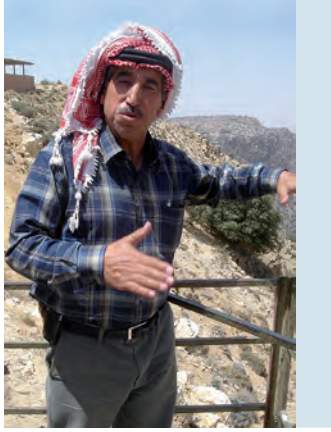

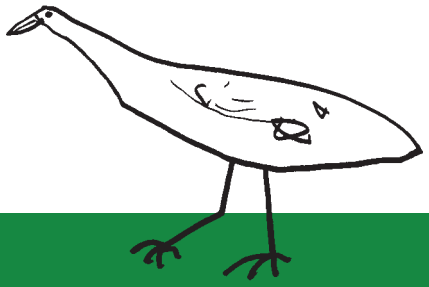

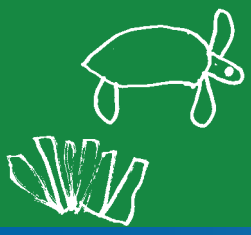

Chapter 3
Biosphere Reserves (BRs) and various types of designated areas

Chapter 3
Biosphere Reserves (BRs) and various types of designated areas

3.1 Introduction – Protecting designated spaces in the past

The establishment of protected areas is not a modern concept - it has a long history. For example IUCN refers to areas of natural resources in India that were protected from any form of exploitation more than two thousand years ago. Ancient Greek forests were linked closely to religion and were considered as sacred. These "sacred" forests were fiercely protected by law and there are several provisions documented about their management. Most of them were left to evolve naturally allowing impressive primeval forests to grow. Examples of such forests and "alsi" in ancient Greece include the sacred groves of ancient Athens and Dodonis, the forest of Eumenides in Kolonos and the forest of Zeus in Olympia, which was named "Altis" by Hercules, etc. Sacred forests are found in many civilisations worldwide.

In 1872, the world's first National Park was created at Yellowstone in the U.S. a "public park or recreation area for public benefit".

In Europe, where accessible natural expanses had always been smaller and where human activity coexisted with nature, protected areas were smaller in area and frequently included at least one inhabited region with human activity.

3.2 Biosphere Reserves and their characteristics

History, principles

The "Biosphere Conference" organized by UNESCO in 1968 was the 1st Intergovernmental Conference examining how to reconcile the conservation and use of natural resources, thereby foreshadowing the present-day notion of sustainable development. It resulted in the launching of the UNESCO **Man and the Biosphere** (**MAB**) Programme in 1971. One of the original MAB projects consisted in establishing a coordinated **world network of sites** representing the main ecosystems of the planet (terrestrial, coastal and marine) in which genetic resources would be protected, and where research, monitoring and training work could be carried out, named as "**Biosphere Reserves**" (**BRs**). These are nominated by national governments and remain under the sovereign jurisdiction of the States where they are situated.

Biosphere Reserves (BRs) represent a key component in the UNESCO MAB Programme's objective which is to test and implement "a sustainable balance between the often conflicting goals of conserving biological diversity, promoting human development" and "maintaining associated cultural values" (adapted from Hadley, 2002).

Ever since they were created, BRs have reflected in their functioning the MAB Programme's basic philosophy by putting the emphasis on "humans as an integral and fundamental part of the biosphere"; their purpose is to achieve "integrated approaches to the study, assessment and management of ecological systems subject to human impact" (Hadley, 2002).
At the core of the MAB Programme, they focus on a multi-stakeholder management system involving local communities, scientists, national and local government authorities and increasingly, other stakeholder groups (such as representatives of the private sector: the food industry, the tourism industry, etc.). As conservation places, they promote ecosystem management by protecting genetic resources, species, land and water, and through the sustainable use of them. Taking into account that each sector of society views ecosystems in terms of their own economic and societal needs, BRs seek to foster economic development compatible with conservation. They also "develop a continuum of scientific and educational activity to underpin sustainable resource management"(Hadley, 2002), demonstrating that sound policies are based on research and subsequent monitoring and on communicating results in a comprehensive way to the potential users of those results.
In short, BRs are much more than just protected areas as they are designed to demonstrate a balanced relationship between people and nature.

Among the perspectives examined by the Seville Conference on Biosphere Reserves in March 1995, emerged the vision for BRs in the twenty-first century. It highlights the role that BRs can play not only in preserving and maintaining natural but also cultural values through sustainable management practices built upon scientific foundations. In order to integrate cultural diversity and biological diversity, especially the role of traditional knowledge in ecosystem management, it reaffirms that attention should be focused on local conditions, on seeking a balance between environmental conditions and local population interests and views, and that management is undertaken at the appropriate spatial and temporal scales. The Seville Conference formally defined and designated a set procedure in the recognition of potential BRs based on this further development (**Seville strategy**). The Seville Strategy changed the criteria for accreditation to include a **zoning system**.

1-3. The visitors' center *El Acebuche*; Horses and storks; Wooden footpath as conservation easement, *Doñana BR*, Spain
© UNESCO / O. Brestin

4-5. Pieces of pottery in *Bouira*; Landscape around *Beni Yenni*, *Kabylia*, Algeria
© Olivier Brestin

6-7. The farm fish ponds; Fish delivery at the fish farm, *Las Salinas de Astur*, *Marismas del Odiel BR*, Spain
© UNESCO / O. Brestin

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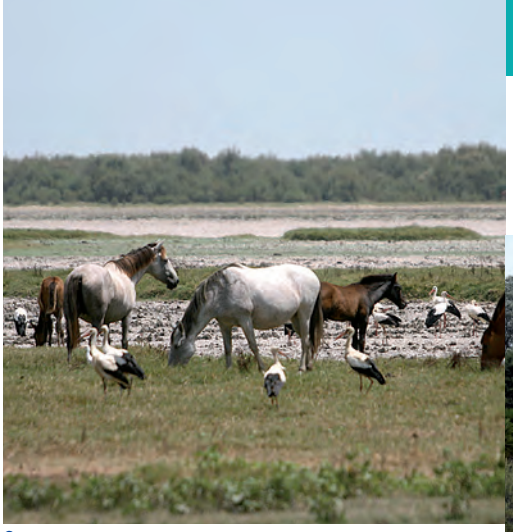

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JUNTA DE ANDALUCIA
DONANA
Sendero peatonal - Foot-path
"Laguna del Acebuche"

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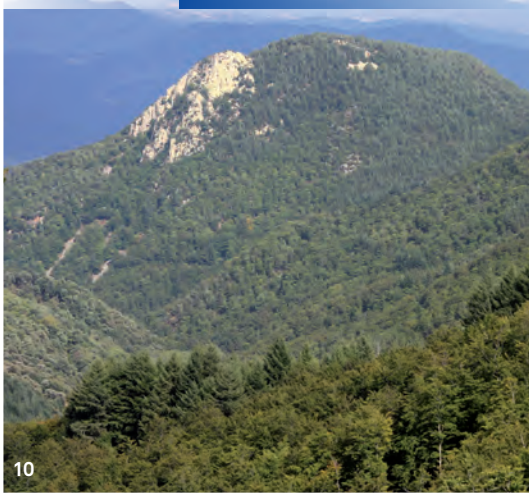
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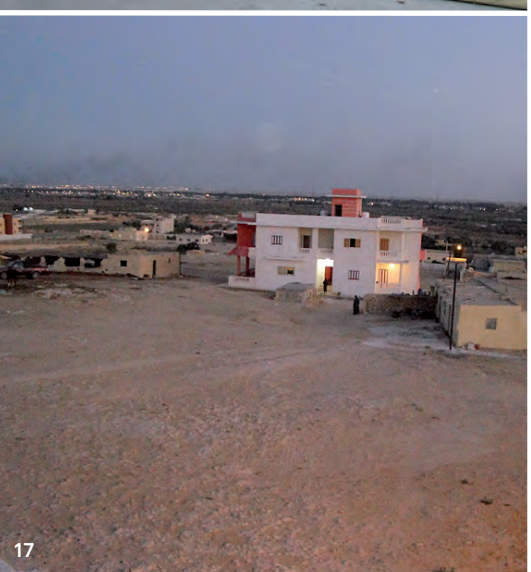
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Table 2
Biosphere Reserves of Mediterranean countries

Algeria	Tassili N'Ajjer (1986), El Kala (1990), Djurdjura (1997), Chrea (2002), Taza (2004), Gouraya (2004)
Croatia	Velebit Mountain (1977)
Egypt	Omayed (1981), Wadi Allaqi (1993)
France	Commune de Fakarava (1977), Vallée du Fango (1977), Camargue (delta du Rhône) (1984), Cévennes (1984), Iroise (1988), Mont Ventoux (1990), Archipel de la Guadeloupe (1992), Luberon-Lure (1997), Pays de Fontainebleau (1998), Vosges du Nord/Pfälzerwald (1998) (transboundary France-Germany)
Greece	Gorge of Samaria (1981), Mount Olympus (1981)
Israel	Mount Carmel (1996), Ramat Memashe (2011)
Italy	Collemeluccio-Montedimezzo (1977), Circeo (1977), Miramare (1979), Cilento and Vallo di Diano (1997), Somma-Vesuvio and Miglio d'Oro (1997), Valle del Ticino (2002), Tuscan Islands (2003), Selva Pisana (2004)
Jordan	Dana (1998)
Lebanon	Shouf (2005), Jabal Al Rihane (2007), Jabal Moussa (2009)
Morocco	Arganeraie (1998), Oasis du sud marocain (2000), Intercontinental BR of the Mediterranean (2006), (Morocco-Spain), Berlengas (2011), Santana Madeira (2011)
Montenegro	Tara River Basin (1976)
Portugal	Paúl do Boquilobo (1981), Corvo Island (2007), Graciosa Island (2007), Flores Island (2009), Geres /Xures (2009) (transboundary Portugal – Spain), Berlengas (2011), Santana Madeira (2010)
Serbia	Golija-Studenica (2001)
Slovenia	Julian Alps (2003), The Karst (2004), Kozjansko & Obsotelje (2010)
Spain	Grazalema (1977), Ordesa-Viñamala (1977), Montseny (1978), Doñana (1980), Mancha Húmeda (1980), Las Sierras de Cazorla y Segura (1983), Marismas del Odiel (1983), La Palma (1983), Urdaibai (1984), Sierra Nevada (1986), Cuenca Alta del Río Manzanares (1992), Lanzarote (1993), Menorca (1993), Sierra de las Nieves y su Entorno (1995), Cabo de Gata-Nijar (1997), Isla de El Hierro (2000), Bardenas Reales (2000), Muniellos (2000), Somiedo (2000), Redes (2001), Las Dehesas de Sierra Morena (2002), Terras do Miño (2002), Valle de Laciana (2003), Picos de Europa (2003), Monfragüe (2003), Valles del Jubera, Leza, Cidacos y Alhama (2003), Babia (2004), Área de Allariz (2005), Gran Canaria (2005), Sierra del Rincón (2005), Los Valles de Omaña y Luna (2005), Alto de Bernesga (2005), Los Argüellos (2005), Os Ancares (2006), Los Ancares Leoneses (2006), Las Sierras de Béjar y Francia (2006), Intercontinental BR of the Mediterranean (2006), (Spain-Morocco), Río Eo, Oscos y Terras de Buron (2007), Fuerteventura (2009), Geres /Xures (transboundary Spain-Portugal) (2009)
Syria	Lajat (2009)
Tunisia	Djebel Bou-Hedma (1977), Djebel Chambi (1977), Ichkeul (1977), Iles Zembra et Zembretta (1977)
Turkey	Camili (2005)

8. Hikers in the Biosphere Reserve, *Cuenta Alta del Río Manzanares BR*, Spain
©UNESCO / O. Brestin

9. SUMAMAD 5th Project Workshop, *Aleppo*, Syria
©Hélène Gille

10. *Val de Santa Fe*, *Montseny BR*, Spain
©UNESCO / O. Brestin

11. SUMAMAD Planning Workshop, *Amman* and *Dana BR*, Jordan
©Hélène Gille

12-13. Photovoltaic solar panels installation, *Omayed BR*, Egypt
©Thomas Schaaf

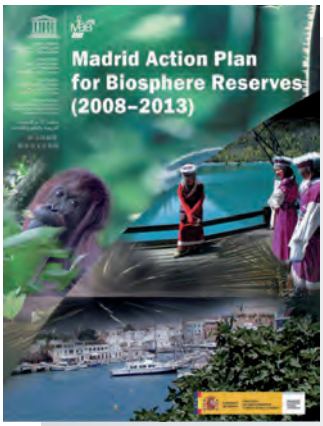
14-16. Environmental Education Center, *La Pedriza, Cuenta Alta del Río Manzanares BR*, Spain
©UNESCO / O. Brestin

15. The information center, *Marismas del Odiel BR*, Spain
©UNESCO / O. Brestin

17. The residential area, *Omayed BR*, Egypt
©Thomas Schaaf

18. Goat rearing, *Alonnisos Island*, Greece
©John Vlaikos

19. Mediterranean monk seal, *Northern Sporades*, Greece
© Vasilis Kouroutos



Cover of the
Madrid Action Plan

During the 3rd World Congress of BRs (2008, Spain), the **Madrid Action Plan** was adopted. This Action Plan provides a clear vision and mission for the world network of BRs for the period 2008-2013. It articulates actions, targets, success indicators, partnerships and other implementation strategies, to demonstrate how the BRs can address the three major challenges:
a) Accelerated climate change with consequences for societies and ecosystems,
b) Accelerated loss of biological and cultural diversity, and
c) Rapid urbanisation as a driver of environmental change.

In 2012 there were already 580 BRs from 114 countries including 8 transboundary sites and one intercontinental (Spain – Morocco). Obviously the network itself provides opportunities for cooperative research and monitoring as well as exchange of information amongst the BRs. The existing BRs of the Mediterranean countries as recorded in the latest catalogue produced by the MAB Secretariat are presented in the related Table and Map.

Biosphere Reserves as show cases of attempts to apply sustainable development on the ground

The BR concept can be used as a framework to enhance people's livelihoods and ensure environmental sustainability. They are ideal settings to develop and test exemplary solutions to challenges facing society, i.e. problems of structural transformation, processes of demographic change as well as climate change. UNESCO's recognition can serve to highlight and reward such individual efforts. The designation of a BR site can raise awareness among locals, citizens and government authorities on environmental and development issues and can help to attract funds.

At national level, BRs can serve as pilot sites to explore and demonstrate approaches to conservation and sus-

Figure 14
Biosphere Reserves around the Mediterranean (MAP, 2009)

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20. From the core area to the buffer zone, *Castillo de Monfragüe*, *Monfragüe BR*, Spain
© UNESCO / O. Brestin

21. The core area and the buffer zone, example of the BR zoning system, *Castillo de Monfragüe*, *Monfragüe BR*, Spain
© UNESCO / O. Brestin

tainable development, providing lessons which can be applied elsewhere and, hopefully, inspire policies and practices contributing to sustainable development at various scales. In addition, they provide concrete means or incentives for countries to implement Agenda 21, the Convention on Biological Diversity (e.g. the Ecosystem Approach), many Millennium Development Goals (e.g. on environmental sustainability), and the UN Decade of ESD. In several cases they may serve also as demonstration sites for mitigation and adaptation to climate change. In the case of large natural areas which straddle national boundaries, transboundary BRs can be established jointly by the countries, testifying long-term co-operative efforts.

Each BR is intended to fulfil the following principle functions, which are complementary and mutually reinforcing:

- **a conservation function** - to contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- **a developmental function** - to foster economic and human development which is socio-culturally and ecologically sustainable (i.e. organic farming, ecologically adapted forest management, and environmentally and socially compatible tourism);
- **a logistical function** - to provide room for research, monitoring, education and information exchange related to local, national and global issues of conservation and sustainable development. In this context, authentic ESD experiences, designed in an interdisciplinary way should be provided to students and visitors.

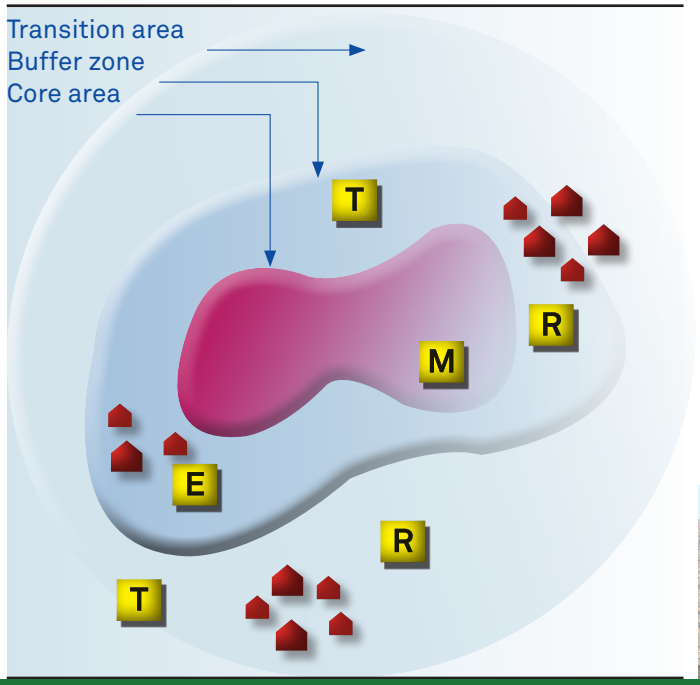
The BRs zoning system

In order to use BRs to involve local people in conservation and to fulfill national commitments under international agreements, conservation had to be developed away from the view of a "closed jar" sealing off a natural area from the outside human community. The MAB Programme has developed a zoning system which is now widely used not only in BRs but in many other types of designated areas where the needs of the local population must be considered.

Ideally, each BR should contain three zones that have to be implemented in site-specific patterns to meet local needs and geographic conditions. "First, there must be one or more core areas – securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses. Next is a clearly identified buffer zone, which usually surrounds or adjoins the core areas and is used for co-operative activities compatible with sound ecological practices. Last is a flexible transition area which may contain a variety of agricultural activities, settlements and other uses, in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests and other stakeholders work together to manage and sustainably develop the area's resources"(Hadley, 2002).

This zonation scheme is applied in different ways by countries to accommodate their geographical conditions, socio-cultural settings, available legal protection measures and local constraints. If the core area can correspond to an existing protected area such as a nature reserve or a national park, and require legal protection limiting human access to research and monitoring purposes, the whole concept of zoning in a BR integrates a dimension of flexibility and can be used creatively in order to facilitate the integration of protected areas into the wider bio-regional landscape.

Figure 15
Biosphere Reserve zonation



Human settlements

R Research station or experimental research site

M Monitoring

E Education and training

T Tourism and Recreation

Show case of Dana Biosphere Reserve, Jordan
(BR technical notes 2, 2007)
This BR is home to some hundred inhabitants belonging to sedentary or nomad groups that are partially or entirely dependent on the resources of the area, in particular sheep and goat pastures.
In order to ensure both the conservation of biodiversity (by limiting overpasturing) and the improvement of the living conditions of the locals, the management body of Dana BR (the NGO Royal Society for the Conservation of Nature) has thus collaborated with various stakeholders (local communities, public services, tourism sector, scientists) to generate income for the locals through the alternative use of resources and space, i.e. the production and marketing of dried fruit, culture and medical plants, arts and crafts. A geographic brand name "Wadi Dana" was given with the promotion slogan "help nature, help the population" that reflects the wish to integrate the conservation and sustainable development functions of the BR. The Dana BR is used for a number of ESD projects. The various forms of cooperation with local communities have led to a more positive perception of the BR on their part.

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22. Bedoin outside his tent, *Dana Biosphere BR*, Jordan
© Thomas Schaaf

23. SUMAMAD Planning Workshop, *Amman and Dana BR*, Jordan
© Hélène Gille

24. School girl measuring the temperature of water, *Azrak Reserve*, Jordan
©RSCN

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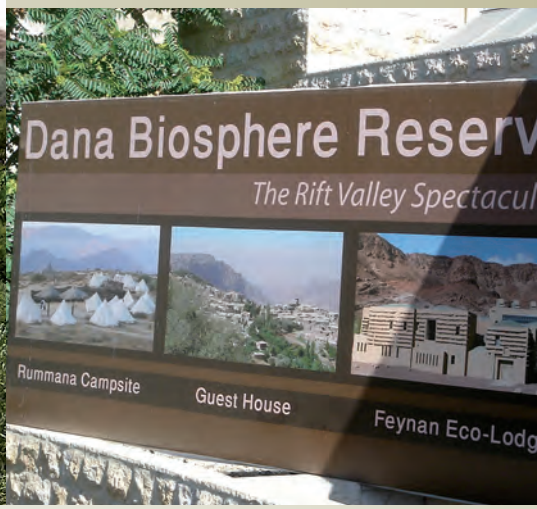

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25. *Dana* village and orchards, *Dana BR*, Jordan
© Thomas Schaaf

26. Entrance and information panel, *Dana BR*, Jordan
© Hélène Gille

27. BR's guide and ESD educator, *Dana BR*, Jordan
© Thomas Schaaf

28-29. Soap production, *Dana BR*, Jordan
© Thomas Schaaf

30. *Rummana Campsite*, *Dana BR*, Jordan
© Thomas Schaaf

31. *Orjan* brand of olive oil soaps designer and manufacturer, *Dana BR*, Jordan
© Thomas Schaaf

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32. Holm oak (*Quercus ilex*) reforestation area, *Villarreal de San Carlos*, *Monfragüe BR*, Spain
© UNESCO / O. Brestin

33. Holm oak (*Quercus ilex*) young plant, *Villarreal de San Carlos*, *Monfragüe BR*, Spain
© UNESCO / O. Brestin

34. Holm oak specimen, Maison de la Biodiversité, *Luberon-Lure BR*, France
© UNESCO / O. Brestin

35. Wood handicrafts, *Sigonce*, *Luberon-Lure BR*, France
© UNESCO / O. Brestin

BRs as open ESD laboratories

What is the relationship between fertiliser use, groundwater pollution and the quality of the agricultural products? How can fossil fuels be replaced with renewables? How can a consumer reflect on issues like food-miles, water and energy input, cruelty to animals, workers' conditions in order to make an informed choice of products? How can we adapt to the climate change challenges in the Mediterranean, as farmers, as tourist agents, as businessmen, as city planners and eventually as citizens?

ESD is more than learning about nature. The key objective and challenge is to develop the capability to make our future sustainable. In this regard, BRs are ideal to act as laboratories for environmental and social learning.

Young people around the world are usually inspired to get involved with nature reserves. Within a BR proper interpretation from trained staff may help them to take responsibility for the tasks assigned to them, to work constructively with others, to shape their own views and defend them in debate. The theoretic assumptions of pedagogy in ESD and appropriate methodological tools to provide authentic experience are extensively presented in Part II of this publication. It is pointed here, however that one of the main things that a child or a visitor should "learn" in a BR is that every individual could make a difference in the way a space is managed sustainably and everyone can contribute in many ways to recognising, identifying and resolving conflicts between humans and nature.

Since 2004 the MAB-ICC has encouraged all countries to support the **UN Decade of Education for Sustainable Development** (2005-2014) led by UNESCO (read more on Chapter 5). BRs constitute an excellent opportunity to act as learning sites for SD in order to implement national policies and strategies for the decade. Relevant national, regional and global authorities should be encouraged to use BR management issues and problems as research questions for multi-disciplinary institutes of higher learning. According to the Madrid Action Plan the target for ESD programmes in regard to BRs and the recommended action is to promote the BR as a "*learning site of excellence for sustainable development*", for demonstrating trade-offs and balance amongst ecosystem services, human environment interactions and well-being.

The number of schools associated with BRs through e.g. joint classes, school camps, curriculum development is one indicator for achievement of the aforementioned target. Another related target for BRs as learning sites within the DESD is the "*exchange of educational resources for widespread adaptation and application*" that requires a number and range of awareness and educational materials to be produced by BRs, NGOs, academic, institutions, etc, as well as a sufficient number of best practices translated into local languages in relation to the role by BRs, MAB National Committees, authorities, national and international NGOs, etc. (Madrid Action Plan, 2008). In the framework of the Madrid Action Plan the present guide was also developed.

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36. The information center, *Marismas del Odiel BR*, Spain
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37. Environmental Education Center, *La Pedriza, Cuenta Alta del Río Manzanares BR*, Spain
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38. Educational panel in EE center, *La Pedriza, Cuenta Alta del Río Manzanares BR*, Spain
© UNESCO / O. Brestin

3.3 Other types of designated areas

Currently, there are several classifications and definitions of various types of designated or protected areas at national and international level. However, many of the general underlying principles in these definitions in **designating a site** are similar and include the following:

- the conservation and protection of important species of flora and fauna and their habitats;
- the conservation of biodiversity (genetic reserves);
- the conservation of a series of natural processes vital to the preservation of life on earth;
- the promotion of scientific research;
- the preservation of its natural, aesthetic traditional and cultural features;
- the promotion of education, recreation and sustainable tourism (e.g. eco-tourism);
- the sustainable management of natural resources.

The term protected area refers to "a geographically defined area which is designated, regulated or managed to achieve specific conservation objectives".
Convention on Biological Diversity

Protected area is "an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means".
International Union for Conservation of Nature (IUCN)

In the last 50 years, the IUCN Committee responsible for national parks and protected areas has pioneered a set of directives for the establishment of a unified classification system of protected areas, expecting
- to alert governments on their importance;
- to encourage the development of management schemes tailored to national priorities;
- to reduce the predominating confusion due to the many classifications;
- to provide a framework for data collection, elaboration and dissemination; and
- to improve communication and understanding between relevant stakeholders.

In 1969, the IUCN General Assembly defined the term **National Park** which led to the emergence of a preliminary classification system, and in 1978, the first official report proposed 10 categories of protected areas. This classification system has been widely used and incorporated into national legislations. Furthermore, it served as the basis of the UN directory of national parks and reserves. After a few years the original classification system was revised to better differentiate between categories, to reflect more sufficiently different circumstances around the world, but also to better communicate the new perceptions of the natural environment and human interactions with it.

The main idea behind this 10-year long revision process (1984-1994) was to consider as first priority the national and local needs when establishing a protected area and

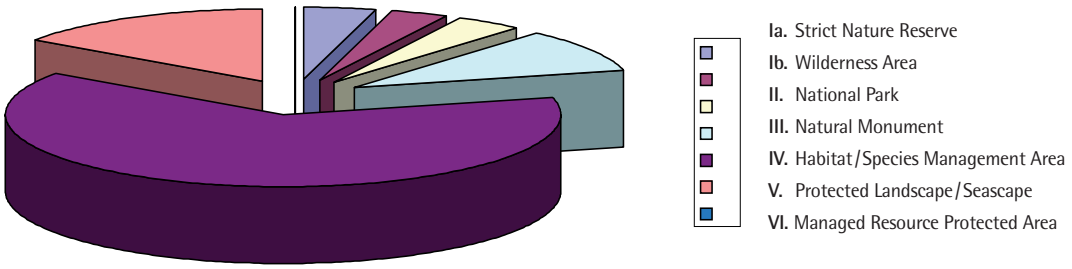
Table 3
Protected Areas in Mediterranean countries

	Protected areas 1970–2004 (1000 hectares)						Protected area as percentage of the national (marine and terrestrial) territory 2004	
	According to the IUCN categories (Ia–VI)					All categories (IUCN & national)		
Country	1970	1980	1990	2000	2004	2004	IUCN	Total
Spain	904	1567	3657	4240	4240	4807	6.8	7.7
France	1815	4288	5532	7226	7226	7319	11.6	11.7
Italy	271	480	1442	1878	1878	5724	4.1	12.5
Greece	37	167	232	491	491	688	2.0	2.8
Monaco	0	0.05	0.05	0.05	0.05	0.05	25.5	25.5
Malta	0.01	0.01	1.32	4.90	5.86	5.85	1.4	1.4
Cyprus	67	67	69	78	78	92	3.4	4.0
Slovenia	87	89	128	150	150	150	7.3	7.3
Croatia	50	91	450	572	572	572	6.5	6.5
Bosnia-Herzegovina	27	27	27	27	27	27	0.5	0.5
Serbia-Montenegro	96	188	323	338	338	387	3.3	3.8
Albania	58	58	60	103	103	103	2.9	2.9
Turkey	291	474	1039	1256	1256	3353	1.5	3.9
Syria	0	0	0	0	0	357	0.0	1.9
Lebanon	0	0	4	4	4	8	0.3	0.5
Israel	33	53	263	295	295	408	11.7	16.2
Egypt	48	48	253	9744	11,812	12,767	11.2	12.1
Libya	0	157	157	173	173	221	0.1	0.1
Tunisia	0	41	46	46	46	258	0.2	1.3
Algeria	13	32	11,949	11,957	11,957	11,970	5.0	5.0
Morocco	330	340	340	373	373	567	0.8	1.2
NMC	**3411**	**7022**	**11,920**	**15,108**	**15,109**	**19,876**	**6.6**	**8.7**
SEMC	**715**	**1146**	**14,050**	**23,848**	**25,916**	**29,909**	**3.7**	**4.3**
MED	**4126**	**8168**	**25,970**	**38,956**	**41,025**	**49,785**	**4.4**	**5.3**
Med. France[1]					1519	1533	22.2	22.5
NMC revised[2]					9402	14,090	5.5	8.2
Mediterranean[3]					**35,318**	**43,999**	**4.0**	**5.0**

Source: UNEP-WCMC/WDBPA v2.03 (World Database on Protected Areas (sea.unep-wcmc.org/wdbpa)), *Plan Bleu*, 2005

Notes:
1 Med. France = Mediterranean regions of France (Languedoc-Roussillon, PACA and Corse).
2 NMC revised = NMC excluding non Mediterranean part of France.
3 Mediterranean = NMC revised + SEMC.

Table 4
Number and percentage of Mediterranean Protected Areas per category in 2007



then to look at how they fall under the suggested IUCN classifications. This idea is reflected in the IUCN's current definition of the term: "**A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values.**"

The areas that meet the IUCN criteria are included in one of the following revised categories (IUCN 1994):
Ia. Strict Nature Reserve managed mainly for scientific research

Ib. Wilderness Area managed mainly for wilderness protection

II. National Park managed mainly for ecosystem protection

III. Natural Monument managed mainly for conservation of specific natural features

IV. Habitat/Species Management Area protecting specific species and their habitats

V. Protected Landscape/Seascape protected as integrated areas

VI. Managed Resource Protected Area to better manage a natural resource e.g. water.

One could deduce that the initial management perception of protected areas was their absolute protection with the aim to conserve its wildlife and aesthetic value excluding any human activity in these areas. This approach met with hostility from neighbouring communities and created difficulties in their efficient management. According to current views, protected areas no longer constitute entirely isolated units but rather are inter-connected to neighbouring areas on many levels including the ecological, economic, political and cultural. Emphasis is given to sustainable management of natural resources, cultural values and to the active participation of local communities. Today, protected areas around the world are not only areas of strict protection, accessible only to scientists, but may include settlements and their protection and preservation is combined with other human activities.

3.4 The international legal framework for designated areas

In addition to some sites designated purely under national legislation the protection of important areas throughout the Mediterranean is in most cases the result of international conventions. Among the most significant ones are the **Ramsar Convention** on wetlands, the **Barcelona Convention** for the Mediterranean Sea, the **Berne Convention** and the UNESCO **World Heritage Convention**. Moreover, several sites of European countries have been identified as "protected", according to EU institutions and programs, such as the **European Network of Biogenetic Reserves** (Council of Europe), **the Biogenetic Reserve, the European Diploma of Protected Areas** (Council of Europe) and **Natura 2000** (Council of Europe).

The Ramsar Convention

This is a framework convention for the protection of **Wetlands of International Importance** concerning national action and international cooperation**.** Signed in 1971 in the city of Ramsar, Iran, it came into force in 1975, as the first convention ever concerned exclusively with wetlands' protection. By 2011, more than 1,900 wetlands in 160 countries have been included in the Ramsar List, with a total area of 187 million hectares (about the size of Libya). Joining the Convention signals a commitment on the part of the country to work actively to support the "three pillars" of the Convention:
• ensuring the conservation and wise use of wetlands it has designated,
• including as far as possible the wise use of all wetlands in the national environmental planning, and
• consulting with other signatory countries about implementation of the Convention, especially in regard to transboundary wetlands, shared water systems, and shared species.
All Mediterranean states have signed the **Ramsar Convention**. Read more at (**www.ramsar.org**).

The Barcelona Convention

In 1975, only 3 years after the Stockholm Conference that set up the **United Nations Environment Programme** (UNEP), 16 Mediterranean countries and the European Community adopted the **Mediterranean Action Plan** (MAP), the first-ever plan adopted as a regional seas programme under UNEP.

One year later, in 1976, these parties signed the Regional Convention for the **protection of the Mediterranean Sea against pollution** (widely known as the Barcelona Convention) aiming to prevent and abate pollution from ships, aircraft and land based sources and urge countries to cooperate for this purpose. Although MAP's initial focus was aimed at marine pollution, over the years, its mandate gradually widened to include coastal zone management. In this respect, 20 years later, in 1995 the Convention was revised and renamed as **Convention for the protection of the marine environment and the coastal region of the Mediterranean**, embracing also the concept of sustainable development.

MAP Magazine and EEA Report covers, 2010

Through the MAP (based in Athens), the Contracting Parties of the Barcelona Convention are quite active today and determined to protect the Mediterranean marine and coastal environment while boosting regional and national plans to achieve sustainable development.

Seven Protocols of the **Barcelona Convention** addressing specific aspects of conservation in the Mediterranean complete the **MAP** legal framework:
- Dumping Protocol (from ships and aircraft)
- Prevention and Emergency Protocol (pollution from ships and emergency situations)
- Land-based Sources and Activities Protocol
- Specially Protected Areas and Biological Diversity Protocol
- Offshore Protocol (pollution from exploration and exploitation)
- Hazardous Wastes Protocol
- Integrated Coastal Zone Management (ICZM) Prorocol

The Protocol on **Specially Protected Areas and Biological Diversity** (SPA/BD) stipulates that the Parties develop guidelines for establishing and managing SPAs and lists a certain number of appropriate measures to be adopted by them in order to ensure protection. Such measures for the protection of the ecological and biological processes and the habitats may include prohibiting the discharge of waste, regulating shipping operations, regulating the introduction of any non-indigenous species or GMOs, etc. In this respect, the Protocol provides for the establishment of a List of **Specially Protected Areas of Mediterranean Importance** (SPAMI list). This is a label that is attributed to sites which satisfy two criteria:
– They must be typical for the conservation of biodiversity elements, ecosystems that are specific to the region, or habitats of endangered species or of special interest for scientific, aesthetic, cultural or educational reasons.
– They must be effectively managed, and accompanied by a monitoring and assessment process.
The SPAMI list currently includes (2008 data) 20 sites from Algeria, France, Italy, Spain and Tunisia, as will as a transnational one (between France, Italy and Monaco). The SPA and Biodiversity Protocol is coordinated by the Regional Activity Centre based in Tunis.

Publication from UNEP *Regional Activity Center for Specially Protected Areas* (RAC/SPA), 2010

The seventh and final protocol of the Barcelona Convention concerning the **Integrated Management of Coastal Zones** was adopted 2008 and came into force at the end of 2010. It serves as a base tool for the protection and sound management of the most vulnerable areas-coastal zones. This protocol is the first legally binding directive for international cooperation in managing coastal areas aiming at their sustainable development.

The Berne Convention

The **Convention on the Conservation of European Wildlife and Natural Habitats** was signed in 1979 in Berne, Switzerland by a Council of Europe initiative, and came into force in 1981. At that time the Berne Convention forged new ground in the protection of European species and their habitats and served as the foundation for the subsequent establishment of the EU Directive on habitats (92/43EEC).

Its aims are to conserve wild flora and fauna and their natural habitats and to promote European co-operation in that field. The Convention places a particular importance on the need to protect endangered natural habitats and endangered vulnerable species, including migratory ones. To this end it includes provisions to promote education, research and information sharing. The convention covers the European continent and extends to some States of Africa.

The World Heritage Convention of UNESCO

The **World Heritage Convention** adopted in 1972 by the UNESCO General Conference, was founded on the premise that certain places on Earth are of **outstanding universal value** and as such should form part of the common heritage of humankind. The Convention is profoundly original in that it links in a single document the concept of **nature conservation and the preservation of cultural sites**. Cultural identity is strongly related to the natural environment in which it develops.

The signatory Parties recognize their obligation to secure the designation, protection, conservation and the delivery of this natural and/or cultural inheritance within their territory to future generations. Any sites of cultural heritage (see box) that meet the UNESCO criteria may be submitted for approval and inclusion in the **World Heritage List.**

In order to ensure that this List reflects the diversity of the world's outstanding cultural and natural sites, UNESCO encourages the nomination of sites in underrepresented parts of the world and especially in categories which are not yet fully represented on the List. Inscription on the World Heritage List is only a first step towards safeguarding these sites for future generations. Management and preservation efforts are an ongoing process, which involves local communities as well as site managers and national authorities.

The World Heritage Map, 2011-2012
©UNESCO

As of November 2011, 188 countries have ratified the Convention and more than 936 sites can be found on the List. These include 725 cultural sites, 183 natural ones and 28 mixed from 153 countries (Read more at **http://whc.unesco.org/en/list**). Especially those sites of the World Heritage List for the conservation of which major operations are necessary and for which assistance has been requested, are characterised "**in danger**" under the Convention.

Issue n°59 of *World Heritage*,
©UNESCO

According to the Convention "Cultural heritage" can be:

Monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

Groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

Sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view;

While "natural heritage" refers to:

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 and precisely delineated areas that constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;

Natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

Another categorisation, also by UNESCO, of special designated areas, are the so-called **GeoParks**. A Geopark is an area with a significant geological heritage, encompassing also an archaeological, ecological or cultural value, where a coherent management scheme is in place, in line with sustainable development. A Geopark may enhance employment opportunities for locals bringing sustainable and real economic benefit, usually through the development of sustainable tourism. Within a Geopark, geological heritage and knowledge is shared with the

public and linked with broader aspects of the natural and cultural environment. Since the launching of the Geoparks network in 2004, 57 Geoparks from 18 countries are established, including some from Mediterranean countries (Croatia, France, Greece, Italy, Portugal and Spain). The UNESCO Geopark Program works in synergy with the World Heritage and MAB BR Network.

The European legal framework for Protected Areas

The EU legislative framework for the protection of the natural environment and particularly biodiversity is comprehensive. The European Directives aiming at the protection of wild fauna and flora and ecosystems are binding for all EU Member States. They cover therefore all the European Mediterranean countries and have been adopted also by most Balkan countries wishing to join the EU. These, namely, are the Birds Directive and the Habitats Directive, which foresee strict legal obligations for counties while it is the European Commission's responsibility to ensure their enforcement. The Commission can bring cases before the European Court if Member States violate the terms of the Directives, a practice not at all uncommon.

The Birds Directive

The **Directive** on the conservation of wild birds (79/409/EEC), to use full name, is the EU's oldest piece (1979) of nature legislation and one of the most important, creating a comprehensive protection scheme for all wild bird species naturally occurring in the Union.
Recognising that habitat loss and degradation are the most serious threats to the conservation of wild birds, the Directive places great emphasis on the protection of habitats for endangered and migratory species through the establishment of a coherent network of **Special Protection Areas** (SPAs) comprising all the most suitable territories for these species. Since 1994 all SPAs form an integral part of the NATURA 2000 network (see below). Currently, 3,000 areas have been declared SPAs and cover 8% of European land territory and surrounding sea areas including many in the Mediterranean region.

The Habitats Directive

With many species under the threat of extinction and the potential degradation of many ecosystems, the **Directive for the conservation of natural habitats and of wild fauna and flora** (92/43/EEC) was issued aiming to protect biodiversity within European territory. The Directive obligates member states to declare **Sites of Community Importance** (SCI) and **Special Areas of Conservation** (SAC) and to protect the various species listed in special catalogues.

The measures outlined in the Habitats Directive aim at the conservation and preservation of natural habitats, their populations and species of wild flora and fauna of common interest keeping in mind the economic, social and cultural interests along with regional and local variations. The types of habitats and plant and animal species protected under the Habitats Directive are outlined in its annexes.[4]

Natura 2000

At the heart of both the Birds and the Habitats Directives is the creation of a network of sites called **Natura 2000**, which is the centrepiece of the European nature & biodiversity policy: It is an EU wide network of **nature protection areas** established under the Habitats Directive, aiming to assure the long-term survival of Europe's most valuable and threatened species and habitats.

Natura 2000 comprises two types of protected areas: the **Special Protection Areas** (SPAs), under the Birds Directive and the **Special Areas of Conservation** (SACs) under the Habitats Directive. Once a Member State declares a SPA, it is immediately granted the Natura 2000 status.

The integration of the SCIs, however, requires a longer process. The nationally proposed lists of SCIs for each biogeographical region of Europe (Mediterranean, Alpine, Atlantic, Black Sea, Boreal, Continental, Macaronesian, Pannonian and Steppic) are scientifically evaluated. Based on this, the European Commission finalizes the list of SCIs which become part of the Natura 2000 and are to be designated as SACs at national level.
The list of SCIs for the Mediterranean zones was last finalized in 2007 and the Member States are obliged to declare these areas as SACs, within six years. They must also specify conservation objectives for the habitats and their species, undertake appropriate measures to preserve them and avoid their degradation. The Habitats Directive also provides for the possibility of co-financing conservation measures by the European Commission while Member States and the Commission are responsible for promoting research and scientific activities necessary to meet the Directive's goals.

By 2009, the Natura 2000 Network has included more than 21,000 SACs and 5,000 SPAs for birds, covering around 800 000 km^2 (20% of EU territory, an area at the size of France) plus 100 000 km^2 of marine environment. **The Natura 2000 network also fulfils the European obligation under the UN Convention on Biological Diversity**.

Natura 2000 areas in the Mediterranean
The list of Natura 2000 sites in the Mediterranean EU States was first adopted in July 2006, and further updated in 2008. Altogether, within the Mediterranean Region there are 2,928 SCIs (under the Habitats Directive) and further 999 SPAs (under the Birds Directive). There is often considerable overlap between some SCIs and SPAs which means that the figures are not cumulative. Nevertheless, it is estimated that together they cover around 20% of the total land area in this region.
(EC EDG, 2009)

4. Annex I (types of natural habitats) and Annex II (animal and plant species provide recommendations on the types of habitats and species whose conservation requires the declaration of a SAC. Annex III specifies the selection criteria of a SCI. In Annex IV lists species of flora and fauna requiring particularly strict protection. Annex V lists plant and animal species whose removal from their natural environment is possible by regulative management measures. Finally, Annex VI lists the prohibited methods of capturing or killing.