs for the purposes of the Emerald Network, it will be in a better position to designate SACs when it joins the EU. This has led to close cooperation and coordination between the Council of Europe (serving the Bern Convention) and the European Commission (responsible for the Directive) in terms of the technical and financial matters necessary for the development of both networks.

In effect the Emerald Network will take the philosophy of the Natura 2000 Network beyond the borders of the EU, and will result in the implementation of the fundamentally coincident

objectives of both the Bern Convention and the Habitats Directive across the whole continent. This will result in successful nature conservation in Europe.

Criteria and definition of sites

Areas of special conservation interest

Recommendation No. 16 provides that for a site to be designated as an ASCI it must satisfy one or more 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) The site 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) The site 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 emphasised that the procedures established for the Habitats Directive will apply for Contracting Parties that are Member States of the EU, and therefore the designation criteria are those provided for by the Directive (which are largely the same as for the Convention anyway).

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

Therefore not all areas protected under other schemes can be designated for the Emerald Network. Like Natura 2000, its coherence is a result of the limited criteria for designation. Sites have to be important and contribute *substantially* to the objectives of the Convention.

Listing of sites

Which States may designate ASCIs?

Resolution No. 3 (1996) encourages “Contracting Parties and observer States to designate ASCIs” and to notify them to the Secretariat.

As of September 2002, 40 European States are Contracting Parties to the Convention. A further eight European States have observer status at meetings of the Standing Committee (i.e. Armenia, Belarus, Bosnia-Herzegovina, the Federal Republic of Yugoslavia, Georgia, the Holy See, Russia and San Marino).

In 1998, the Standing Committee decided upon the participation of non-European Parties in the Emerald Network. Consequently Burkina Faso, Morocco, Tunisia and Senegal which are Contracting Parties, raises to 52 the number of States that may participate in the Emerald Network.

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

Resolution No. 5 establishes that, for Contracting Parties that are Member States of the EU, 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 to those of the Emerald Network and a more solid legal basis. In this respect, the full and thorough implementation of the Habitats Directive is contemplated as a necessary and fundamental step towards the achievement of



The North Vidzeme Biosphere Reserve in Latvia is an Emerald Network site. Photo: Helene Bouguessa.

common goals concerning the protection of natural habitats and the conservation of wild flora and fauna.

The listing of sites has already begun in the 15 States of the EU and in the other 23 States that have participated in 'pilot projects'. The overall objective of the Emerald Network pilot projects is to develop a pilot database containing a reasonable proportion of the ASCIs and to submit a proposal to the Standing Committee of the Bern Convention for the designation of sites.

In order to achieve this objective, the countries have to form project teams, carry out the training of the teams (by organising workshops), and proceed with scientific work (i.e. data collection on the species and habitats concerned, a field survey for each selected pilot area, and mapping of distribution data on species and habitats) and technical tasks (i.e. 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).

These pilot projects have resulted in the designation of 10% of the sites that are potential Emerald Network sites, with 153 sites being identified in 18 of the 23 States.

Resolution No. 3 (1996), Recommendation No. 16 (1989) and Resolution No. 5 (1998) provide the fundamental basis for the designation of ASCIs, and 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 regards the technical details, it should be noted that Resolution No. 3 created "a group of experts to carry out the necessary activities related to the building up of the network".

The group of experts has agreed in principle that the designation process should be compatible with that of the Natura 2000 Network, and Resolution No. 5 (1998) establishes the procedure that should be followed.

In order to designate an ASCI, a government must deposit a standard data form with the Secretariat of the Council of Europe. This form is based on the database designed for Natura 2000, although the data has been modified to cover the larger geographical area of the Bern Convention and the greater number of species listed by it. The forms can be filled in electronically and the

software allows for the semi-automatic transfer of information gathered by other projects, such as the CORINE-biotopes programme.

In accordance with the “Rules for the Emerald Network”, the Standing Committee has the right to advise a government that one or more areas of particular interest to the Network should be designated. Conversely, if a government designates an area that does not meet the criteria, the Standing Committee may advise that government to withdraw the designation. If the government nevertheless maintains the designation, the Standing Committee may decide not to accept it.

The Standing Committee concluded that, for the designation of ASCIs and the protection of natural habitats, it was necessary to reinforce the work that Contracting Parties were carrying out. Thus, Recommendation No. 14 (1989) requests that Parties 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 these tasks were addressed to Contracting Parties, the Standing Committee subsequently decided to prepare lists for points (a), (b), (c) and (d) above, for the whole of Europe.

Consequently, in December 1996 the Standing Committee adopted Resolution No. 4, which identified endangered natural habitats requiring specific conservation measures (point (b) above).

Moreover, in 1998 the Standing Committee adopted Resolution No. 6 listing the species requiring specific habitat conservation measures – including for 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 the choice of sites of particular relevance for threatened species.

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

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

The procedure will be different for Contracting Parties to the Convention that are also Member States of the European Community. In order to ensure harmonisation and compatibility with the Natura 2000 Network, these Parties will only be required to identify the areas that have been effectively included in the Natura 2000 Network, following the necessary verification process prescribed by the Habitats Directive. This is designed to ensure the full compatibility and coherence of the networks.

The status and management of ASCIs

Once ASCIs have been designated, it is recommended that States take a number of steps (by legislation or otherwise) to ensure that ASCIs are properly managed. Recommendation No. 16 (1989) requests that States ensure, wherever possible, that:

- ASCIs “are the subject of an appropriate regime, designed to achieve the conservation of the factors” for which the area has been designated;
- “the agencies responsible for the designation and/or management and/or conservation of ASCIs have available to them sufficient manpower, training, equipment and resources

(including financial resources) to enable them properly to manage, conserve and survey the areas”;

- “appropriate ecological and other research is conducted, in a properly coordinated 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”; and that
- “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, States are recommended to take steps, as appropriate, to:

- “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)”;
- “regularly review the terms of the management plans in the light of changing conditions or of increased scientific knowledge”;
- “clearly mark the boundaries of ASCIs on maps and, as far as possible, on the ground”;
- “advise the competent authorities and landowners of the extent of ASCIs and their characteristics”; and
- “provide for the monitoring of ASCIs and especially of the factors for which their conservation is important”.

Thus States are invited to pay considerable attention to the conservation of ASCIs. However, there is no precise recommendation to provide legal protection for ASCIs, since the Standing Committee has preferred flexible wording and has simply recommended that areas “be subject to the appropriate regime”. Indeed the Standing Committee was more interested in achieving conservation objectives than in developing a specific ‘area protection’ procedure, since some systems may work very well without strong legal obligations attached. In any case the Standing Committee asked States to consider the matter of the protection of ASCIs, and Recommendation No. 16 suggests that Contracting Parties “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”.

Sites in danger

The Bern Convention has a specific procedure for dealing with cases in which there is a presumed lack of compliance with obligations. The procedure normally involves the submission of a complaint (usually by an NGO) and often involves on-the-spot appraisals and recommendations to the government concerned to carry out (or avoid carrying out) a number of precise actions. The Standing Committee may open files on Contracting Parties, and over a hundred cases have been dealt with in the last 15 years. Regarding the Emerald Network, the rules established by the Committee request governments to “undertake surveillance of the conservation status of species and natural habitat in designated ASCIs”. Governments are also obliged to provide information on “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”. If any such changes come to light, the Standing Committee is able to “advise the government concerned on steps to be taken to ensure conformity with the provision of Recommendation No. 16 (1989)”.

As few ASCIs were designated before 2001, only one case file that has been discussed under the Bern Convention concerns an Emerald Network site (i.e. a motorway in the Kresna Gorge, Struma, Bulgaria).

Collaboration with other agreements

The Council of Europe signed a Memorandum of Cooperation with the European Environment Agency (EEA) to share information on protected areas in Europe. Within the framework of that agreement and in cooperation with the UNEP World Conservation Monitoring Centre (UNEP-WCMC), a Common Database of Designated Areas (CDDA) has been created. This database will gather information on sites that have received international designation in Europe. The core of this database will comprise sites designated under the Emerald Network and Natura 2000. Compatibility of fundamental information has been assured by using similar software and a 'model data form' for collecting information.

Future work

The Emerald Network remains a priority activity for the Bern Convention. It is politically relevant as an instrument to assist those Central and Eastern European States that are candidates for EU membership to prepare for Natura 2000. For other States, it is important from a 'standard-setting' perspective, since it will be possible to develop a common European approach to the protection of natural habitats.

Within the framework of the Memorandum of Cooperation signed with the EEA, reinforcement of the cooperation with the EEA and the Nature Thematic Centre in Paris is envisaged, in particular by transferring to the Agency the technical responsibilities involved in the setting-up of the Emerald Network. Interested States, particularly those that are candidates for membership of the EU, may also request greater responsibility, and there is the possibility that this work could be financed from 'approximation' funds.

A timetable for the identification of sites was established in October 2002, which aimed at having 30% of all ASCIs designated by 2005. The Network should be operative in most States by the end of 2007.

The development of the Emerald Network is intended to be a dynamic process, requiring regular updates of information. The pilot projects are an important starting point for establishing the Network. With an increasing number of countries becoming involved in the process in the future, it will soon be possible to witness the successful implementation of the Emerald Network.

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The European Diploma of Protected Areas



FRANÇOISE BAUER

The European Diploma is a recognition of excellence awarded to sites in Europe. To be granted a diploma sites must meet certain criteria, and each is assessed. After assessment the application for diploma will either be awarded, given conditionally, deferred or rejected, with the final decision made by the Committee of Ministers. The areas that have been granted diplomas have a rich heritage, are prestigious and represent almost every type of natural landscape in Europe. The diploma is intended to ensure that the sites remain of the same high standard and is therefore given for a renewable five-year period, after which time it is reviewed, ensuring a continued focus on excellence.

THE EUROPEAN DIPLOMA of Protected Areas of the Council of Europe is a distinction that recognises the quality of both the heritage within a site and the site's conservation and management system.

Instituted in 1965 by the Committee of Ministers Resolution (65) 6, the European Diploma is awarded to natural or semi-natural areas which, on the basis of their scientific, cultural or aesthetic qualities, are of exceptional significance as regards the conservation of biological, geological or landscape diversity in Europe, and which have an appropriate conservation system in place.

Sites that are awarded the Diploma are placed under the Council of Europe's patronage for a renewable five-year period.

Conditions for obtaining the European Diploma and criteria for the choice of sites

The European Diploma of Protected Areas is awarded in accordance with the conditions laid down in the regulations set out in Committee of Ministers Resolution (98) 29. An application is submitted by the government of the Member State and is examined by a group of experts in the presence of a representative of the State concerned.

In all cases where the significance for Europe of the applicant area is acknowledged, the group of experts conducts an on-the-spot appraisal to check whether the criteria for awarding the Diploma are met.

The criteria are divided into general ones, which must be met by all applicant areas, and specific ones relating to the area's particular purpose. These criteria reflect both the objectives served by nominated areas and the protection measures required to achieve those objectives. The findings of the appraisal are considered by the group of experts, which may recommend that the Diploma be awarded immediately, that the application be deferred or rejected, or that the award be made conditional on certain additional measures. The final decision is taken by the Committee of Ministers, in the form of a resolution.

The European Diploma is usually awarded subject to conditions and/or recommendations which must be complied with before the Diploma is renewed for the first time. The Diploma takes the form of a contract which sets out objectives that are designed to improve strategies for conservation management and reduce and/or eliminate potential threats. For example, in 1999 the De Oostvaardersplassen nature reserve in the Netherlands was awarded the Diploma on condition that plans to extend Amsterdam Airport in the direction of the reserve be abandoned, along with any similar projects.

In accepting the European Diploma, the competent authorities undertake to manage their site in an appropriate manner and to produce an annual report on the management of the site

and information about any changes that have taken place since the previous year. Thus the European Diploma of Protected Areas is a reward which also incurs obligations.

The list of sites

To date, 61 areas from 23 countries have been awarded the European Diploma. However, in some Member States no sites have yet received the Diploma. The lack of applications from some countries may be explained by the extremely stringent requirements of the Diploma. Other Member States have had applications rejected and are cautious about submitting further nominations. Furthermore, applications have been submitted for the Tihany Peninsula in Hungary, Thayatal National Park in Austria, Matsalu Nature Reserve in Estonia and Triglav National Park in Slovenia.

The majority of applications in recent years have been from central and east European countries, and there is growing interest in this activity by the Council of Europe.

Types of areas receiving the European Diploma

The areas that have received the Council of Europe Diploma represent almost every type of natural landscape in Europe. Diploma areas therefore range from those landscapes that have been shaped and populated mainly by humans, to those nature reserves in which the conservation of natural environments and species is the main priority, including natural sites that are nevertheless open to the public.

The following are examples of the areas listed:

■ **Nordic expanses**

- Muddus National Park in Sweden is a vast area of practically virgin forest and marshland in Lapland. The fauna of the far north is difficult to reach and is well protected.
- Seitsemien National Park in Finland is a patchwork of peat bogs and forests, part of which has been protected since the turn of the 20th century.
- The Kostomuksha Strict Nature Reserve in Russia is an area of lakes and taiga-type forests. It is included in the Russian-Finnish Friendship Nature Reserve.

■ **Practically unspoilt mountains, rivers, valleys and alluvial plains**

- Since the 1930s, the Teberda National Reserve, in the Karachayevo-Cherkessian Republic of the Russian Federation, has protected 85,000 ha of magnificent Caucasian landscape, remarkable fauna and flora, and unspoilt valleys where the rivers flow unimpeded, providing essential water supplies to the agricultural plains below.
- The Podyjí/Thaya River Basin National Park in the Czech Republic protects a river valley with outstanding features, including a rich variety of flora and exceptional pseudo-karstic grottoes.

■ **Virgin forests and evolving forests**

- The National Parks of Bialowieza (Poland) and Belovezhskaya Pushcha (Belarus) offer protection to some of the last groups of virgin forest on the European plains, with their unique fauna, including the bison.
- Beech and oak forests are maintained over an area of 764 ha in the Sasso Fratino Nature Reserve in Italy.

■ **Geological and palaeontological sites**

- The Ipolytarnóc Nature Conservation Area (Hungary) is a palaeontological site of major importance. Approximately 19 million years ago, it was the scene of a volcanic eruption that engulfed and preserved trees, traces of leaves, and animals.
- The Karlštejn National Nature Reserve in the Czech Republic lies to the south-east of Prague in a landscape of Bohemian karst. It is exceptional in terms of its geological, palaeontological and stratigraphic heritage and also its wildlife heritage.

■ Central European steppes

- The Tsentralno-Chernozemny Biosphere Reserve in the Russian Federation contains seven protected sectors of unspoilt chernozem and steppe environments, which constitute an irreplaceable genetic heritage.

■ Important peatlands

- The Haute Fagnes Nature Reserve (Belgium) includes peat bogs, heathland and wet grasslands.
- The Wurzacher Ried Nature Reserve (Germany) is a huge area of marshlands and peat bog.

■ Spectacular sites

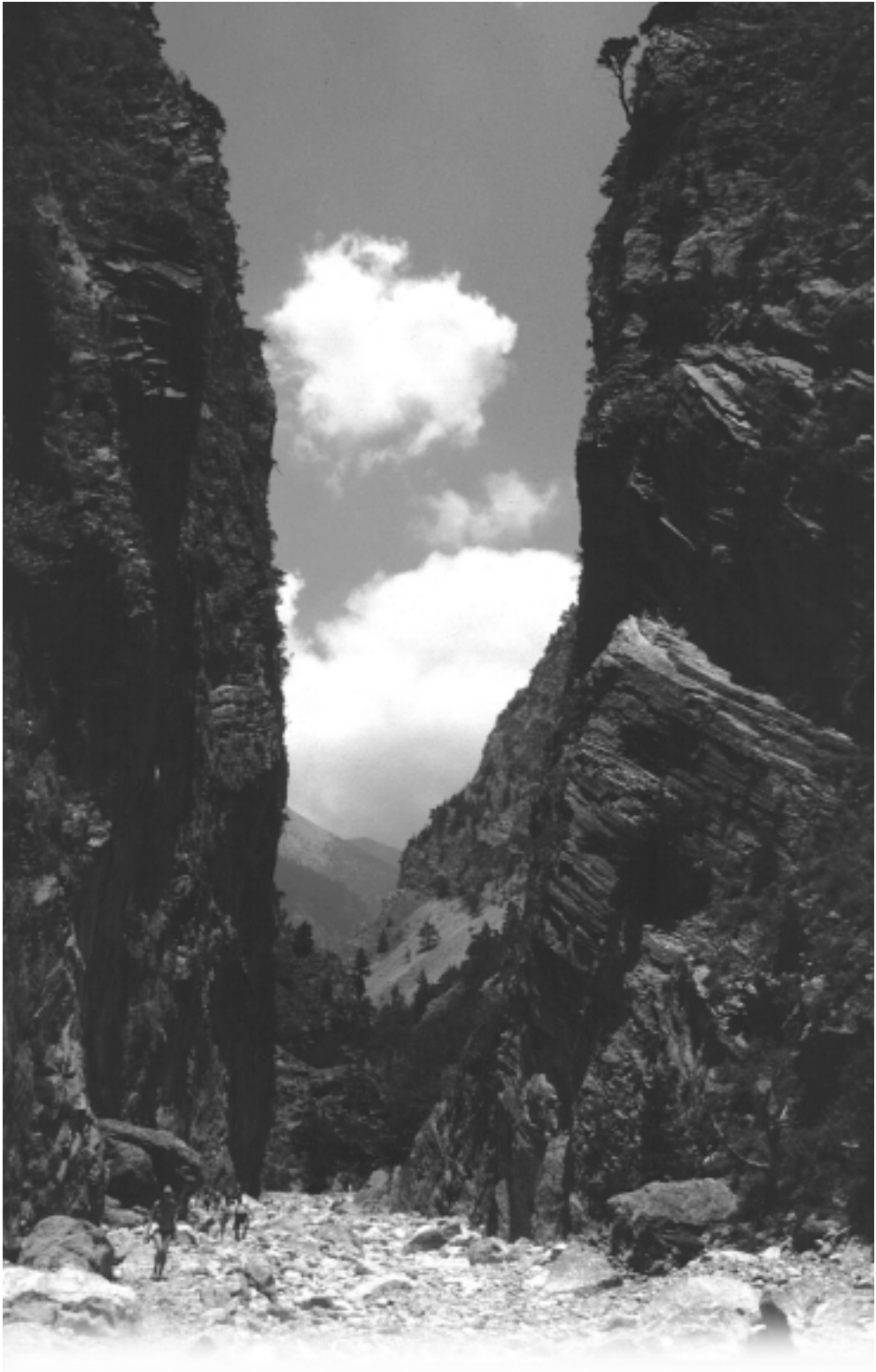
- With its 6 km long gorge, the Weltenburger Enge Nature Reserve in Germany is one of the most impressive landscapes on the Danube.
- The Krimml Falls Nature Site in Austria preserves a landscape dominated by the highest waterfalls in the Alps.

■ Significant wetlands

- The Danube Delta Biosphere Reserve (Romania) is one of the most extensive areas of freshwater wetland still in its natural state in Europe, and is of exceptional value in terms of its biology, landscape and culture.
- The Camargue National Reserve in the Rhone Delta of France, is an important refuge for birds and contains the largest European colony of flamingos.
- The Boschplaat Nature Reserve in The Netherlands protects one-third of the island of Terschelling, with its dunes and regularly flooded mud flats, which benefits the large bird populations. In April and May, the area is host to 10% of the global population of Brent geese (*Branta ruficollis*).
- The Doñana National Park in Spain is an exceptional natural site on the Mediterranean coast at the mouth of the Guadalquivir. Marshlands, dunes, beaches and woodlands make it an important area (albeit a threatened one) for Mediterranean fauna and flora.
- The Kuscenneti Manyas National Park (Turkey) is close to the Sea of Marmara, on the shore of the Kus Lake. It is an important refuge and breeding ground for waterbirds.

■ Protected islands, peninsulas and coastlines

- The Maremma Nature Park (Italy) protects the last stretch of almost unspoilt coastline in Tuscany, and contains a fine selection of Mediterranean vegetation.
- The Ekenas National Park (Finland) contains a unique example of Baltic and coastal waters.
- The Fair Isle National Scenic Area in the United Kingdom is an isolated part of the Shetland Islands and is of great ornithological interest.
- Purbeck Heritage Coast (United Kingdom) covers about 40 km of coastline, with high cliffs, dunes, islands, meadows, quarries and industrial and cultural sites.
- The Port-Cros National Park (France) protects both islands and the underwater environment, and was the first park of this type in the Mediterranean.
- The Salvage Islands (Portugal) are particularly important nesting sites for pelagian birds, and are of botanical interest.
- The Teide National Park on the island of Tenerife (Spain), is characterised by an enormous volcanic cirque and mountains which rise to 3,700 m, the highest in Spain. Its distinctive climate enables a particular range of vegetation to flourish, with a high proportion of endemic species.
- The White Mountains National Park (Greece) protects the magnificent Samaria Gorge on the island of Crete and has extremely rich vegetation.



The Samaria Gorge in the White Mountains National Park, Crete is both a Biosphere Reserve and a European Diploma Site. Photo: Peter Creed.

■ Central and southern European mountain landscapes

- In the magnificent landscapes of the Abruzzi National Park (Italy), large predators, such as the wolf and the bear, coexist with the residents of villages.
- The Maritime Alps Nature Park (Italy) and the Mercantour National Park (France) form the two sides of a single mountain region, which is considered to be the most important centre of endemic species in the Alps.
- The Vallée des Merveilles in the French Park contains the richest open-air collection of Bronze Age petroglyphs in Europe.
- At the western tip of the White Carpathians, the Bílé Karpaty Protected Landscape Area (Czech Republic), which adjoins its counterpart in Slovakia, comprises a mosaic of habitats of natural and human origin. The dominant element is grassland and there is a very wide variety of flora.
- The Swiss National Park is located in a magnificent setting where local species have been able to reestablish their natural cycles.

■ Heath and moorland

- The Lüneburg Heath Nature Reserve (Germany) protects one of the largest expanses of heath in Northern Europe.
- The Beinn Eighe National Nature Reserve (United Kingdom) includes high moorland, as well as the last examples of the post-glacial pine stands of the Caledonian forest.

■ Cultivated or inhabited landscapes

- One-third of the Germano-Luxembourg Nature Park (Germany/Luxembourg) is forest. It also includes grasslands with a large variety of species. It is a landscape that has undergone little change and has many natural and cultural features.
- The Wachau Protected Landscape (Austria) extends over a 33 km stretch of the Danube that cuts through the Bohemian uplands and is bordered by forests, meadows, orchards and vineyards. The great monastery of Melk attracts large number of visitors.

Reporting and information management: original features of the European Diploma

The review of European Diplomas

The European Diploma is awarded for a renewable five-year period. Upon the expiry of the period of validity, a site must be reappraised in order to renew the European Diploma. This requires an assessment of the state of the site and an investigation to ensure that the requirements specified when the Diploma was awarded have been satisfied. This renewable time period distinguishes the Diploma from other international seals of approval. The threat of withdrawal or non-renewal acts as a deterrent (by averting potential threats to the area's integrity) and as an incentive (by encouraging better management). Indeed this is what gives the Diploma its power and prestige: withdrawal has a serious effect on public opinion and political credibility.

To date, the Diploma has not been renewed for only one area, the Pyrenees National Park in France. This was because the French authorities had not taken into account the conditions and recommendations prescribed by the Council of Europe, particularly as regards the development of the Col du Somport as a ski resort.

The Diploma may be withdrawn at the end of the five-year period or at any point during this period, in the event of a serious threat to the site. As with the award or renewal of the Diploma, an expert appraisal is required.

Supervisory machinery

Although the European Diploma is not established by means of a convention, it nevertheless relies on a uniform supervisory system. This system operates by means of:

- annual reports which managers are required to submit and which facilitate assessments of environmental changes, any alterations and improvements undertaken, research and educational programmes conducted, and threats to the site; and
- appraisals carried out every five years when the Diploma is due to be renewed or in the event of a serious threat or significant damage to the area. For example, an extraordinary appraisal was conducted in 1999 in the Doñana National Park, one of the most important wetlands in Europe, following an accident in a pyrite mine in Aznalcollar. The visit aimed to study the effects on the area of the flow of sludge containing toxic waste and the measures taken to remedy the damage.

Advantages of the monitoring process

This ongoing monitoring process ensures that a high level of protection is maintained, management is improved, and any threats to an area are averted by rejecting projects (generally economic development projects) that are likely to jeopardise the area's integrity. Many serious threats have been averted in this way. For example:

- plans to construct a large reservoir in the Peak District National Park (United Kingdom), which would have disfigured the landscape;
- plans to expand the airport near the Wollmatinger Ried Nature Reserve (Germany), which would have caused severe disruption to aquatic life; and
- plans to use a glacier for summer skiing in the Vanoise National Park (France).

Sites in danger

Some managers of European Diploma sites face serious problems:

■ **The Kuscenneti Manyas National Park ('the bird paradise') in Turkey**

Due to the deterioration of the site in recent years, the decline of the bird populations that had made it so distinctive within Europe, and the fact that most of the measures recommended at successive renewals had not been implemented, the decision was taken in 2001 not to renew the European Diploma until certain conditions (concerning the site's integrity, the reestablishment of its ornithological value, and its water management and pollution control) had been met.

In 2003 an on-the-spot appraisal will be organised to assess the measures taken to implement the conditions and, if appropriate, to propose a review of the suspension. The Secretariat has already been informed by the Turkish authorities of progress made on the implementation of a management plan ("Ecological Risk Analysis and Management Planning for Lake Manyas"), which is considered to be the foundation stone upon which the future of the park rests.

■ **The Poloniny National Park in Slovakia**

The Park is in a very disturbing position as a result of the forest's change of status. An on-the-spot appraisal was organised in 2002 to study the possibility of extending the validity for a further five-year period. The expert has paid close attention to the new forest development plan which, with the exception of forests located in the national nature reserves, was geared to the economic exploitation of the forest. The Group responsible for the European Diploma will examine the expert's report in 2003.

Collaboration with other agreements

In the spirit of the Pan-European Biological and Landscape Diversity Strategy (approved in Sofia in 1995 at the Ministerial Conference "Environment for Europe"), the network of areas that have been awarded the European Diploma is collaborating with other networks of protected areas. By acting as core areas, the European Diploma network is making a significant contribution to the Pan-European Ecological Network.

Cooperative relationships have also been established with other protected area networks, including:

- the Council of Europe's network of biogenetic reserves, which was established in 1976 under Resolution (76) 7, and which is concerned with preserving representative examples of Europe's heritage;
- the activities of the World Conservation Union (IUCN) and its World Commission on Protected Areas;
- UNESCO's Man and the Biosphere Programme;
- UNESCO's World Heritage Sites;
- sites listed under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention);
- sites nominated as part of the Natura 2000 programme; and
- sites designated by the Contracting Parties to the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), as part of the Emerald Network.

Regular and constructive relationships have also been established with organisations such as the Europark Federation, to which most managers of European protected areas belong.

Finally, reference should be made to cooperation between and twinning of individual protected areas and, in general, to the encouragement given to cross-border activities. This is where the Council of Europe's European Diploma sites have an exceptional role to play. For example, there is close collaboration between the parks of the French Mercantour and Italian Maritime Alps, and there is cooperation between the parks of the French Vanoise and Polish Bieszczady.

Conclusion

Due to the quality of their heritage and the status and prestige they enjoy, areas holding the Diploma are unique sites for:

- conserving and managing biological and landscape diversity;
- promoting the sustainable use of resources, in particular for forestry, agriculture, tourism and the development of innovative approaches; and
- developing cooperation and partnership between all relevant parties, including the local population, elected representatives, landowners and farmers.

While retaining their primary objective of conserving biological and landscape diversity, most of the areas that have been awarded the European Diploma now have a broader and socially beneficial role, which requires the utilisation of their skills and experience.

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The Natura 2000 network



KAREN SIMPSON

This article outlines the objectives of the two principle Directives of the European Union relating to biodiversity, namely Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (Birds Directive) and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive). In particular it describes Natura 2000, the network of European protected areas which was established by the Habitats Directive and which also incorporates the Special Protection Areas designated under the Birds Directive.

DESPITE PROGRESS in the nature conservation policies of the individual Member States of the European Union (EU), the populations of many species are continuing to decline rapidly. It is not only rare species that are affected, with recent studies showing a sharp drop in the populations of common species. Indeed, half of the mammal species in Europe and a third of reptile, fish and bird species are endangered. Marine species that are affected by pollution and fishing are among the most threatened. As for plants, 3,000 species are endangered and 27 threatened with extinction.

The dramatic decline in the populations of many species is primarily due to the deterioration of the natural habitats necessary for their survival. In a few decades, the intensification of many human activities (e.g. agriculture, forestry, industry, energy, transport, tourism, etc.) has led to the loss or fragmentation of natural habitats, leaving little room for wildlife or confining it to a meagre portion of Community territory. River ecosystems and estuaries, which are of vital importance to many species, have been severely damaged throughout Europe. Other habitats of great biological value are now a fraction of their original size. For example, heathland, steppes and peat bogs have shrunk by 60–90%, according to the Member States.

To encourage better management of Europe's natural heritage, the Community has gradually been implementing a nature conservation policy on its territory. In 1973, the priorities were established in the first Action Programme for the Environment and, ten years later, specific financial instruments were created for nature conservation. Successive revisions of the Treaties have strengthened the legal basis of this policy, and in 1992 the Maastricht Treaty reaffirmed the obligation to incorporate environmental protection into all EU policies. The fifth Action Programme for the Environment specifies nature conservation and the preservation of biodiversity as major priorities. Community legislation relating to biodiversity comprises two Directives: Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (Birds Directive) and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive). These Directives are concerned with the protection of natural habitats, fauna and flora, and the creation of a European network of protected sites.

Birds Directive

The Birds Directive was the first step by the EU towards combating species decline, and is concerned with the long-term protection and management of all bird species living in a wild state on Community territory (including migratory species) and of their habitats. It imposes strict legal obligations on Member States of the EU to regulate trade in birds, to limit hunting to species able to sustain exploitation, and to prohibit certain methods of capture and killing. In addition, 181 species and sub-species that are endangered because of their low numbers and/or restricted range and migratory species benefit from specific conservation measures.

In particular it is the duty of Member States to preserve the natural habitats of these wild birds. Member States are required to classify the most suitable territories in number and size as Special Protection Areas (SPAs) for the conservation of the bird species listed in Annex I to the



Several sites on the UK's North Norfolk Coast are part of Natura 2000 and/or Ramsar sites, and much of the area constitutes a Biosphere Reserve. Photo: Jeremy Harrison.

Directive and regularly occurring migratory species not listed in Annex I, taking into account their protection requirements in the geographical areas of sea and land area to which this Directive applies.

Criteria for the establishment of SPAs

There are no specific criteria regarding the establishment of SPAs. However, Article 3 provides that Member States shall take the requisite measures to preserve, maintain or reestablish a sufficient diversity and area of habitats for all species of birds referred to in Article 1.

The preservation, maintenance and reestablishment of biotopes and habitats includes the following measures:

- creation of protected areas;
- upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones;
- reestablishment of protected biotopes; and the
- creation of biotopes.

As of 11 April 2002, 2,827 SPAs had been designated, covering a total of 229,480 km². However, there are still sites of ornithological interest to be conserved in most of the Member States.

Habitats Directive and the Natura 2000 network

The Habitats Directive was adopted in 1992 to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States of the European Union. Measures taken pursuant to this Directive are designed to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community Interest. These measures take account of economic, social and cultural requirements and regional and local characteristics.

The fundamental purpose of the Directive is to establish, by the year 2004 at the latest, a network of protected areas throughout the European Community. This network, commonly referred to as Natura 2000, is designed to maintain both the distribution and abundance of threatened species and habitats, both terrestrial and marine.

Each Member State is responsible for identifying and designating Special Areas of Conservation (SACs) sites which are important for the protection of natural habitat types (listed in Annex I of the Directive) and species (listed in Annex II). A SAC is defined as being a site of Community Importance that is designated by the Member State through a statutory, administrative

and/or contractual act, where the necessary conservation measures are applied for the maintenance or restoration of the natural habitats and/or the populations of the species for which the site was designated. These areas will benefit from statutory or contractual measures and, where appropriate, management plans that will ensure their long-term preservation by integrating human activities into a sustainable development strategy.

Together, the SACs designated by the Member States will make up the European network of protected sites of Natura 2000. All the SPAs created under the Birds Directive will also form part of this network. Each Member State can choose the mechanisms it uses to participate in this joint enterprise. The Commission is helping to set up the network and ensure that the common goals become reality.

Member States are under an obligation to contribute to Natura 2000 in proportion to the representation of the natural habitat types and species within their territories.

Habitats and species of Community Interest

A Site of Community Importance (SCI) for the purposes of the Habitats Directive is a site which, in the biogeographical region or regions to which it belongs, contributes significantly to the maintenance or restoration of the natural habitat types or species listed by the Directive. It may also contribute significantly to the coherence of Natura 2000 and/or contribute significantly to the maintenance of biological diversity within the biogeographic region concerned.

Habitats of Community Interest (listed in Annex I of the Directive) include those whose natural range is very small or has shrunk considerably on Community territory: peat bogs, heathland, dunes, coastal and freshwater habitats, etc. Also included are outstanding examples of typical characteristics of the European Union's six biogeographical regions (Alpine, Atlantic, Boreal, Continental, Macaronesian and Mediterranean). Approximately 200 types of habitat are classified by the Directive as natural habitats of Community Interest.

Species of Community Interest (listed in Annex II) include those which are endangered or becoming endangered, as well as certain endemic species. The Directive identifies nearly 200 animal species and over 500 plant species whose habitats require protection. To take account of differences between the Member States, certain species of Community Interest benefit from an exemption clause, in countries where their populations are not threatened.

The European Union has a particular responsibility for the conservation of natural habitats which are in danger of disappearing (e.g. posidonia beds, coastal lagoons, alluvial forests) or species threatened with extinction (e.g. monk seal *Monachus monachus*), identified in Annexes I and II respectively. Classified as priorities, they must benefit from urgent protection measures.

Thus the Natura 2000 network will include a representative sample of all habitats of Community Interest, especially priority habitats. It will thus ensure that all fauna and flora of Community Interest receive sufficient protection to guarantee their long-term viability. Since these Directives entered into force, the situation of some of the habitats and species concerned has changed. Scientists should therefore evaluate the conservation measures that have been taken to enable the European Commission and the Member States to adapt these Directives, following consultation with specialised committees (the Habitats and Ornis Committees).

Criteria and the listing of sites

The creation of the Natura 2000 network is the cornerstone of Community nature conservation policy and a major challenge for the fifteen Member States. Introducing effective conservation and management measures for the sites is a huge undertaking. It requires the participation of all national and local operators and strict selection of sites at Community level. To carry out this operation successfully, the European Commission and the Member States must proceed in three stages.

Stage 1: Preparation of national lists

The habitats and species covered by the Habitats Directive are recognised as being endangered or sensitive throughout Europe. However, knowledge of their distribution and conservation status varies widely from one Member State to another. The first step in the designation process is therefore a scientific assessment at national level of each habitat or species of Community Interest – Article 4(1). On this basis the important sites can be identified and proposed in the form of national lists presented to the European Commission. The sites are pre-selected on the basis of common criteria (included in Annex III), which include the following:

- degree of representativeness;
- ecological quality of the habitat;
- size and density of the population of the species concerned;
- degree of isolation of the species relative to its natural population range; and
- surface area occupied.

National lists were to be sent to the Commission within three years of the notification of the Habitats Directive (on 5 June 1992).

Stage 2: Identification of Sites of Community Importance

The second stage, with the support of the European Topic Centre on Nature Protection and Biodiversity of the European Environment Agency, is the identification of the SCIs which will form the Natura 2000 network. The selection is done by the European Commission in collaboration with the Member States. Each site proposed on a national list is evaluated on the basis of its relative value, its importance as a migratory route or transboundary site, its total surface area, the coexistence of the various types of habitat and species concerned and its unique character as a biogeographical region. The sites on national lists which contain priority habitats or species are selected as SCIs. In cases where a Member State overlooks an exceptional site, Article 5 provides that the European Commission can suggest adding it to the list, if it can be scientifically demonstrated that the site is essential for the preservation of habitats or species covered by the Habitats Directive. After discussion with the Member State concerned, the final unanimous decision rests with the EU's Council of Ministers. The list was to be established within six years of the notification of the Directive.

Designation of Special Areas of Conservation

According to Article 4(4) of the Directive, when a site is selected as a SCI, the Member States must designate it as a SAC within six years, i.e. at the latest in 2004. The sites which are most endangered or most important for conservation must be designated first. This six-year period should be used by the Member States to gradually introduce the measures required to conserve and manage the sites.

The special case of the Birds Directive

The Birds Directive also provides for the designation of sites to conserve the habitats of the most endangered bird species as well as for migratory bird species. Particular importance is given to the conservation of wetlands. However, all the sites are designated as SPAs in a single stage. They are then directly incorporated into the Natura 2000 network. The conservation aims are similar to those of the SACs.

Declassification of sites

Article 9 of the Habitat Directive provides that the Commission shall periodically review the contribution of SCIs, and SACs may be considered for declassification where this is warranted by natural developments.

Management obligations for the Natura 2000 sites

The Habitats Directive contributes to the general aim of sustainable development. Its objective is to encourage the preservation of biodiversity while taking account of scientific, economic, social, cultural and regional requirements. The purpose of the Natura 2000 network is therefore not to create nature sanctuaries where all human activity will be systematically excluded. The preservation of biodiversity in the designated sites may require human activities to be maintained or encouraged. For instance, some types of meadow have to be mown or grazed so that they do not become fallow, which would lead to the disappearance of certain endangered species. However, human activities must remain compatible with the conservation aims of the designated sites. When the management plans are being prepared, the Member States must assess each activity so as to prevent any deterioration of habitats or danger to the species for which the site was designated.

Once a site is designated, Article 6 of the Habitats Directive obliges the Member States to establish conservation measures. Management plans, specifically designed for the sites concerned or integrated into other development plans seem to be the best way of achieving this. Objectives can be identified, problems foreseen and solved with the owners or users of the site, implementing mechanisms defined and long-term conservation plans established. Each Member State is free to choose the method and type of measures to be taken. Whether statutory, administrative or contractual, they must prevent any deterioration of the site and if necessary restore them.

Article 6 provides that any new plan or project likely to have a significant effect on a designated Natura 2000 site must take account of the natural value which determined the integration of the site into the network. An appropriate assessment of the effects of the project on the site's conservation aims is therefore required. The national authorities are free to authorise an activity provided that the assessment shows that it will not have an adverse effect on the site. If it does, and there are no alternative solutions, the activity concerned may only be carried out on the site if it is declared to be of major public interest. The Member State must then take all the required compensatory measures and inform the Commission thereof. However, if a site hosts priority habitats or species, the only considerations which may be raised are those relating to human health, public safety or the environment. If there are other imperative reasons of overriding public interest, the Commission will be asked for its opinion. Article 6 also applies to new activities which are foreseen outside a Natura 2000 site but are likely to affect it.

Reporting requirements

Central to the success of Natura 2000 is the level of information on habitats and species of Community Interest which will be assembled during the coming years. As the sites classified under the Birds and Habitats Directives together form Natura 2000, a common reporting system has been developed, the Natura 2000 Standard Data Form. Experience in data collection in Europe has been built up through the CORINE biotopes project, which at present describes over 6,000 sites in the European Union, and the Standard Data Form draws upon this experience. The data-entry form takes all aspects of both Directives into account and therefore only one format is required.

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

This information required for each site will be the subject of separate files. A database is at present being established under the auspices of the ORNIS Committee to compile data on bird populations in each region of the Community. The database will:

- provide the necessary information to enable the Commission, in partnership with the Member States, to coordinate measures to create a coherent Natura 2000 network and to evaluate its effectiveness for the conservation of Annex I habitats and for the habitats of species listed in Annex II of the Habitats Directive, as well as the habitats of Annex I bird species and other migratory bird species covered by the Birds Directive;
- provide information which will assist the Commission in other decision-making capacities to ensure that the Natura 2000 network is fully considered in other policy areas and sectors of the Commission's activities, in particular regional, agricultural, energy, transport and tourism policies;
- assist the Commission and the relevant committees in choosing actions for funding under LIFE (an EU funding mechanism) and other financial instruments where data relevant to the conservation of sites, such as ownership and management practices, are likely to facilitate the decision-making process; and
- provide a useful forum for the exchange and sharing of information on habitats and species of Community Interest to the benefit of all Member States.

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

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

Sites in danger

As previously discussed, the EU has established priority natural habitats and species which must benefit from urgent protection measures.

Collaboration

Regarding nature conservation, the Habitats and Birds Directives are the EU's main contribution to the conservation of biodiversity, as defined by the 1992 Convention on Biological Diversity (CBD) or, earlier, by the 1979 Convention on European Wildlife and Natural Habitats (Bern Convention). They are also in line with the general principles of more specific conventions, such as the 1971 International Convention for the Conservation of Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), the 1979 Convention on the Conservation of Migratory Species (Bonn Convention), and conventions on specific regions, such as the 1974 Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), the 1976 Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention) and the 1991 Convention on the Protection of the Alps. The creation of Natura 2000 is thus part of a wider environmental strategy being implemented by the EU.

In accordance with the commitments made in 1992, the EU is developing a range of instruments designed to increase environmental responsibility in general in all relevant sectors of activity and at all levels of society: for example, the integration of the environment into the Common Agricultural Policy, industrial eco-labelling, impact studies, etc. The EU is also increasing its role in international activities and cooperation for sustainable development, especially with its neighbours in Central and Eastern Europe.

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The Ramsar Convention on Wetlands



DOUGLAS TAYLOR

This article describes the Convention on Wetlands, particularly concentrating on the designation of sites as wetlands of international importance – the so-called “Ramsar Sites”. Worldwide there are now well over a thousand Ramsar Sites, and the continual increase in the number of these sites reflects the international recognition of their importance. The benefits of the development of an international network of protected wetland areas are explored, and the significance of the global distribution and the level of representation of wetlands in certain geographical areas are examined.

THE 1971 CONVENTION on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

Under Article 2 of the Convention, a prospective Contracting Party is required to designate at least one wetland within its territory to enable their accession to the Convention. Collectively, Contracting Parties designate wetland sites “to develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the ecological and hydrological functions they perform.” Such designated sites are listed in the Ramsar List of Wetlands of International Importance (Ramsar List).

Criteria used to select sites: their purpose and goals

A wetland is identified as being of “international importance” if it meets at least one of the Criteria adopted by the IVth, VIth, and VIIth meetings of the Conference of the Parties to the Convention (COPs). In 1999, COP7 adopted eight Criteria as part of the Convention’s “Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance” (Strategic Framework).

The Criteria and their supporting guidelines assist Contracting Parties to identify potential sites that qualify as internationally important. The Criteria can be summarised as follows:

- **sites containing representative, rare or unique wetland types** – a wetland should be considered internationally important if it:
 - contains a representative, rare or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region (Criterion 1).
- **sites of international importance for conserving biological diversity** – a wetland should be considered internationally important if it:
 - supports vulnerable, endangered, or critically endangered species or threatened ecological communities (Criterion 2);
 - supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region (Criterion 3);
 - supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions (Criterion 4);
 - regularly supports 20,000 or more waterbirds (Criterion 5);
 - regularly supports 1% of the individuals in a population of one species or sub-species of waterbird (Criterion 6);
 - supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity (Criterion 7);

- is an important source of food for fishes, or is a spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend (Criterion 8).

More than one Criterion can apply to any one site, and some sites have been designated under all Criteria.

Criterion 1 enables unique features or combinations of landform, hydrology and biodiversity at the wetland ecosystem scale to be recognised. This Criterion has been the most commonly applied for designation (64% of sites). However, its application requires some care and contextual knowledge, since site selection should be in the context of the site's biogeographic region, and how representative, rare or unique it is relative to the total national and regional wetland resource. Criteria 2 to 6 inclusive recognise a site's importance as regards the (non-fish) biodiversity of species and populations that depend upon the site.

The 'fish' criteria in Criteria 7 and 8 were adopted at COP6 in 1996. Since then, 103 sites (28.5% of the total designated since COP6) have been designated under either or both Criteria 7 or 8, which is an indication of the major importance of wetlands in sustaining fish.

The listing of sites under the Ramsar Convention

Collectively, all designated sites are listed in the Ramsar List, which is established under Article 2(4) of the Convention and is maintained by the Ramsar Bureau.

Conservation and wise use

Article 3(1) of the Convention states that Contracting Parties "shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List, and as far as possible the wise use of wetlands in their territory".

The linkage of conservation with the wise use of wetlands is the key to implementing the Ramsar Convention. Thus it is recognised that wetlands are vital for people in providing essential goods and services and, in turn, wise use enables the conservation of wetlands and their dependent species. This philosophy is realised in practice through capacity building, and by means of training, raising public awareness and education. Many of the authorities and local communities that are responsible for Ramsar Sites have established public interpretation and awareness-raising centres in order to demonstrate the connection between conservation and wise use.

Lake Myvatn in Iceland is both a Ramsar Site and an Emerald Network Site. Photo: Eladio Fernández-Galliano.



Ramsar Sites have been described as ‘jewels in the wetlands crown’, but the conservation and wise use principles that guide their management also apply to all other wetlands in a Contracting Party’s territory. Sites form part of a network at national and sometimes regional level within the ‘ecosystem approach’ of the Convention on Biological Diversity (CBD), which recognises wetlands as integral to river basins, and as critical as a secure source of water and food for people. Also, many sites are identified as crucial ‘links in the chain’ for migratory species, notably on migratory waterbird flyways, some of which are the subject of additional governmental agreements, e.g. the Agreement on the Conservation of African/Eurasian Migratory Waterbirds (AEWA).

Important Bird Areas (IBAs) and related Endemic Bird Areas (as defined by BirdLife International), often coincide with Ramsar Sites. Indeed many wetland IBAs are recognised as sites qualifying for Ramsar designation, if they do not already have that status.

Representativeness, biogeography and ecosystem management

The designation of a site under Criterion 1 depends upon a Contracting Party clearly describing which biogeographical classification they are using. There are many different regionalisation schemes in use, and consequently Contracting Parties are now asked to specify which classification scheme they used when applying this Criterion. The aim is to achieve “a scientifically rigorous determination of regions as established using biological and physical parameters such as climate, soil type, vegetation cover, etc.” (as stated in the Strategic Framework).

The decision by a Contracting Party as to the representativeness of a site is clearly a key one, and should be considered in a regional and global context. Under-representation of certain wetland types in the Ramsar List has also been recognised by Contracting Parties, who have called for stronger emphasis on wetlands such as coral reefs, mangroves, sea-grass beds, wet grasslands and peatlands. Further guidance on identifying and designating such wetlands is being prepared by the Convention’s Scientific and Technical Review Panel (STRP).

However, using the Criteria to designate Ramsar Sites is just the start. Contracting Parties are expected to implement management planning processes on all sites so as to secure their sustainable use through management and monitoring. They are also encouraged to manage sites in the wider context of broad-scale land use management, (particularly at the river basin/catchment level), in recognition of the contribution well-managed wetlands make to water resource management through their role in water supply, water purification, flood control and groundwater recharge. Such site management is a powerful demonstration of the CBD’s ecosystem approach to sustainable use and, since the Ramsar Criteria cover habitat, species and genetic populations, sites cover many of the CBD’s indicative elements of biological diversity.

The growth of the Ramsar List

Globally there are 1,180 Ramsar Sites (as at August 2002) designated by the 133 Contracting Parties to the Convention. In total 103 million hectares are covered by designated sites, which is significant when compared to the estimated minimum total global wetland resources of 1,279 million hectares (GRoWI 1999). Although this represents a considerable success for the Convention, it should be noted that some sites include adjacent parts of non-wetland catchments, so the total area of wetland habitat designated will be less than the total area of the sites.

There has been an accelerating rate of increase in designated areas, which reflects the continuing recognition of the value of designating sites, and also the recent trend of designating large wetlands.

Universal membership of the Convention has not yet been achieved but is a real possibility in the near future, with Africa, central Asia and Oceania, and the Caribbean being regarded by the Ramsar Bureau as the key regions for further development.

Sites designated by each Contracting Party

On accession to the Convention, each Contracting Party is required to designate at least one site. Thirty-six Parties, 26 of whom joined the Convention over three years ago, have only designated this first site. Between them, these Contracting Parties (27% of the total number) have designated only about 8.8% of the total area recorded in the Ramsar List, and their designation of more sites, as expected under the Convention, would significantly enhance the List.

Global and regional distribution of Ramsar Sites

Under the Strategic Framework, Contracting Parties are expected to designate coherent and comprehensive networks of Ramsar Sites (see Figure 1) within their territory in order to achieve the international network envisioned in the Convention. However, few, if any, Parties have yet achieved the designation of such a network. The coverage and characteristics of wetlands designated for the List reflects the cumulative result of individual decisions by Parties to designate a wetland, rather than a globally coordinated, targeted approach.

By far the largest number of sites (over 60% of the total) are in Europe. However, there is a more equitable area distribution of designated sites between the different Ramsar Regions, although designations by Asian Parties (by both number and area designated) remain particularly small. Although numerous, many European sites are small and form only 19% of the total area designated. However, the percentage of Europe's landmass that has been designated (approximately 0.8%) is comparable to other Regions such as Africa (approximately 0.9%).

Representation and under-representation in the Ramsar List

There are four broad categories of under-representation. Taken together, these categories indicate that, although it is a major and significant global network for the delivery of sustainable use of biological diversity and sustaining human life, the Ramsar List has not yet achieved its objective of being a coherent and comprehensive national and international network. The four categories of under-representation are as follows:

1. **global coverage** – the global distribution of designated wetlands in relation to the global wetland resource;
2. **regional or national under-representation**, (see Figure 2) according to appropriate biogeographic classifications, and notably in the territories of those Parties who have designated only one or very few sites;

Figure 1. Global distribution of Ramsar Sites. Contracting Parties are shown in grey.

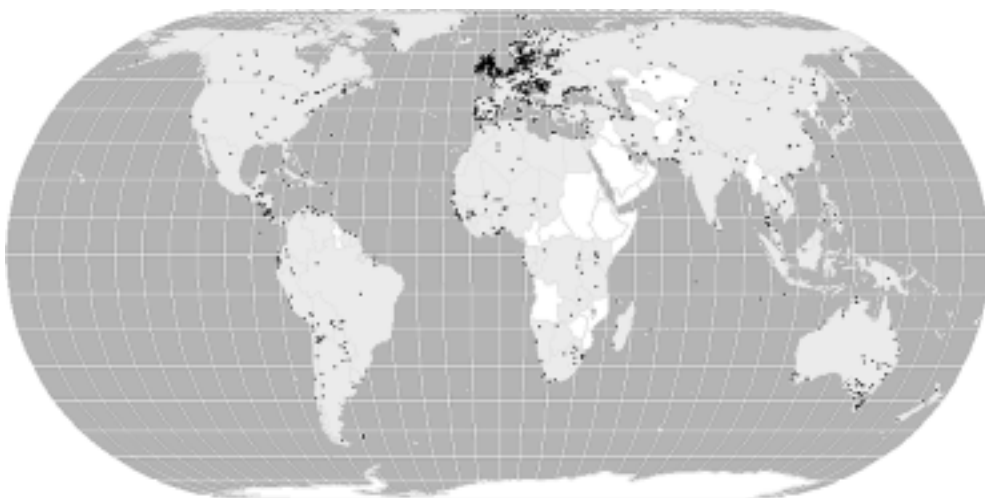


Figure 2. Regional distribution of Ramsar Sites (number of sites).

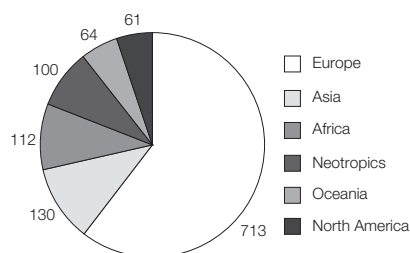
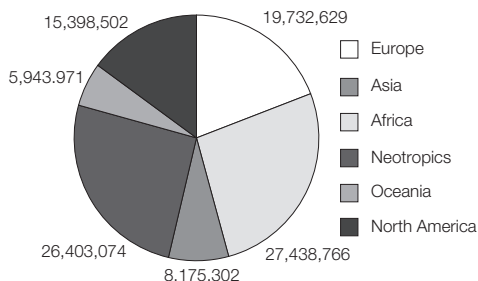


Figure 3. Regional distribution of designated Site area (hectares). Global Ramsar Site area = 103,092,244 ha. (Area data for five sites unavailable).



3. numbers of sites designated for certain of the wetland types (see Figure 3) of the Ramsar Classification of Wetland Type; and the
4. numbers of sites designated for their wetland-dependant biodiversity (under Criteria 2–8), for example, gaps in the site networks for migratory waterbirds and globally threatened species.

No numerical targets have been defined to objectively correct these forms of under-representation, and full assessment of under-representation is hampered by the lack of knowledge of the size and characteristics of the global wetland resource (as recognised in COP7 Resolution VII.20) and most wetland types. However, by way of example, a recent analysis for Europe by BirdLife International indicated that only one-quarter of IBAs which potentially qualify as Ramsar Sites (under Criteria 2, 4, 5 and/or 6) have been partially or wholly designated.

The Ramsar Sites Directory holds information about the numbers of sites designated for each wetland type. Contracting Parties have recognised that a number of wetland types are under-represented in the Ramsar List, indicating that there should be priority for designating such wetlands, particularly coral reefs, mangroves, sea-grass beds and peatlands, and intertidal wetlands, especially tidal flats.

Certain other wetland types, including geothermal wetlands, Alpine wetlands, and tundra wetlands, also occur as the primary wetland type in only small numbers of sites. It should be noted that a small number of designated sites is not an absolute indication of under-representation since the global distribution of each wetland type is naturally uneven and some types of wetland (for example, karst and caves) are geologically restricted.

Targets for improving representation can be considered if the global or regional distribution of an under-represented type is well known. For example, the relatively poor coverage of designated sites for coral reefs, particularly for Africa and Oceania, could be greatly improved using sources of knowledge of coral reef distribution.

The value of Ramsar site designation

Global and national purpose

Contracting Parties designate at least one qualifying Ramsar Site to activate their accession to the Convention. There is no upper limit to the number of sites or the area that may be designated, but according to the Convention “wetlands should be selected for the List on account of their international significance in terms of ecology, botany, zoology, limnology or hydrology” – Article 2(1).

A site qualifies if it meets one or more of the eight Criteria. However, within the territory of any one Contracting Party, which Criteria are applied most strongly depends upon the eco-regional characteristics of the territory, and thus the representativeness of the sites designated will reflect a combination of national and global priorities.

At the global level, the main purpose and value of Ramsar Sites is to form a global network representing all wetland types, and the aim of the Ramsar List is “to develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the ecological and hydrological functions they perform”.

The recognition of wetland values and functions is a key feature of the Ramsar Convention at the national and local levels, and ordinary people from local communities are invited to participate in the conservation and wise use of their wetlands. The Ramsar Sites network is important in raising this awareness. Extensive guidance to promote wise use is published by the Bureau of the Convention, which highlights the value of designation and provides practical tools to implement wise use at national or local level.

Future development

The Ramsar Sites listed to date form a powerful and significant network of sites through which Contracting Parties can demonstrate and deliver sustainable use. This is of benefit to the many peoples who depend on the goods and services provided by wetland ecosystems, and for the conservation of global biological diversity.

In the coming years, an essential but major challenge is the full recognition of the role of wetland ecosystems as providers and users of the world’s increasingly scarce water supplies, and their contribution to poverty eradication through food and water security. The designation and management of Ramsar Sites can play a powerful role in securing this understanding through the full recognition of the vital contribution these areas make to maintaining the health of the world’s environment. Reconciling the conservation and wise use of wetland ecosystems with water management and demands for its use will be essential to the future management of existing sites and the designation and management of additional sites.

However, there is a long way to go to achieve this recognition by the identification and designation of all such wetlands as Ramsar Sites to form the coherent national and international networks of designated wetlands envisaged. The selection of a site for designation is entirely a matter for each of the Contracting Parties, which have been guided to designate a full national network of sites by COP decisions. While 27% of Contracting Parties have so far only designated a first site, others have designated over 100.

The under-representation of wetland types is a complex issue, because knowledge remains patchy, and targets for major improvements in representation need to be based on knowledge of the global or regional extent of the available wetland resource. The results of applying the Ramsar Site selection Criterion 1 for selection also need to be better understood. In addition, under-representation is not only a question of ensuring that all Ramsar Wetland Types (using the Ramsar classification typology) are appropriately represented: it is crucially important also to ensure that the suite of wetlands sufficiently supports dependant biodiversity, including, for example, vulnerable, endangered and critically endangered species and threatened ecological communities, and networks for migratory waterbirds and fish. This aspect is relatively poorly researched.

COP7 urged Contracting Parties to undertake comprehensive national wetland inventories as the basis for site selection and designation, but also recognised that further site designations should not await the completion of such inventories, since many wetlands are already known to be internationally important. Further tools and guidance on wetland inventories, assessment, monitoring and management are being prepared for use by Parties to support their efforts. The results of national wetland inventories, used in conjunction with the information and analyses available from existing sites in the Ramsar Sites Database and Sites Directory, will provide assistance to Parties in assessing the coverage and gaps in their existing national network in the context of their overall wetland resource.

Reporting and information management

In accordance with Resolution 5.3 (as reaffirmed by several subsequent resolutions), the Information Sheet on Ramsar Wetlands (RIS), with its accompanying map delimiting the site, is compiled and submitted to the Ramsar Bureau by a Party when it designates a site. The master RIS for each Site is held by the Ramsar Bureau, and a copy by Wetlands International. In the early days of the Convention there were no standard categories of information to be supplied by a Party upon the designation of a site. Standardised categories were approved by COP4 in 1990 and since then have been in use for all designations.

The Ramsar Bureau maintains the official Ramsar List, which provides information for each country on all sites, including their names, dates of designation, province, area and geographical coordinates. The Bureau also maintains a fuller Annotated Ramsar List, consisting of a one-paragraph description of each site, derived from the information provided by Parties in their RIS. Wetlands International develops and maintains the Ramsar Sites Database and prepares the Ramsar Sites Directory, under contract to the Ramsar Bureau.

Ramsar Sites Database

The Ramsar Sites Database is the suite of information resources and tools which provide an information 'system' about Ramsar Sites. Recommendation 4.7 of the Conference of Contracting Parties established that the "data sheet developed for the description of Ramsar Sites ... be used by Contracting Parties and the Bureau in presenting information for the Ramsar database". Data from the official RIS is supplied by Parties is coded and entered into the database, to be used for analyses of the status and characteristics of the Ramsar Site network.

Ramsar Sites Directory

The Directory is a unique internet-based technical product containing concisely written descriptions of each Ramsar Site in a standard format, taken from the RIS.

Since the style and level of detail of information provided by Parties when they have designated a site varies considerably (particularly between sites designated in the early years of the Convention and more recent sites designated using the RIS), the purpose of the Ramsar Sites Directory is to extract and present summary information about each Site in a standardised and accessible form, which in turn enables more consistent comparisons between sites.

Directory entries include a summary of why the site is important and the full scientific names of key species recorded. Every Directory entry is now available as a web page and also in two widely-used downloadable formats.

Sites in danger

The Montreux Record is "a record of Ramsar Sites where changes in ecological character have occurred, are occurring or are likely to occur". It is maintained by the Bureau in consultation with the Contracting Party concerned.

This is the key mechanism for recording and managing sites that are in danger. Contracting Parties are required to monitor the condition of sites, including all actual or likely changes in ecological character. They are also required to notify the Bureau of problems and, where appropriate, seek a Ramsar Advisory Mission to assist in finding a solution. When remedial action has been implemented, the site may be removed from the Montreux Record.

Presently 29 Contracting Parties have a total of 59 sites on the Record. Since the implementation of the Record at COP4 in 1990, 14 Contracting Parties have removed 19 sites from the Record.

Collaboration

The Ramsar Convention is participating in a wide range of collaborative activities. These activities cover three main categories:

■ Global and regional conventions

- CBD;
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention);
- United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa;
- Convention Concerning the Protection of World Cultural and Natural Heritage (UNESCO, World Heritage Convention);
- UNESCO Man and the Biosphere (MAB) Programme;
- United Nations Conference on Trade and Development (UNCTAD);
- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention);
- The Coordinating Unit of the Mediterranean Action Plan of the Secretariat of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention);
- South Pacific Regional Environment Programme (SPREP);
- International Commission for the Protection of the Danube River.

■ International organisations

- BirdLife International (partner organisation);
- IUCN – The World Conservation Union (partner organisation);
- Wetlands International (partner organisation);
- World Wide Fund for Nature;
- The Society of Wetland Scientists;
- The Nature Conservancy;
- Eurosite;
- Centre for International Earth Science Information Network (CIESIN), Columbia University (USA), and Wetlands International;
- The Global Biodiversity Forum, IUCN – The World Conservation Union;
- International Association for Impact Assessment;
- Ducks Unlimited (USA, Canada, and Mexico).

■ Private Sector

- The Danone Group for the Ramsar Evian Project/Projet d'Evian.

Many of the Memoranda of Understanding (MoUs) or Memoranda of Cooperation (MoCs) are operationalised through workplans or similar instruments.

The primary collaborative activities are enabled under successive Joint Work Plans between the Ramsar Convention and CBD, which collaborate extensively on the harmonisation of technical instruments and cross-delegation of tasks that might otherwise overlap.

Some examples of practical collaboration relate to the provision of data. Data from the Ramsar Sites Database is provided to CIESIN under a three-way Memorandum of Understanding between the Ramsar Bureau, Wetlands International and CIESIN. Acting as a 'gateway' to the Ramsar Database, the purpose is to allow data and map comparisons of Ramsar Sites with other spatial datasets, such as rivers, watersheds and population centres.

Information on the world's wetland sites that are both Biosphere Reserves under UNESCO's Man and the Biosphere Programme (MAB) and also Wetlands of International Importance under the Ramsar Convention, is maintained on a joint website.

Douglas Taylor is an International Science Coordinator for Wetlands International. Ramsar website: www.ramsar.org

The World Heritage List – the best of all worlds?



MARK SPALDING

The Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) was adopted in Paris in 1972. The aim of the convention is to engage all nations in protecting those sites that are the most important examples of the world's natural and cultural diversity. This article describes the procedures for recognition of sites as being of "World Heritage" value, focusing on those properties that form part of the natural or mixed (natural and cultural) heritage.

THE CONVENTION Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) provides for the protection of areas recognised as having "outstanding universal value". The underlying precept is that certain areas with outstanding natural and cultural values should be regarded as being part of the "common heritage" of all people now and in the future, and that we all have rights with respect to their conservation. The Convention provides for the designation of such places as World Heritage Sites, and its principal aim is to foster international cooperation to safeguard these areas. Sites must be nominated by the state in which they occur, but their acceptance for inclusion on the World Heritage List is contingent on a detailed review procedure. Important sites may not be given World Heritage status if they lack outstanding universal value. Currently there are only 144 sites with natural values and a further 23 sites with mixed natural and cultural values. This makes it one of the smaller conventions in terms of numbers of designated sites, but in many ways this has always been the point, with World Heritage status being regarded by many as 'the Nobel Prize for Nature'. The Convention is also the only one of its kind to deal with sites of both natural and cultural value. In this article natural heritage sites are the key focus.

Criteria and definitions for sites

The primary objectives of the World Heritage Convention are to identify and conserve the world's cultural and natural heritage by drawing up a list of sites whose outstanding values should be preserved for all humanity, and to ensure their protection through closer cooperation among nations.

State Parties to the Convention are required to identify and delineate areas of cultural and natural heritage within their territory. To this end, "natural heritage" is defined in Article 2 as:

- "natural features consisting of physical and biological formations ... which are of outstanding universal value from the aesthetic or scientific point of view";
- geological and physiographical formations ... which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation"; and/or,
- "natural sites or ... natural areas of outstanding universal value from the point of view of science, conservation or natural beauty".

The text of the Convention requires that States endeavour to develop general policies to promote this heritage. This includes incorporating it into planning and management regimes, undertaking research and counteracting threats, and enshrining these efforts within legal, administrative and financial frameworks.

Member States submit "an inventory of property forming part of the cultural and natural heritage", including "documentation about the location of the property... and its significance."

The World Heritage Committee is then empowered to “establish ... a ‘World Heritage List’ ... of properties forming part of the cultural heritage and natural heritage ... which it considers as having outstanding universal value.”

To be included in the Natural World Heritage List, sites must meet one or more of the criteria laid down in Paragraph 44(a) of the Operational Guidelines for the Implementation of the World Heritage Convention:

- “i) be outstanding examples representing major stages of the earth’s history, including the record of life, significant ongoing geological processes in the development of landforms, or significant geomorphic or physiographic features; or
- ii) be outstanding examples representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals; or
- iii) contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance; or
- iv) contain the most important and significant natural habitats for in situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation”.

They must also fulfil the following conditions of integrity (paragraph 44 (b)):

- “i) The sites described in 44(a)(i) should contain all or most of the key interrelated and interdependent elements in their natural relationships ...
- ii) The sites described in 44(a)(ii) should have sufficient size and contain the necessary elements to demonstrate the key aspects of processes that are essential for the long-term conservation of the ecosystems and the biological diversity they contain...
- iii) The sites described in 44(a)(iii) should be of outstanding aesthetic value and include areas that are essential for maintaining the beauty of the site ...

Banff National Park is one of a complex of national and provincial parks that comprise the Canadian Rockies World Heritage Site. Photo: Jeremy Harrison.



- iv) The sites described in 44(a)(iv) should contain habitats for maintaining the most diverse fauna and flora characteristic of the biographic province and ecosystems under consideration ...
- v) The sites ... should have a management plan. When a site does not have a management plan at the time when it is nominated ... the State Party concerned should indicate when such a plan will become available ...
- vi) A site ... should have adequate long-term legislative, regulatory, institutional or traditional protection. The boundaries of that site should reflect the spatial requirements of habitats, species, processes or phenomena ... The boundaries should include sufficient areas immediately adjacent to the area of outstanding universal value in order to protect the site's heritage values from direct effects of human encroachment and impacts of resource use outside of the nominated area ...
- vii) Sites should be the most important sites for the conservation of biological diversity..."

In principle, a site could be inscribed on the World Heritage List as long as it satisfies one of the four criteria and the relevant conditions of integrity. However, most inscribed sites have met two or more criteria.

Some 23 "mixed" sites have been designated which include both cultural and natural properties, whilst in 1992 the World Heritage Committee adopted guidelines to include "cultural landscapes" within its remit. These are areas which incorporate the "combined works of nature" in a more holistic sense. They are illustrative of the evolution of human society and settlement over time, and are examples of sustainable land-use relating to the specific constraints and natural environmental conditions where they are found. In many cases the spiritual elements of particular cultures may further be reflected in these landscapes. Such landscapes are also important in supporting natural and semi-natural biodiversity, including managed ecosystems and rare breeds of agricultural species or wild progenitors. For some of these sites it is only the cultural elements which have been listed as "outstanding", although a number of others also have important natural elements, such as Hortobágy National Park in Hungary, the Ouadi Qadisha (the Holy Valley) and the Forest of the Cedars of God (Horsh Arz el-Rab) in the Lebanon, and the Rice Terraces of the Philippine Cordilleras.

Listing of sites

There are several players involved in the nomination of sites (see Figure 1):

- The **General Assembly of States Parties** meets every two years during the UNESCO General Conference to elect the World Heritage Committee and to decide on major policy issues.
- The **World Heritage Committee** consists of representatives from 21 of the States Parties to the Convention who meet once a year. The Committee must include "an equitable representation of the different regions and cultures of the world". This Committee makes the decisions relating to the implementation of the Convention, including the allocation of funds. It is also responsible for establishing, keeping up to date and publishing the World Heritage List and the List of World Heritage Sites in Danger.
- The **World Heritage Bureau** was established by the World Heritage Committee to undertake various functions, including the preparation of recommendations concerning the inclusion of properties nominated by States Parties. The Bureau consists of seven members and meets twice a year.
- The **World Heritage Centre** acts as the Secretariat to the Convention, preparing documentation for meetings of the Committee and implementing the decisions of the meetings.
- **Advisors** – Three organisations are recognised as having a central advisory role: the International Centre for the Study of the Preservation and Restoration of Cultural Property

(ICCROM), the International Council of Monuments and Sites (ICOMOS), and the World Conservation Union (IUCN). Each may attend World Heritage Committee meetings as observers, whilst IUCN is the key organisation looking at natural site nominations.

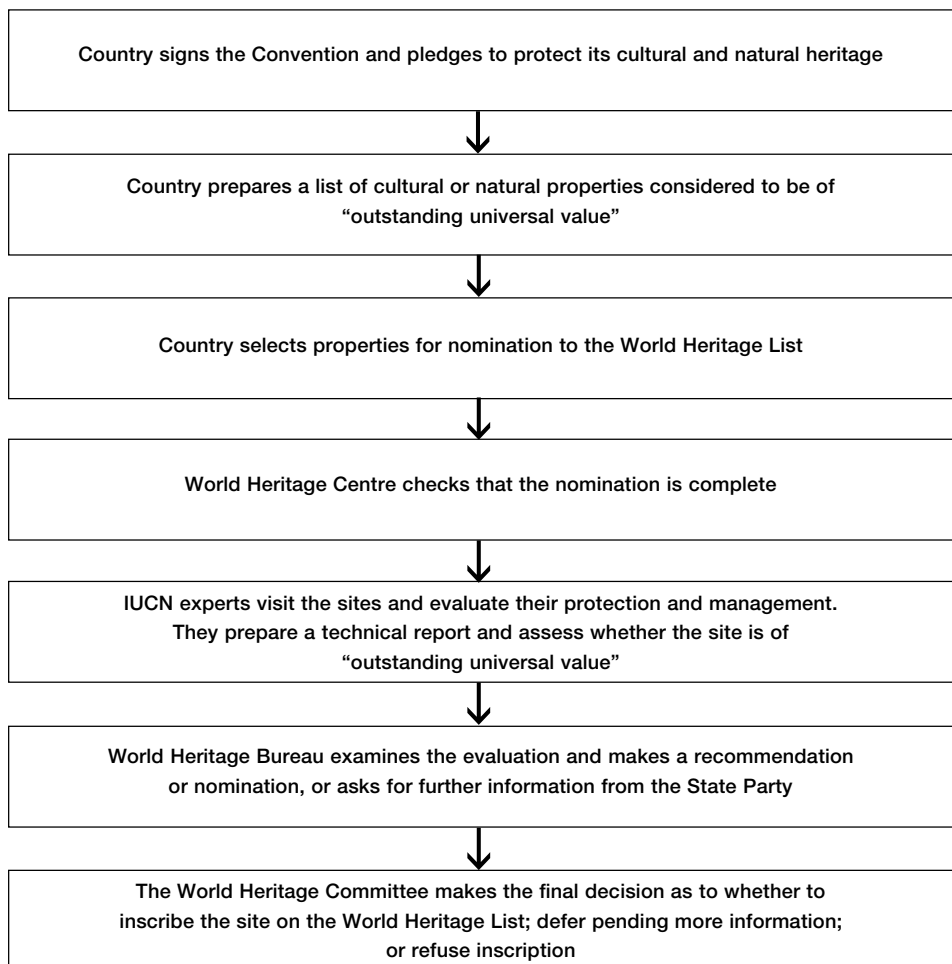
Historically most designated sites have been single contiguous areas. However, there have been moves to encourage the designation of cluster sites, modelled on the first nomination of this kind, the Wet Tropics of Queensland established in 1988. Such cluster sites may be geographically separated but cover a common theme or ecosystem type. Support has also been given to the designation of serial nominations where further sites are added to an existing site over time.

Although the great majority of sites are single country nominations there are seven natural and one mixed site which are transboundary sites, nominated and managed by two State Parties.

The World Heritage Network

To date 175 States have ratified the World Heritage Convention. The 167 natural and mixed sites of the World Heritage Convention are distributed amongst 76 countries, on all inhabited continents. Most of these sites are considered as “best examples” of particular natural features,

Figure 1. *The process by which sites are nominated.*



with an implied level of “uniqueness”. At the same time, it has been possible to try to categorise what has been protected using information on biogeographic provinces or habitats. In 1996 IUCN’s Natural Heritage Programme initiated a series of global overviews on various subjects that would eventually constitute a global strategy for natural World Heritage sites. To date, studies have focused on particular ecosystems (such as forests, geological features, wetland and marine sites), while perhaps the most useful study, providing a broad overview, was prepared in 2000 and looked at a number of separate biodiversity values.

A summary of the distribution of the World Heritage Network and the perceived gaps in its coverage is provided in Table 1. The findings shown here suggest that the World Heritage Network already provides protection for a broad range of biodiversity values. However it is important to realise that these findings are the results of a GIS analysis rather than direct observations. Many of the “regions” specified in this table cover very large areas and a broad range of ecosystems and species. The World Heritage sites that occur in these regions will, in most cases, only protect a fraction of these biodiversity values. It should further be noted that, with the exception of the WWF Eco-regions and Conservation International (CI) hotspots, these are terrestrial regions only. It has been widely reported that marine areas are poorly represented in the World Heritage Network.

Other ecosystem specific studies prepared by IUCN have shown that:

- mountains are represented in 55 natural and mixed sites (2002 data);
- wetlands and marine areas form a major feature in 39 sites and a secondary feature in a further 38 sites (1997);
- forests are represented in 61 sites (1997);
- tropical forests are represented in 41 sites (2002);
- mangrove forests are found in 18 sites (1999); and that
- coral reefs are found in 14 sites (1999).

These studies all make recommendations for new sites in order to provide a more representative network.

Value of site listing

Recognition of sites on the World Heritage List is considered by many to be a considerable accolade, engendering a sense of pride, raising the profile of sites and thus in many ways enabling the efforts of national governments and management agencies.

With recognition, many sites have been able to increase tourism revenues. Equally important, the listing of a site provides some form of international scrutiny on the protection of sites. While the majority of natural sites are already listed within national protected areas legislation, listing provides an additional layer of protection making it more difficult to overturn or ignore protection regimes.

In a number of cases (see paragraph *Sites in danger*) World Heritage Sites have been listed as being “in danger”, leading to international action. The threat of removal from the World Heritage List has, in some cases, led to dramatic efforts to prevent damage to sites.

With certain sites, and particularly cluster nominations, World Heritage listing can be seen to lend a unifying element to disjunct sites.

Importantly, the World Heritage Network is precisely that, a ‘network’ not only of sites, but of agencies involved in the management and protection of those sites. There is considerable flow of ideas, information and expertise between sites.

Linked to the 1972 World Heritage Convention, a World Heritage Fund was established. This receives the majority of its income from compulsory contributions from States Parties (1% of their UNESCO dues) and from voluntary contributions. The total amount received each year is just under US\$3.5 million.

Table 1. Measures of biodiversity representation within the World Heritage Network.

Figures are largely derived from Smith and Jabowska and are based on a list of 141 natural and mixed sites. It should be noted that the totals both of World Heritage sites, and of regions classified under certain regimes (notably WWF and CI) may have altered since this publication.

	Proportion represented	Number of regions represented	Total number of regions	Number of Sites
Udvardy Biogeographical Provinces	51%	96	190	n/a
WWF Global 200 ecoregions:	40%	94	233	194
– terrestrial ecoregions	49%	67	136	104
– marine ecoregions	39%	24	61	35
– freshwater ecoregions	8%	3	36	55
Centre of Plant Diversity	<30%		234	74
Conservation International biodiversity hotspots (terrestrial only)	80%	20	25	57
Vavilov Centre of Plant Genetic Diversity	67%	8	12	40
Endemic Bird Areas	30%	65	218	71

From this fund the World Heritage Committee is able to allocate support, particularly to threatened sites, enabling studies, providing experts or equipment, and/or giving emergency assistance in reaction to sudden events. The fund is also used to help in the identification of sites and to provide help in the preparation of inventories of potential World Heritage Sites for certain countries. Training is another key element, for example providing funds to support courses in wetland management, forestry, or environmental education. Funding is also used in support of periodic reporting to the World Heritage Committee and in education and awareness-raising.

Reporting and information management

Considerable information is generated as part of the process of reporting to the World Heritage Committee, both in the drawing up of tentative lists of sites, but more importantly in the nomination and assessment process. The format and content of submissions is laid out in the Operational Guidelines to the Convention.

In addition, Article 29 of the Convention requires States Parties to submit periodic reports, the purpose of which is to “give information on the legislative and administrative provisions which they have adopted for the application of this Convention, and on the state of conservation of specific World Heritage properties”. The reports also provide details of the experience acquired by a State Party in the field. They are submitted to the Committee (via the World Heritage Centre), which itself submits a report on its activities at the biennial ordinary sessions of the General Conference of UNESCO. The 22nd session of the World Heritage Committee, held in December 1998, decided on the periodicity of reporting and the format. Each State Party is required to submit a report every six years in accordance with a pre-established schedule. The Committee will examine reports on a region-by-region basis, starting with the Arab States in 2000.

Provision is also made for “Reactive Monitoring”, where the World Heritage Centre and others including the advisory bodies report on the state of specific sites that are under threat. State Parties must report on these sites and on any activities which may affect the conservation status.

Large quantities of information about the World Heritage sites are made available through the World Heritage Information Network (WHIN), which is a clearing-house for

World Heritage information. WHIN is a partnership between the UNESCO World Heritage Centre, the Advisory Bodies (ICOMOS, IUCN, and ICCROM), State Parties and those managing World Heritage sites. If they maintain a website, these organisations are identified as WHIN Partners and are actively encouraged to participate in delivering improved information over the internet. The WHIN search engine searches information concerning World Heritage sites on the websites of all WHIN Partners. Additionally WHIN searches a number of other websites with significant information on World Heritage sites.

Sites in danger

The World Heritage Convention has a relatively powerful procedure for dealing with sites that are threatened. As with all protected areas, threats may arise from both human and natural causes, and may be intrinsic problems or may arise from threats lying outside site boundaries.

Article 11(4) of the World Heritage Convention establishes a List of World Heritage Sites in Danger which is to be maintained by the Committee. It comprises “a list of the property ... for the conservation of which major operations are necessary and for which assistance has been requested”. A site may be added to the List of World Heritage Sites in Danger when “serious and specific dangers” threaten the characteristics for which the site was originally inscribed. Inscription on the List of World Heritage Sites in Danger requires the Committee, in consultation with the relevant State Party, to develop a programme of corrective measures and to monitor progress. The aim is to restore those characteristics for which it was originally inscribed and remove it from the List of Sites in Danger. However, if the site loses these characteristics, the Committee may delete the property from both lists. Complete removal of a site from the World Heritage List is required “When a property inscribed ... has seriously deteriorated, or when the necessary corrective measures have not been taken within the time proposed ...”

Such removal is only to be done where all other options have been exhausted, and when there is no possibility that the site can be saved. It is done following consultation with both the State

An iguana in the Galapagos Islands World Heritage Site, Ecuador. Photo: Melissa Emmenegger.



Party and the competent advisory organisation. The final decision is taken by the World Heritage Bureau.

At the present time some 18 natural sites are listed as Sites in Danger, including, among others, Yellowstone National Park in the USA (threatened by mining, pollution, species introductions, culling of bison herds and road-building), and several sites in central Africa (threatened by war, civil unrest, and refugee encroachment).

Collaboration

Collaboration is a critical part of the function of international conventions. The various mechanisms of the World Heritage Convention and especially the World Heritage Centre encourage the free flow of information between State Parties, managers and a broader public.

The World Heritage Centre also meets regularly with the secretariats of other international conventions to exchange information and to coordinate action. These include the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention to Combat Desertification (CCD), and the Convention on the Conservation of Migratory Species of Wild Animals (CMS). A joint website has been established.

Conclusion

The World Heritage Convention does not aim to protect all of the world's natural heritage, but does aim to provide protection for the "Outstanding". As the World Heritage List grows, there is a need to develop the List in a systematic manner, ensuring that the best of the natural world is covered in a comprehensive manner, including less high profile elements of biodiversity, ecosystems and geological structures. State Parties need to be encouraged in this approach, and IUCN remains committed to this task.

Acknowledgements

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Résumés

Accords et programmes internationaux sur les zones protégées

JEREMY HARRISON

Il existe une gamme de conventions et de programmes en place qui désignent et reconnaissent des sites en leur donnant un statut international. Ce numéro de *Parks* en décrit plusieurs, mais en aucun cas il ne les décrit tous. Cet article examine en termes généraux les différences qui existent entre ces approches, et recommande des mesures qui peuvent être prises pour assurer une bonne complémentarité des différentes approches, et pour assurer que leur application s'effectue dans un esprit de coordination et de synergie, plutôt que dans la duplication et une possible confusion.

La Convention de Barcelone et son impact sur la diversité Biologique

HUMBERTO DA CRUZ

Le Plan d'action méditerranéen (MAP) a été mis en place en 1975 pour protéger la mer Méditerranée contre la pollution. Après que le MAP eut été mis en oeuvre, il a été observé que la pollution provenait en grande partie de la terre, à la suite de quoi le plan fut étendu aux écosystèmes marins et terrestres. Le plan a ensuite évolué vers une approche plus intégrée de la conservation dans la région, et des moyens légaux ont été développés pour soutenir cette approche. Cette approche intégrée comprend la création d'un réseau d'aires spécialement protégées d'importance méditerranéenne qui incorpore dans la Méditerranée des sites côtiers et marins qui satisfont à certains critères, dont la possession d'un statut légal approprié et d'objectifs de gestion et de conservation.

Réserves de biosphère : un réseau pour la conservation et le développement durable

PETER BRIDGEWATER

Les réserves de biosphère existent depuis plus de trente ans, et forment un réseau mondial de plus de 400 sites répartis dans plus de 100 pays. Le réseau a pour but de préserver la biodiversité tout en répondant aux exigences d'une meilleure compréhension et d'une meilleure appréciation des relations entre l'homme et la biodiversité. Le réseau a également pour objectif de couvrir tous les écosystèmes terrestres et marins, depuis la haute montagne jusqu'aux zones à haute densité de population. Ce réseau accorde une place importante à la recherche dans des domaines liés à la gestion de la biosphère et favorise les échanges d'informations, d'expériences et de personnel.

Le Réseau Emeraude : Zones d'intérêt spécial pour la conservation dans l'ensemble de l'Europe

ELADIO FERNÁNDEZ-GALLIANO

Le Réseau Emeraude a été créé sous l'impulsion de la Convention de Berne (1979) qui prévoyait de créer dans toute l'Europe (et dans certaines parties de l'Afrique) un réseau de Zones d'intérêt spécial pour la conservation (ASCI). Le développement du réseau fut retardé pour des raisons politiques, et avant sa création, Natura 2000 avait été mis en oeuvre au sein des Etats de l'Union européenne dans le cadre des Directives sur les Oiseaux et les Habitats. Afin d'éviter que ne coexistent en Europe deux réseaux de conservation parallèles, la décision fut prise d'intégrer les sites Natura 2000 dans le Réseau Emeraude. Cet article décrit les relations entre les deux réseaux et les compare, et examine également en détail le développement du Réseau Emeraude et des ASCIs.

Le Diplôme européen des aires protégées

FRANÇOISE BAUER

Le Diplôme européen est attribué à des sites en Europe qui se distinguent par leur excellence. Pour se voir accorder un diplôme, les sites doivent répondre à certains critères, et chacun des sites fait l'objet d'une évaluation. Après l'évaluation, le diplôme peut soit être attribué, soit être attribué sous réserve, ou bien son attribution peut être différée ou rejetée, la décision finale étant prise par le Comité des Ministres. Les aires qui ont reçu un diplôme ont un patrimoine riche, sont

prestigieuses et représentent presque tous les types de paysages naturels présents en Europe. Le diplôme a pour but d'assurer que les sites se maintiennent à ce niveau élevé et est donc donné pour une période de cinq ans renouvelable, période à l'issue de laquelle l'attribution du diplôme est réexaminée, ce qui permet d'entretenir un intérêt constant pour l'excellence.

Le réseau Natura 2000

KAREN SIMPSON

Cet article résume les objectifs des deux principales Directives de l'Union européenne relatives à la biodiversité, qui sont la Directive 79/409/EEC du Conseil, du 2 avril 1979, concernant la conservation des oiseaux sauvages (Directive Oiseaux) et la Directive 92/43/EEC du Conseil, du 21 mai 1992, concernant la conservation des habitats naturels ainsi que de la faune et de la flore sauvages (Directive Habitats). En particulier, l'article décrit Natura 2000, le réseau des aires protégées européennes qui a été établi par la Directive Habitats et qui incorpore également les aires de protection spéciales désignées au titre de la Directive Oiseaux.

La Convention Ramsar sur les zones humides

DOUGLAS TAYLOR

Cet article décrit la Convention sur les zones humides, et examine en particulier la façon dont les sites sont désignés comme étant des zones humides d'importance internationale, les fameux sites « Ramsar ». Il y a maintenant plus d'un millier de sites Ramsar dans le monde entier, et l'augmentation continue du nombre de ces sites traduit le fait que leur importance est reconnue au niveau international. Cet article explore les avantages associés au développement d'un réseau international de zones humides protégées et examine l'importance de leur distribution dans le monde et de leur niveau de représentation dans certaines zones géographiques.

La liste du patrimoine mondial : le meilleur de tous les monde ?

MARK SPALDING

La Convention concernant la protection du patrimoine mondial culturel et naturel (la Convention du patrimoine mondial) fut adoptée à Paris en 1972. L'objet de la Convention est d'encourager toutes les nations à protéger les sites qui sont les plus représentatifs de la diversité naturelle et culturelle de l'humanité. Cet article décrit les procédures servant à reconnaître les sites présentant des caractéristiques de « patrimoine mondial », en se concentrant sur les propriétés qui caractérisent le patrimoine naturel ou mixte (naturel et culturel).

Resúmenes

Acuerdos Internacionales y programas en áreas protegidas

JEREMY HARRISON

Hay una serie de convenciones internacionales y de programas establecidos que determinan o reconocen áreas, dándoles categoría internacional. Varios de éstos son descritos en esta edición de *Parks*, pero de ningún modo cubre a todos. Este artículo examina en términos generales las diferencias entre estos enfoques y da recomendaciones para las acciones que se pueden tomar para asegurarse de que los diferentes enfoques son complementarios y son aplicados de manera tal que aseguran la coordinación y sinergia en lugar de una confusión potencial y una duplicación.

La Convención de Barcelona y su impacto en la biodiversidad

HUMBERTO DA CRUZ

El plan de acción del Mediterráneo (MAP) fue implementado en 1975 para proteger el Mar Mediterráneo contra la polución. Después de la implementación de MAP se observó que mucha de la polución se originaba en la tierra y es así que se ha extendido para cubrir los ecosistemas marinos y terrestres. Desde ese entonces ha evolucionado para crear una aproximación a la conservación en la región más integrada y se han desarrollado medios legales para avanzar esto. Como parte de esta aproximación integrada, se ha creado una red de Áreas Protegidas Especiales de Importancia Mediterránea que satisfacen un cierto criterio incluyendo el estado legal apropiado, el manejo y los objetivos de conservación.

Las Reservas de la Biosfera – una red para su conservación y su sostenimiento

PETER BRIDGEWATER

Las reservas de la biosfera han existido por más de treinta años y forman una red mundial de más de 400 sitios en más de 100 países. El propósito de la red es conservar la biodiversidad mientras cumple con las demandas para un entendimiento mayor y un aprecio de la relación entre el hombre y la biodiversidad. La red tiene como propósito cubrir todos los ecosistemas terrestres y marinos y se extiende desde las altas montañas hasta las áreas densamente pobladas. Dentro de la red, se promueven una gran variedad de investigaciones de tópicos relacionados con el manejo de la biosfera e intercambios de información, experiencia y personal.

La Red Esmeralda: Áreas de Conservación de Interés Especial para la totalidad de Europa

ELADIO FERNÁNDEZ-GALLIANO

La Red Esmeralda fue creada como resultado de la estipulación hecha por la Convención de Bern (1979), de implementar, a través de Europa, (y algunas partes de África) una red de áreas de conservación de interés especial (ASCI). El desarrollo de la red fue demorado a causa de factores políticos, y antes de su creación, Natura 2000 fue implementada dentro de los estados de la Unión Europea a fin de cumplir con las Directivas de Aves y Habitats. Para evitar la creación de dos redes paralelas en Europa, se tomó la decisión de integrar los sitios de Natura 2000 dentro de la Red Esmeralda. La relación y las comparaciones entre las dos redes son descritas en este artículo y el desarrollo de la Red Esmeralda y de las ASCI es examinado también en detalle.

El Diploma Europeo de Áreas Protegidas

FRANÇOISE BAUER

El Diploma Europeo es un reconocimiento de excelencia otorgado a sitios en Europa. Para merecer un diploma los sitios necesitan cumplir con un cierto criterio y cada sitio es evaluado. Después de la valoración, la solicitud de diploma resultará en el otorgamiento del mismo, o el otorgamiento condicional, o será diferido o rechazado, quedando la decisión final en manos de la Comisión de Ministros. Las áreas a las que se les han otorgado diplomas tienen un rico

patrimonio, son prestigiosas y representan casi todos los tipos de paisaje natural en Europa. El diploma trata de garantizar que los sitios permanecerán en el mismo alto nivel de estándar y por lo tanto se otorga por períodos renovables de cinco años y después de ese período es revisado, asegurando de este modo un enfoque continuo en la excelencia.

La red Natura 2000

KAREN SIMPSON

Este artículo señala los objetivos de las dos Directivas de la Unión Europea con relación a la diversidad, denominadas Directiva del Consejo 79/409/EEC del 2 de abril de 1979 sobre la conservación de aves salvajes (Directiva de las Aves) y Directiva del Consejo 92/43/EEC del 21 de mayo de 1992 sobre la conservación de los habitats naturales y de la fauna y flora (Directiva de Habitats). Se describe en particular Natura 2000, la red de áreas protegidas europeas que fue establecida por la Directiva de Habitats y que también incorpora las Áreas Especiales de Protección designadas bajo la Directiva de las Aves.

La Convención Ramsar sobre los Humedales

DOUGLASE TAYLOR

Este artículo describe la convención sobre los humedales, concentrándose particularmente en la designación de sitios como humedales de importancia internacional – los llamados “Sitios Ramsar”. Actualmente, hay más de mil sitios Ramsar en el mundo entero, y el aumento continuo del número de áreas refleja el reconocimiento internacional de su importancia. Se exploran los beneficios del desarrollo de una red internacional de humedales protegidos y la importancia de la distribución global y del nivel de representación de los humedales en ciertas áreas geográficas.

La Lista del Patrimonio Mundial – ¿lo mejor del mundo?

MARK SPALDING

La Convención que trata de la protección del Patrimonio Cultural y Natural Mundial (Convención del Patrimonio Mundial) fue adoptada en París en 1972. El propósito de la Convención es vincular todas las naciones para proteger aquellos sitios que son los ejemplos más importantes de la diversidad natural y cultural del mundo. Este artículo describe los procedimientos para el reconocimiento de sitios que pueden ser evaluados como Patrimonio Mundial, enfocando en aquellas propiedades que forman parte del patrimonio natural o mixto (natural y cultural).

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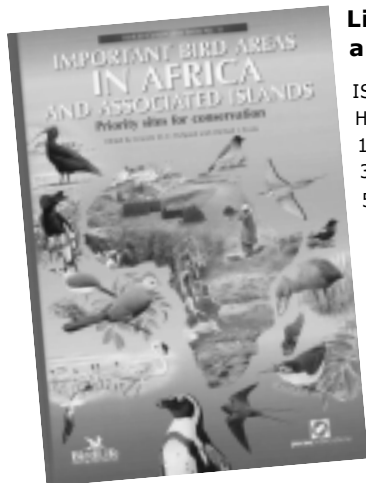
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World Commission on Protected Areas (WCPA)

WCPA is the largest worldwide network of protected area managers and specialists. It comprises over 1,300 members in 140 countries. WCPA is one of the six voluntary Commissions of IUCN – The World Conservation Union, and is serviced by the Protected Areas Programme at the IUCN Headquarters in Gland, Switzerland. WCPA can be contacted at the IUCN address above.

The WCPA mission is to promote the establishment and effective management of a worldwide network of terrestrial and marine protected areas.

IUCN – Union mondiale pour la nature

Fondée en 1948, l'Union mondiale pour la nature rassemble des Etats, des organismes publics et un large éventail d'organisations non gouvernementales au sein d'une alliance mondiale unique: plus de 950 membres dans 139 pays.

L'IUCN, en tant qu'Union, a pour mission d'influer sur les sociétés du monde entier, de les encourager et de les aider pour qu'elles conservent l'intégrité et la diversité de la nature et veillent à ce que toute utilisation des ressources naturelles soit équitable et écologiquement durable.

Afin de sauvegarder les ressources naturelles aux plans local, régional et mondial, l'Union mondiale pour la nature s'appuie sur ses membres, réseaux et partenaires, en renforçant leurs capacités et en soutenant les alliances mondiales.

IUCN – Unión Mundial para la Naturaleza

La Unión Mundial para la Naturaleza, fundada en 1948 agrupa a Estados soberanos, agencias gubernamentales y una diversa gama de organizaciones no gubernamentales, en una alianza única: más de 950 miembros diseminados en 139 países.

Como Unión, la IUCN busca influenciar, alentar y ayudar a los pueblos de todo el mundo a conservar la integridad y la diversidad de la naturaleza, y a asegurar que todo uso de los recursos naturales sea equitativo y ecológicamente sustentable.

La Unión Mundial para la Naturaleza fortalece el trabajo de sus miembros, redes y asociados, con el propósito de realizar sus capacidades y apoyar el establecimiento de alianzas globales para salvaguardar los recursos naturales a nivel local, regional y global.