



# Linking Natura 2000 and cultural heritage Case studies

## Linking Natura 2000 and cultural heritage | Case studies

European Commission 2017

This document has been prepared  
for the European Commission by THE N2K GROUP.

The case studies were written by  
Livia Bellisari, Tania Deodati (*Comuniità Ambiente/N2K Group*)  
Concha Olmeda, Ana Guimarães (*Atecma/N2K GROUP*),  
with the collaboration of Kerstin Sundseth and Oliviero Spinelli  
under contract N° 070202/2015/714775/SER/B3.

Numéro de projet: 2017.3106

---

Titre: Linking Natura 2000 and cultural heritage Case studies

---

Version linguistique	Support/Volume	Numéro de catalogue	ISBN	DOI
EN	PDF/Volume_01	KH-04-17-352-EN-N	978-92-79-67725-0	10.2779/577837

---

*Reproduction authorised provided the source is acknowledged.*

Front cover

# Index

## Introduction | 4

Long cases

### NATURA 2000 AND HISTORICAL AND ARCHEOLOGICAL SITES

Las Medulas | 10

Megali and Mikri Prespa Lakes | 13

### NATURA 2000 AND CULTURAL SITES IN CITIES

Matera | 17

### SPIRITUAL VALUE OF NATURA 2000 SITES

Ukonsaari Island | 20

The Rila Monastery | 23

Mt Athos | 26

### INSPIRATIONAL VALUES OF NATURA 2000

Nature Concerthall | 30

### NATURAL AND CULTURAL VALUES OF LANDSCAPES

Stevns Klint | 33

Wadden sea | 36

Secoveljske soline | 40

Vanatori Neamt | 43

Pico Island | 46

Burren | 50

The Teide National Park | 52

### NATURAL AND CULTURAL TOURISM

Gotland | 55

Iroise Marine Park | 58

Caves of the Aggtelek | 61

Short cases

### NATURA 2000 AND HISTORICAL AND ARCHEOLOGICAL SITES

European Green Belt | 66

Coa valley | 67

SASMAP | 68

Belgian part of the North sea | 69

The massif karst of Dachstein | 71

Biospharenpark | 72

The Gauja National Park | 74

### NATURA 2000 AND CULTURAL SITES IN CITIES

Almendralejo Church | 75

### SPIRITUAL VALUE OF NATURA 2000 SITES

Majella National Park | 77

### INSPIRATIONAL VALUES OF NATURA 2000

Dolomites | 78

### NATURAL AND CULTURAL VALUES OF LANDSCAPES

Skocjan Caves | 80

Plitvice National Park | 81

Dwejra Heritage Park | 83

Stora Alvaret | 84

Montesinho/Nogueira | 86

### NATURAL AND CULTURAL TOURISM

Soomaa National Park | 87

## Introduction

The extraordinary cultural and natural heritage of the European Union, recognized all over the world for its uniqueness and diversity, can offer a powerful contribution to sustainable and inclusive development. The amplitude of its landscapes, stretching from the Arctic to the Mediterranean Sea and from the Carpathian Mountains to the Atlantic Ocean, is reflected in the myriad of local traditions, land uses, languages, local arts, crafts and customs. When combined with innovative governance models, this rich heritage has the potential to make a significant contribution to the long-term competitiveness of economies, incrementing tourism inflows and exports of manufactured goods and services. It can also help to rekindle the interest of citizens in EU policies.

In recent years there has been a growing recognition within the European Union of the interplay between cultural and natural heritage and of the need for greater cooperation and information sharing between the two. The 2008 financial crisis and subsequent decreases in public budgets has also provided a further incentive to pool resources and explore potential synergies and opportunities for collaboration in terms of planning and management. The development of new information technology, while having a disruptive impact on some institutional structures, has facilitated contacts among administrations, scientists and local businesses and helped raise awareness for Europe's remarkable tangible and intangible heritage.

The promotion of synergies between cultural and natural heritage is already taking place at the local level in many European localities be they urban, coastal, rural and semi-rural, encompassing natural, cultural, recreational, historical, archaeological and inspirational or spiritual values.

As a major showcase of Europe's natural heritage and rich biodiversity, the Natura 2000 Network with its 27,000 sites across 28 EU Member States can act as a powerful ally in preserving Europe's rich heritage, offering ample opportunities for artistic spiritual reflection, artistic expression, education and awareness as well as recreation, health and tourism.

The Natura 2000 network is unique in that it is the largest coordinated network of protected areas in the world, it is not just about protecting remote nature but instead forms an integral part of our landscape incorporating wide ranging land use practices, cultural and social elements from 28 different countries across the EU.

Strong heritage – be it natural or cultural - can provide an important basis for attracting inward investments and promoting sustainable forms of recreation and tourism.

According to the EC communication "Towards an integrated approach to cultural heritage for Europe"<sup>1</sup> heritage can help brand cities and regions, attracting talent and tourism, while promoting social cohesion through regeneration of neglected areas, creating locally-rooted jobs, promoting a shared understanding and a sense of community.

In addition, heritage offers important educational and volunteering opportunities for both young and older people and promotes dialogue between different cultures and generations.

The value of the Natura 2000 network also extends well beyond its ability to protect Europe's biodiversity. It provides society with a wealth of valuable ecosystem services, such as fresh water, carbon storage, protection against floods, avalanches and coastal erosion, pollinator insects etc... and offers ample opportunities for tourism and recreation. Biodiversity is also essential in forming our cultural characteristics and values.

<sup>1</sup> European Commission, Towards an integrated approach to cultural heritage for Europe, COM(2014) 477 final.

Collectively, the ecosystem services provided by the Natura 2000 Network are estimated to be worth around € 200–300 billion per year. This is many times greater than the actual cost of managing the network in the first place.

The 2013 Report of the European Commission, “The Economic benefits of the Natura 2000 Network<sup>2</sup>, concludes that “there is a new evidence base that conserving and investing in our biodiversity makes sense for climate challenges, for saving money, for jobs” (...) and also “for cultural identity”. What is needed to harmonize cultural and natural heritage is an adequate protection, an integrated management and an interdisciplinary approach.

One of the main drivers of integration is linked to the capacity of cultural and natural heritage sites to attract visitors and the cascade effect on the local economy. Heritage, according to the EC communication, has a spill-over effect in other economic sectors, contributing € 415 billion to the EU GDP, with 3.4 million tourism enterprises accounting for 15.2 million jobs linked, directly or indirectly, to heritage. In total the tourism sector contributes more than 5% to the EU GDP, while the EU-28 total expenditure for culture in 2014, to give just one figure, corresponded to around 2.1% of the EU GDP and the expenditure for the ‘protection of biodiversity and landscape’ corresponded to about 0.1 % of EU GDP.

### **Nature and culture protection: the need for a policy**

As stated in the “Report of the Horizon 2020 Expert Group on Cultural Heritage, Getting cultural heritage to work for Europe”<sup>3</sup>, cultural heritage is a significant force for 21st century Europe. “Not only is it at the heart of what it means to be European, it is being discovered by both governments and citizens as a means of improving economic performance, people’s lives and living environments”.

According to the report “The challenges that European society is facing in terms of demographic change, migration and political disengagement of citizens, especially youngsters and unemployed people, have raised the question of how citizens can be empowered and better involved in institutional processes. We believe cultural heritage innovation can transform these challenges into positive outcomes for cohesion and wellbeing as is underlined in the Council conclusions on participatory governance of cultural heritage”.<sup>4</sup>

The transformation of heritage into living heritage entails the capacity to control, reduce or eliminate the prevailing process of homogenization, monoculture and commercialization that affects Europe and the rest of the world. It also requires overcoming the separation in planning and managing cultural landscapes. As stated in the above mentioned report “Science is often monodisciplinary, policies are mostly single-sectoral and the management of landscapes shows a strong divide between nature and heritage management. This often leads to miscommunication, inefficient use of resources and loss of cultural and ecological assets.”

Natura 2000 also recognizes this multidisciplinary approach, and is playing a crucial role not only in protecting Europe’s most valuable species and habitats but also in maintaining and promoting cultural assets in the sites. The Directives make it clear that its biodiversity objectives should be met while taking account of economic, social, cultural and regional requirements. Many World Heritage sites overlap with a Natura 2000 site or are directly or indirectly protected by European nature conservation legislation. One of the selection criteria for an area to be included in the World Heritage list refers to sites “that 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”.

2 European Commission, The Economic benefits of the Natura 2000 Network, 2013.

3 Directorate-General for Research and Innovation-2015, © European Union, 2015.

4 OJ (2014/C 463/01)

The policy document adopted in 2015 by the Paris general assembly of the World Heritage Convention “Policy for the integration of a sustainable development perspective into the processes of the World Heritage Convention” represents an important reference in explaining the need for an integrated policy and highlighted a number of important steps to be undertaken for an integrated approach to nature and culture management.

Another essential document by the UNESCO, World Heritage Centre entitled the “Handbook for World Heritage Cultural Landscapes”<sup>5</sup> includes in the introduction a quotation from one of the founding fathers of the concept of cultural landscapes, Carl Sauer “The cultural landscape is fashioned out of the natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result.” According to the Handbook “Managing cultural landscapes requires many issues to be addressed, so an interdisciplinary approach is needed that covers history, art, geography, architecture and landscape architecture, archaeology, anthropology, legal studies, ecological sciences, social sciences, including town planning, communication and marketing, sociology, financial management, interpretation, training and education, as well as the various uses of landscape, such as agriculture, forestry, industry or tourism”.

More recently, an international conference held in Athens in 2014 (“Declaration of Stymfalia : Cultural Landscapes in Natura 2000 sites: towards a new policy for the integrated management of cultural and natural heritage”<sup>6</sup>) identified a number of cultural and natural heritage. One is to look at strengthening implementation of the EU nature legislation considering in particular the essential contribution of Natura 2000 Network to the conservation and restoration not only of biodiversity, but more generally of natural and cultural values.

The Declaration of Stymfalia affirms that the key heritage management objective is to sustain landscapes while allowing both continuing use by local communities that are dependent on them and conserving cultural and natural heritage. Integrated planning should engage all stakeholders (public, environmental and cultural associations, NGOs, central/regional/local administrations, scientific community) in the preservation and restoration of the linkages between natural and cultural heritage. And last but not least management plans of landscapes with important cultural and natural heritage, especially those located within Natura 2000 sites, need to be supported by an integrated set of natural and cultural heritage criteria rather than separate ones.

A meeting of EU Nature directors held in Rome a few months later resulted in the agreement on the so-called “Charter of Rome on natural and cultural capital”<sup>7</sup> with similar recommendations and cultural values.

According to the Charter culture is considered, on the one side, as one of the services provided by ecosystems and, on the other side, as the main driver in influencing ecosystems and biodiversity and in shaping landscapes. Nature and people, private and public entities and groups are intimately interrelated and interacting in direct or indirect ways almost everywhere. This human driving role in diversity is particularly true in Europe where cultural features have shaped entire land use with agriculture, forestry, communities and other urban, peri-urban or rural infrastructure.

The two international acts that the Charter refers to are the 1992 Conventions on Biological Diversity and on Cultural Heritage. The CBD aims at protecting and encouraging customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements”. While the 2003 Convention for the Safeguarding of Intangible Cultural Heritage, states that “The intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. The “intangible cultural heritage”, is manifested inter alia in ... (d) knowledge and practices concerning nature”.

5 © UNESCO, 2009

6 [http://stymfalia2014.piop.gr/Assets/pdf/Declaration\\_Stymfalia2014\\_en.pdf](http://stymfalia2014.piop.gr/Assets/pdf/Declaration_Stymfalia2014_en.pdf) issues, priorities and objectives to strengthen the management of a common

7 [http://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/conference\\_ncc\\_charter\\_rome\\_24october.pdf](http://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/conference_ncc_charter_rome_24october.pdf)

## Natura 2000

The European ecological network, Natura 2000, was created to safeguard biodiversity, without excluding socio-economic activity and indeed in some cases encouraging human activities.

Natura 2000 is the main instrument of the EU policy for biodiversity conservation. It's an ecological network that stretches all across the EU territory, established in compliance with the Birds Directive (79/409/EEC) and the Habitats Directive (92/43/EEC) in order to guarantee the long term survival of natural habitats and those species of flora and fauna that are threatened or rare by protecting their minimum vital space.

Today Natura 2000 covers over 18% of the EU's land area and almost 6 % of its marine territory and represents the largest coordinated network of protected areas in the world. Extending over 28 countries the Natura 2000 network includes freshwater, coastal, forest and agricultural habitats.

One of the innovative aspects of the Habitats directive was the inclusion of seminatural habitats which are the result of centuries of agricultural activity, including arable grasslands, steppes and lowland and mountain meadows, on which many species of fauna, in particular birds, are dependent.

One of the main challenges in building the Natura 2000 network relates to establishing the necessary conservation measures and if needed, the appropriate management plans, based on an analysis of both natural value and socioeconomic context and taking into account the characteristics specific to each site and all foreseen activities, including those related to cultural assets.

Although preparing management plans differed according to different Member States and local cultures, they were all faced with a common problem: resolving conflicts between human interests and nature and convincing people and policy makers that human activities and economies depend on ecosystems and that it is in everyone's interests to conserve them in a good status.

Currently many of the over twenty-seven thousand rural, coastal and urban sites making up the Natura 2000 network have management plans and the challenge for their managers is how to sustain them in a viable and profitable way. One of the main benefits of the Natura 2000 network is the connectivity that has been created among site managers to share best practices through the networks organized on the base of specific themes and issues.

## Methodology

Biodiversity and cultural assets are often subject to same threats or require integrated management plans and it is therefore reasonable to link the measures and plans to protect them. The objective of this document is to highlight the contribution of Natura 2000 to the conservation and restoration of natural and cultural capital and suggest factors of success and gaps to address in the future.

A scoping document on nature and culture prepared for the EU Commission suggested a first methodological approach as a basis for the development of a more effective strategy to blend cultural and natural heritage management.

The bibliographic research was carried out through an online search of websites and information platforms (as CBD, BISE, UNESCO, UNEP, ICOMOS, EEA, EBRD and the Council of Europe, Alternet and the EU Business and Biodiversity platform). The survey involved conventions and policies, scientific articles, conference proceedings, relevant peer-reviewed datasets and models, working papers and reports from relevant research, significant initiatives exploring the relationships between biodiversity and culture in terms of policies and funding opportunities.

The Commission then decided to expand this work, by showcasing a series of case studies from across the EU that would represent different aspects of linking Natura 2000/ biodiversity and cultural heritage.

To explore the mutual advantages of linking cultural heritage and biodiversity and, in particular, the added value that Natura 2000 represents, the case studies are organized on six

different layers identified through the scoping study:

- *Natura 2000 and historical and archaeological sites*: the history of Europe, its development and memories have been established over the centuries and natural environments have contributed to shaping our cultural identity. The European territory includes innumerable sites of great historical and archaeological importance and many have also natural values and are, for this reason, part of the Natura 2000 Network.
- *Natura 2000 and cultural sites in cities*: several European cities host both cultural heritage assets and a rich and diverse wildlife and have an important role to play in halting biodiversity loss. The European ecological network includes areas within 32 major cities amounting to over 100 Natura 2000 sites harbouring collectively 40% of the threatened habitat types, half of the bird species and a quarter of the rare butterflies of European interest
- *Spiritual value of Natura 2000 sites*: sacred natural sites are important areas for environmental conservation as traditional respect for the environment and access restrictions lead to well-conserved areas with high biological diversity. The linkage between spiritual and natural values can encourage the protection of landscapes (e.g. in the case of holy mountains) or of entire ecosystems (e.g. in the case of holy forests) hosted in a Natura 2000 site.
- *Inspirational values of Natura 2000*: human cultures, knowledge systems, religions, social interactions, and amenity services have been influenced and shaped by the nature of ecosystems. At the same time, human activity has influenced and shaped its environment to enhance the availability of certain valued services. Ecosystems, landscapes and biodiversity protected through the Natura 2000 Network often inspire cultural and artistic expression and are an invaluable resource for science and education.
- *Natural and cultural tourism*: recreation and tourism uses of cultural and natural areas are growing steadily. Eco-tourism can support biodiversity conservation providing revenues for the management of Natura 2000 sites and cultural heritage can provide an important basis for the “branding” of an area.
- *Natural and cultural values of landscapes*: the strong linkage between Natura 2000 and culture is evident in particular in relation to landscapes. Europe is characterised by innumerable diversified landscapes transformed by the interactions of people and nature over time. Traditional patterns of land use have proven sustainable over centuries and are living examples of cultural heritage.

The aim of the case studies is to show practical examples of successful integrated management of cultural and natural assets, highlighting the actual or potential role played by the Natura 2000 Network. Best practices showcase the integration, or the best opportunities, at management and at regulatory level, including authorities involved and stakeholders engaged.

### **Main conclusions**

The case studies illustrated in the following pages present the context where efforts are undertaken to achieve an integrated management of cultural and natural values.

On the base of these case studies it is possible to identify a number of elements that can contribute to ensuring the viability and durability of integrated management plans.

#### *Factors of success*

- a single management body for both natural and cultural aspects or at least an interdisciplinary approach, shared long term vision and harmonized legal frameworks for protection,
- knowledge of all assets that represent the cultural and natural heritage of a site,
- effective engagement of local residents and stakeholders,
- a precise assessment of ecological and cultural sustainability versus sustainable use (visitors, economic activities,...),
- design of innovative solutions fit for specific situations,
- integrated management plans and planning tools to combine different management prescriptions and objectives and overcome potential conflicts, eg use of zoning,
- awareness raising information and dissemination both locally of what they have and with potential to attract tourists attention, branding and inward investments.

- an interdisciplinary approach and monitoring of impacts eg of tourism. To achieve a successful integrated management it is often important to overcome a number of challenges still not fully addressed:

*Gaps to address*

- analysis of factors connecting cultural and biodiversity interdependence
- analysis of challenges for policy development, harmonization and implementation
- development of methodologies to better integrate biodiversity and cultural landscapes management
- coordination between cultural and natural managers and a two-ways communication with stakeholders.

*Recommendations for further work*

- encourage new researches on the potential of an integrated cultural/natural heritage approach,
- promote exchange of expertise at EU, national and local levels through seminars, conferences, platforms in order to:
- encourage dialogue between cultural and natural heritage experts/managers management in order to improve understanding of the requirements of both sectors and agree on common objectives
- identify and brand traditional crafts and practices related to the conservation of natural and cultural heritage
- identify existing platforms (i.e. GEOSS, Copernicus, European Environmental Agency) and cutting edge information technologies that can provide tools and best practices for discovery and monitoring of natural heritage;
- promote an enabling policy framework to expand local capabilities and create opportunities to use capabilities;
- view conservation objectives within a larger landscape context and within a larger system of social and environmental values and needs encompassed in the sustainable development concept,
- fully embrace sustainable development and harness the reciprocal benefits for heritage and society,
- use international and regional initiatives aimed at building investment promotion expertise, and take advantage of information exchange networks for promoting investment,
- promote investment linkages between businesses, especially between foreign and local enterprises,
- address the specific investment obstacles faced by SMEs and local producers,
- keep in mind that the value of the cultural landscape is based on the interaction between people and their environment and the focus of management is on this relationship.

Historians, economists and social scientists have done a lot of research on the management of common goods, common land and common resources since the 1990's. These show that common management can actually be very sustainable if it is in accordance with situation-tailored, or situation-specific types of governance. This leads to one of the major challenges in European heritage management for the next few years: the development of new heritage commons. How can we use the new insights on sustainable management of common land and common goods in order to develop successful new collective arrange

ments and strategies on the local and micro regional level for different categories of heritage? And how could these new local arrangements successfully match with professional and institutional heritage management, or could even be an alternative for these? Possible impacts could be a stronger engagement and involvement of local communities in landscape and heritage management, new sources of financing as well as a considerable reduction of management costs. "Report of the Horizon 2020 Expert Group on Cultural Heritage, Getting cultural heritage to work for Europe"<sup>8</sup>.

Spain

## Las Médulas, splendid nature in ancient mines

- ◀ Ensuring joint management and preservation of cultural and natural features through a single management body



### A fantastic scenery resulted from a Roman gold mine

The spectacular landscape of Las Médulas is the result of one of the largest gold mines in the Roman Empire which dates back to the 1st century A.D. Because of its outstanding cultural and natural values, the area is protected as a Natural Monument and a Cultural site according to national and regional law and is designated as a World Heritage Site by UNESCO. Moreover, it is part of a bigger Natura 2000 area (ES4130117 Montes Aquilanos y Sierra de Teleno), which also includes the Carucedo Lake, a protected wetland originating from the ancient mining activity, and of great importance for waterfowl.

#### Cultural values

To extract gold from Las Médulas, the Romans used a system called “ruina montium” (wrecking of mountains), a type of hydraulic mining which involved undermining a mountain with large quantities of water. This technique, which was described by Pliny the Elder in 77 A.D., consisted of carving tunnels into the mountain, like a giant ant hill, and filling them with water to saturate

and collapse the mountain and thus extract the gold. The work in Las Médulas ceased in the 3rd century when the supply of gold was exhausted. The area has since been taken over by nature, creating what is now a magnificent landscape of fantastic red rock formations carved out from years of mining activity, covered with chestnut and holm oak trees.

#### Natural values

Las Médulas and the surrounding area hold a diverse natural biodiversity rich vegetation of oak woods, chestnut and Mediterranean pine forests, natural alluvial forests of alder and ash trees, willows and poplars. The area is also an ideal habitat for a variety of wildlife, including species protected under the Habitats Directive such as horseshoe bats (*Rhinolophus euryale*, *R. hipposideros* and *R. ferrumequinum*), endemic amphibian and reptile species (*Chioglossa lusitanica*, *Iberolacerta galani*) as well as other endemic species linked to watercourses such as the Pyrenean Desman (*Galemys pyrenaicus*) and fish like the *Achondrostoma arcasi*, which are only found in a few rivers in Portugal and Spain.

Moreover, the area stands out for the rich birds' community, which includes important breeding populations of Hen and Montagu's Harriers (*Circus cyaneus* and *C. pygargus*), Peregrine Falcon (*Falco peregrinus*), Golden, Booted and Short-toed Eagles (*Aquila chrysaetos*, *Hieraaetus pennatus* and *Circus gallicus*), Honey Buzzard (*Pernis apivorus*), Chough (*Pyrrhonorax pyrrhonorax*), Red and Blue Rock Thrushes (*Monticola saxatilis* and *M. solitarius*), Alpine Swift (*Apus melba*), Bluethroat (*Luscinia svecica*) and an endemic partridge (*Perdix perdix hispaniensis*).

### Integrated management of natural and cultural values involving all relevant stakeholders

The site is managed with the aim of ensuring the preservation of its significant cultural and natural features. It represents a good example of integrated management that takes into account both interests.

Having different protection categories, the site is managed in accordance with approved management plans appropriate for each category, under the competence of different administrations (Culture and Nature regional authorities).

The conservation measures and the management of the natural protected area were first determined in a Natural Resources Management Plan approved in 2002 which concerned the area designated as Natural Monument, a protected area category which, according to national and regional legislation, deserves special protection for its scientific, cultural or landscape values. This Plan established the necessary measures to ensure the protection, conservation, improvement and appropriate use of the natural area.

Furthermore, a management plan has been adopted for the Natura 2000 site that includes Las Médulas, which sets the conservation objectives and necessary measures to ensure the maintenance or, where appropriate, the restoration of the natural features (habitats and species) that motivated the site designation. This plan also sets relevant sectoral guidelines for the conservation and management of the protected area considering the environmental integration of land use and activities in the Natura

2000 site (e.g. forest management, agriculture, tourism, hunting, etc.).

In addition, a plan for the management and use of the Cultural Site of Las Médulas determines the management criteria and conservation measures for the maintenance and use of this area with the aim of preserving its cultural values, while promoting the necessary actions relating to research, conservation, public access and visits. The existence of unique natural and cultural values in the site has gained considerable recognition and appreciation by society in recent years. This has caused a significant increase in visitors and in the demand of tourism services.

The management plan of the cultural site takes into account the importance of preserving the significant natural assets present in the site and the impact that an increasing number of visitors may have on them. The plan considers that a massive influx of visitors can increase erosion or affect the vegetation and other sensitive elements of the natural environment. Among them, the conservation of wetlands and lakes, such as the Carucedo Lake, should deserve special attention. It is therefore planned to carry out the necessary studies and monitor the possible impacts of tourism on the area while adopting suitable measures to properly channel



the general public and implement the necessary actions in this regard.

The importance and diversity of natural and cultural assets requires that there is a proper coordination of the actions and resources coming from different parties involved in the management of the site. Significant efforts have been made to promote the integration of management bodies and social participation. To this end, the regional government nominated in 2013 a Governing Board, which constitutes a single management body for the cultural site and the natural area. This Governing Board integrates Nature and Culture administrations, all local town councils and relevant stakeholders, as the most relevant Unions, business and professional organizations, land owners and NGOs. By ensuring cross-sectoral dialogue, the management of the area is not only more efficient but also helps to resolve any potential conflicts that might arise between nature and cultural objectives.

### Conclusions

Las Médulas is an area with significant cultural and natural values which require special protection. This makes the site management quite complex and necessarily requires the involvement of different administrations and stakeholders, including two regional ministries (Culture and Environment), many local councils and private actors (e.g. Las Médulas Foundation).

The challenge was therefore to properly integrate the management bodies and regulations approved for the cultural site and the natural protected area.

This has been achieved through the designation of a Governing Board which acts as a single advisory and management body for the cultural site and the natural protected area, ensuring that decisions are made with the consensus of all relevant institutions and social actors in the area.

The management plan recently approved for the cultural site (2013) further strengthens the integration of all the natural values in the management of the cultural site. It takes into account the management plans and regulations established for the protected areas included in the site (natural monument and Natura 2000 sites) and foresees the necessary actions to prevent any possible impact of visitors on these areas.

Las Médulas receives an increasing number of visitors every year (around 80,000 in 2015 while there were just 50,000 visitors in 2010) who come to enjoy the archaeological and historical heritage as well as the rich natural heritage. This is a quite significant number

of visitors for such a remote area in Central Spain, far away from tourism circuits, with just around 3,200 inhabitants in the three main villages. Guided tours also increased considerably (from 5,000 in the year 2006 to 22,000 in 2009), which provides a good opportunity to raise awareness about the natural values of the area among those who come attracted by its cultural features and vice-versa.

A Foundation was set-up especially to promote knowledge, awareness and dissemination of Las Médulas values, with the participation and sponsorship of regional and local administrations and private stakeholders. Las Médulas Foundation aims to contribute to the valuation and protection of the cultural site as well as help improve the awareness of this important cultural and natural area. An information centre located in Las Médulas village and managed by the Foundation, provides information and support to visitors. Guided tours, leaflets and brochures have been prepared to promote and enhance the enjoyment of the main natural and cultural features of the area.

### References

- <http://www.miespacionatural.es/espaciospanel/4353>
- [http://www.patrimonionatural.org/ren.php?espacio\\_id=16](http://www.patrimonionatural.org/ren.php?espacio_id=16)
- <http://rednatura.jcyl.es/natura2000/LIC/Formularios%20oficiales/PDF%20LIC%20resumen/ES4130117.pdf>
- <http://www.fundacionlasmedulas.info/>
- <http://www.turismocastillayleon.com/es/rural-naturaleza/espacios-naturales/medulas>
- <http://www.jcyl.es/>

Greece

## Megali and Mikri Prespa Lakes, an example of integrated management in a national park

- ◀ A place where Natura 2000 coexists with archaeological, historical, religious, landscape and spiritual values
- ◀ A management body with an overall view of the common heritage which has led to the establishment of a new decision making scheme involving all stakeholders

### Background

Located in the Northwestern part of Greece, Prespa National Park has been included in the Tentative World Heritage List following its nomination by Greece for both its cultural and nature values (so called “mixed site”).

#### Natural values

Established in 2000 by the Prime Ministers of Greece, Albania and the Former Yugoslav Republic of Macedonia (FYROM), this region is now part of the Trans-Boundary Biosphere Reserve ‘Ohrid-Prespa Watershed’.

The Greek part of Prespa also includes two Natura 2000 sites, which are renowned for their rare waterbirds. They host one of the few mixed colonies of Dalmatian Pelicans (*Pelecanus crispus*) and White Pelicans (*P. onocrotalus*) in Europe and harbour one of the highest concentration of Dalmatian Pelican breeding pairs as well as one of the largest colonies of Pygmy Cormorants (*Phalacrocorax pygmeus*) within the European Union. The Mikri Prespa lake is a Wetland of International Importance, thus coming under the aegis of the international Ramsar Convention.

#### Cultural values

The historical and cultural attractions of the area are also of outstanding interest and beauty. They include numerous archaeological sites from the Neolithic Age to the Byzantine and Post-Byzantine period, not to mention the local architecture, with houses made of natural materials such as stone, wood, clay and reeds. It is also a territory with a long history of wars and conflicts between different nationalities. The resulting mix of different cultures has added to the site’s already rich and diverse cultural heritage.

The survival of both the natural and cultural heritage of the area is due in great part to the absence of human activities during the second half of the 20th century.



Today nearly 70% of the professional activities are concentrated in the primary sector, e.g. bean cultivation, fishing and livestock farming. Fishing has been the main activity of the inhabitants of the littoral settlements for decades. The use of traditional fishing methods has persisted until a few years ago, especially in the Lake Mikri Prespa.

### Integrated management of natural and cultural values

The first coordinated effort to protect the entire area took place in 1990 with the foundation of the Society for the Protection of Prespa (SPP), a non-governmental organisation, that has systematically and effectively contributed to the protection of natural and cultural heritage throughout the entire Prespa basin, by means of a wide range of projects jointly promoting viable development and the harmonious co-existence of man and nature.



The establishment of Prespa Park has successively laid the basis for an integrated management of the area's natural and cultural heritage. According to the Prime Ministerial Declaration the objectives of the Prespa Park are:

1. To conserve the ecological values and functions and of the biological diversity.
2. To increase opportunities for a sustainable economic and social development of the local societies and the use of natural resources for the benefit of nature, local economies and future generations.
3. To preserve cultural values, such as monuments, traditional settlements and traditional human activities, and of those cultural elements promoting the sustainable management of the natural resources.
4. To encourage the participation, cooperation and involvement of stakeholders in decision-making and in benefit sharing in all three countries.

The strategic Action Plan for the sustainable development of the Prespa Park, completed in 2002 and updated in 2010, was the first building block of the trilateral cooperation. The action plan includes a series of long-term goals with related actions at a transnational, national and regional level including objectives to: preserve and restore the ecological status and values of surface and ground water resources; strengthen land-use planning and management;

improve the livelihoods of the local communities by ensuring sustainable forestry, agriculture and fisheries; preserve cultural heritage and improve eco-tourism.

The plan also includes an estimate of the costs for hiring a person to be responsible for the implementation of the measures and, in a dedicated section, it lists potential funding sources on both an international and national level

#### **Best practices concerning stakeholder involvement**

Residents in areas surrounding Prespa Park are engaged in a series of activities related to agriculture, animal-husbandry, fishing, and mainly in water management and tourism. Ensuring their active involvement in the conservation and promotion of the area is therefore crucial.

#### *Water Management*

The conservation efforts in Prespa have been particularly successful due to the establishment of a new decision making scheme, which has allowed the participation of all relevant stakeholders. Conservation and management actions, especially towards the conservation of important wetland habitats and waterbird species, have been based on EU funds.

Following an important decline in breeding colonies of the Dalmatian Pelican and the Pygmy Cormorant, a number of local stakeholders set out in the late 1990's to implement concrete measures in order to reverse this trend. Central to those efforts was the very first study on the Mikri Prespa wetland vegetation the recommendations of which were piloted in various test sites across the wetland. Thanks to its multi-stakeholder participation approach, which promotes active participation in wetland management and sharing of responsibility, the area received a LIFE project (2002-2007 LIFE02 NAT/GR/008494) to continue and expand on the initial management activities undertaken. It helped to demonstrate that consensus can be found to accommodate what initially can be considered as "conflicting interests", those of conservationists on one hand and farmers and stock breeders on the other, in a delicate situation involving water management. A major success is also the fact that regulatory means have been put into place in order to ensure the sustainability of the water level management and the vegetation management and habitat restoration. Most notable is the creation of the Water Level Management Committee and its transformation into the Wetland Management Committee (WMC), which are constituted by key stakeholders.

Moreover, in the Greek part of the Prespa Lakes, experts from 17 countries met in September 2009 to analyse and discuss the possibility and modalities of a common approach to the natural and cultural heritage of Mediterranean wetlands that would result in creating synergies and building consensus. At the end of the workshop, organised by Med-INA (Mediterranean Institute for Nature and Anthropos) with the collaboration of the Med-Wet Initiative and the Society for the Protection of Prespa (SPP), a Prespa Statement on 'an integrated approach to the cultural and natural values of Mediterranean wetlands was proposed ([http://www.silene.es/documentos/Prespa\\_Statement.pdf](http://www.silene.es/documentos/Prespa_Statement.pdf)). All participants agreed reconfirmed their belief that an integrated approach to both the natural and cultural heritage of wetlands will improve understanding of the situation and will significantly benefit the conservation of both aspects of heritage.

#### *Transboundary cooperation for tourism*

The development of tourism is considered an important element for the preservation of the natural resources and cultural heritage of Prespa Park, providing an essential source of income to local communities. The Prespa region of Greece is the most successful in terms of tourism even though there still are significant marketing challenges, in particular in attracting visitors in the off-season.

In February 2010, the Ministries of Environment of the three countries sharing the Prespa Lakes basin and the European Commission signed an international agreement. "The Tourism Strategy and Action Plan", intended as a forward-looking visionary document to help the three governments in securing future funding for the implementation of responsible tourism initiatives within the Prespa Lakes basin. The Prespa Lakes basin will be developed as a model of sustainable and responsible tourism development, building on its superb natural and cultural features. It will have high quality attractions and activities for both domestic and international visitors in a stunning landscape protected by National Parks.

"The management plan for ecotourism, natural and cultural heritage" includes transnational, national and regional targets and activities, together with potential indicators of the success of each activity. The main product themes which the Prespa Lakes basin offer in order to meet growing market needs are ecotourism, nature including bird-watching, culture, activity tourism, and environmentally sensitive accommodation, resort and spa developments in order to create awareness of the Prespa Lakes basin as a superb location for ecotourism, nature, culture and marketing initiatives. A series of potential flagship investments are outlined in the Action Plan for future funding, to attract new visitors and to extend length of stay. According to the projections the tourists foreseen in the Greek part of Prespa were to increase from a yearly average of 23,652 (2011) to 40,000 (2015).

#### **Conclusions**

Prespa is an area rich in natural beauties such as lakes, rivers, forests, flora and fauna. It has been shaped by human presence ever since prehistoric times. Today human activities, which have played a crucial role in the creation of the natural landscape, are providing a vital contribution to the management and protection of the area.

The 2002 Strategic Action Plan identified potential difficulties in implementing the transboundary co-operation in Prespa Park:

- Different laws, policies and protected areas systems and powers of the management authorities;
- Different political and administrative structures;
- Different stages of economic development and policy;
- National sovereignty and security matters;
- Difficult terrain, inaccessibility and lack of transport;
- National political or cultural difficulties that can cause misunderstandings;
- Language barriers;

- Pending foreign policy issues between Greece and the former Yugoslav Republic of Macedonia that prohibit a formal adoption of new international agreements between the two countries.

But despite all these difficulties, the strategic plan is being implemented. The main factors that have determined the success of the program are the overall view of the common heritage to be preserved, the integrated approach to the management of the natural and cultural values and, last but not least, the active participation of local stakeholders.

A range of initiatives, promoted also by SPP, including the trilateral declaration of the Prespa transboundary Park, the establishment of a new legislative framework and new multi-stakeholder bodies for the Park, the development of a joint Strategic Action Plan, the organisation of a transboundary monitoring system, the completion of a Spatial Planning Study for the Greek side of Prespa, and the promotion of trademarked 'Prespa Park Products' (PPP) were all achieved primarily via bottom-up multiscale participation, communication and multilayered networking activities by a variety of stakeholders.

The case of Prespa is an example where conservation efforts have been particularly successful due to the establishment of a new decision making scheme, which has allowed the participation of all relevant stakeholders.

## Reference

- Bojadzi, A., Brajanoska, R., Stefkov, Gj., Fotiadis, G., Shumka, S. And Avukatov, V. (2012). Conservation Action Plan for Mountain tea in the Prespa Lakes Watershed (Final Report). UNDP/GEF project "Integrated ecosystem management in the Prespa lakes basin", pp 65.
- Muslli, MSc E. (2015). The Cultural Heritage of the Great Prespa Region. Academic Journal of Business, Administration, Law and Social Sciences. 2015; 1 (1).
- Society for the Protection of Prespa (SPP), WWF-Greece, Protection and Preservation of Natural Environment in Albania (PNEA), Macedonian Alliance for Prespa (MAPP) (2005). Strategic Action
- Plan for the Sustainable Development of the Prespa Park, Executive Summary, Aghios Germanos, pp.76. [http://www.silene.es/documentos/Prespa\\_Statement.pdf](http://www.silene.es/documentos/Prespa_Statement.pdf)
- Papayannis, T. and Pritchard, D. E. (2011), Culture and Wetlands in the Mediterranean: an Evolving Story, Athens, Med-INA.
- Trakolis D.(2001). Local people's perceptions of planning and management issues in Prespes Lakes

National Park, Greece. J Environ Manage. 2001 Mar;61(3):22741.

- UNDP former Yugoslav Republic of Macedonia (2012a). Prespa Lakes Basin. Strategic Action Programme. Integrated Ecosystem Management in the Prespa Lake Basin.
- UNDP former Yugoslav Republic of Macedonia (2012b). Tourism. Strategy and Action Plan for the Prespa Lakes Basin 2012-2016. Integrated Ecosystem Management in the Prespa Lake Basin.

<http://www.spp.gr/>

<http://whc.unesco.org/en/tentativelists/5864/>

<http://prespanationalpark.gov.al/?lang=en>

Italy

## Matera, learning from the ancient rupestrian paradigm

- ◀ A successful case of revitalizing a city through the recovery of its cultural and natural heritage

### Background

Surrounded by a small canyon carved out by the Gravina (ravine) river, the Italian city of Matera, is located in the southern region of Basilicata.

Stretching along the western slopes of the Murgia karst plateau, Matera is famous for its Sassi (literally “stones”), a peculiar system of dwellings and churches carved into the rock, that constitute the oldest part of the city, inhabited since the Paleolithic age. In 1993, Matera and the Archaeological Historic Natural Park of the Rupestrian Churches of Matera, were inscribed in the UNESCO’s World Heritage List as a unique testimony of a human activity whose universal value is linked to the symbiosis between cultural and natural landscape. More recently Matera has been designated as the European capital of culture for 2019.

This ancient self-sufficient housing complex is located in an area composed mainly of easy to mould calcareous rock. The scarceness of resources such as soil, energy and, in particular, water and the need to use them judiciously encouraged their collective management. Thus, during the rainy season the terracing protects the slopes from erosion and conveys the water by gravity into the many cisterns while, in the dry season, specially created cavities collect and store water which is generated from the atmospheric humidity of cisterns located at the bottom of the caves.

What today appears as an extraordinary urban ecosystem, is the result of different civilizations, starting from prehistoric times. The ancient principle of land management, based on the harmonious relationship between humans and nature, was interrupted in 1952, when the Italian government declared the caves, defined as a national shame, as uninhabitable, forcing their abandonment. Only in 1986 did the Italian Parliament approve a law to promote the recovery of the area, leading to the restoration of the Sassi as we see them today, completely renovated and repopulated.

When it comes to biodiversity and landscape, the Sassi and the ravines characterizing the surrounding environment represent a significant area of interest. In the 1990s the entire area of the Matera’s ravines



has been designated as a Natura 2000 site (ZPS-SIC IT9220135 “Gravina di Matera”) coinciding almost completely with the perimeter of the Archaeological Historic Natural Park of the Rupestrian Churches of Matera.

In particular, the Sassi and the ravines are an important breeding and staging area for numerous birds, including two priority species, the Lesser kestrel (*Falco naumanni*) and the Lanner falcon (*Falco biarmicus*), which have their most important breeding population here. Other species of importance include the Red kite (*Milvus milvus*), the Egyptian vulture (*Neophron percnopterus*) and the curlew (*Burhinus oedipicus*). The lesser kestrel, symbol of the park, has found another ideal habitat in the Matera Sassi, sometimes nesting under the roofs of the houses, between the tiles and on the cornices of churches and monasteries.

### Integrated management of natural and cultural values

The history of Matera was marked by a full symbiosis between its natural and cultural features until the



1950s, when the population was forced to leave the Sassi, leading to a rapid decline of the area. From that moment on, the need to recover the Sassi became a challenge for Italian and international scientists and intellectuals, who saw in them the expression of a priceless culture.

Finally two legislative acts, the first in 1967 (Measures to complete the consolidation of the districts “Sassi di Matera” and for their historical and artistic protection) and the second in 1986, helped to launch the restoration of the Sassi.

The institution of the Archaeological Historic Natural Park of the Rupestrine Churches of Matera, in 1990, connected the Sassi to the surrounding natural landscape and promoted the use of ancient techniques of construction, whilst at the same time taking into account the valuable natural values of the area designated under Natura 2000.

A management plan for the site has been recently produced and approved, in order to achieve a collaborative management approach among the various authorities and to avoid an overlap of their responsibilities. The process has been planned using three symposia/ workshops which offered an

opportunity to facilitate the debate and develop and create shared ideas.

#### **Safeguard actions for threatened raptors of the Matera Province**

Between 2006 and 2009, the Park Authority and the municipalities of Matera and Montescaglioso also carried out a LIFE project (Rapaci lucani LIFE 05 NAT/IT/0009) aiming at safeguarding the most important European population of lesser kestrel while favouring the cohabitation with the residents.

In order to protect the colony nesting under the Sassi roofs, new standards were set in the construction regulations, to ensure that the appropriate roof tiles and cavities that are required for nesting lesser kestrel are provided for when renovating or constructing new buildings. Furthermore, 400 artificial nests were installed in several buildings of Matera and Montescaglioso and another 1,600 were made available to building companies and individual citizens, resulting in a considerable increase of the lesser kestrel population and offering a concrete example of the value of integrated management.

Another LIFE project, (ARUPA, Urgent actions for amphibian and reptile species present in the Gravina di Matera- LIFE08/NAT/IT/000372), focused on the torrent Gravina, affected by a high level of pollution which reduced the presence of valuable freshwater species. The habitats on the bottom of the ravines, characterized by the presence in the wettest months of temporary collections of water, are an ideal refuge for many rare species of amphibians, such as the Apennine Ululone (*Bombina pachypus*), the Southern Crested Newt (*Triturus carnifex*), the Italic Triton (*Triturus italicus*), the Italian tree-frog (*Hyla intermedia*) and some reptiles such as the fourlined snake (*Elaphe quatuorlineata*).

In order to preserve the amphibians and reptiles and to mitigate the threat factors, the project completed a number of actions to ensure the survival of populations through renaturalization of the watercourse, reforestation, restoration of dry stone walls, which are part of the cultural heritage of Matera, as well as the establishment of forest nurseries and farms for the captive breeding of amphibians and reptiles.

### **Reintegrating in the urban context the oldest part of the city**

The great challenge of Matera was to ward off the museum crystallization of the Sassi. This was made possible by reintegrating the oldest part of the city in the urban context and developing community participation in matters of tourism and cultural enhancement. This approach has seen a growing number of cultural associations participating in or focusing on testing and showcasing various artistic forms. Amongst those participating are a number of historical Cultural institutions recognized at the national level (among others La Scaletta, Centro Carlo Levi, fondazione Zetema, Artèria).

In order to create national and international attention a number of events were organized, such as, among others, the “Sassi Great sculpture exhibitions”, the “Women’s Fiction Festival”, the “International writing workshop for women” and the literary award “Energheia” for emerging young writers, together with musical events such as the “Duni Festival”, the exhibition “VivaVerdi”; the Onyx Jazz festival Club, “Gezziamoci”, which has now reached its twentieth edition and includes, among its many cultural and musical activities, also guided walks through the natural and cultural landscape surroundings of Matera; the “MiFaJazz Big Band Festival” and “The Colors of Jazz”. These activities that have contributed to keeping the Sassi alive and raising the awareness of the cultural value they represent. They have also lead to the considerable increase of tourism: in 2010 Matera, with a

population of 60,000 hosted 120,000 visitors, with an increasing trend and an almost year round presence. The recognition of Matera as the European Capital of Culture for 2019 bears witness to the cultural vitality of the city that is in harmony with its natural values as well.

### **Conclusion**

Matera has shown over the years a great capacity to learn from past mistakes. First abandoned and then re-populated, the Sassi, which now represent one of the main tourist attractions in southern Italy, have returned to their original symbiosis with the landscape and nature. The participation of the local community has played a key role in recovering the Sassi’s cultural heritage as well as safeguarding its natural values.

The legislative framework has provided an important support for integrating environmental and cultural management activities. Today, the area of the Sassi is an active part in the life of Matera, and a model of sustainable development in harmony with nature.

### **Reference**

<http://whc.unesco.org/en/list/670>  
<https://www.fondazioneSassi.org/category/news/>  
<http://www.matera-basilicata2019.it/it/>  
<http://www.italyheaven.co.uk/basilicata/matera.html>

Finland

## Ukonsaari Island, natural and spiritual home of the Sámi

- ◀ Common challenges in the management of Natura2000 and spiritual heritage
- ◀ An interesting example of sustainable development respectful of a sacred place
- ◀ A replicable path to reconnect people with nature through culture



### Background

The Sámi are descendants of the people who first inhabited the northern regions of Fennoscandia shortly after the end of the last ice age (approximately 10,000 years ago). At its height, the Sámi inhabited the whole of what is now Finland and progressively started to differentiate from Finnish due to differences in livelihoods and culture. There are now about 9,000 Sámi in Finland, more than 60 per cent of whom now live outside the Sámi Homeland (an area legally defined), but the total Sámi population is estimated to be over 75,000, with the majority living in Norway.

The Inari Sámi people are part of a distinct language group and have lived in the vicinity of Lake Inari for two thousand years. The Inarijärvi protected area is situated in the municipality of Inari, Northern Lapland, and covers 900 km<sup>2</sup> of the total 1,043 km<sup>2</sup> of Lake Inari. In the heart of Lake Inari, a rocky island called Ukonsaari (100m wide, 300m long and over 30m high) stands out from the surrounding islands. Its steep cliffs, boulders and caves make it a famous natural site that is known to

have been a very important and sacred place of worship for the indigenous Inari Sámi people.

### Natural values

Ukonsaari is also of high nature value hosting a wide range of rare and endangered species and habitats that are protected under the EU Habitats and Birds Directives. Inari lake is Finland's third largest lake with numerous islands, a beautiful and diversified landscape. It is surrounded by vast areas of mires and old growth forests. Having an excellent water quality, the lake hosts numerous fish species, including indigenous lake trout, various salmonids as well as the Arctic Char and a wide variety of white fish. The site hosts also numerous bird species, in particular waterbirds.

### Cultural values

The Ukonsaari Island bears the name of the most powerful god, Ukko, the god of thunder, comparable to the Greek god Zeus. Ukko had power over the weather and people's destinies and Inari men had to placate him through sacrifices. Ukonsaari has been a sacred site for 7,000 years and archaeological excavations uncovered a number of sacrificial artifacts (such as bones, antlers and teeth from deer or reindeer and goats or sheep) which suggest that for a period of time the Christian faith and the old traditions and religion co-existed. And Ukonsaari is still regarded as a sacred site in Inari even today, with the continuing local tradition of throwing a coin in the water to ask Ukko for a following wind.

### Preserving nature as part of Sámi culture

Today, Ukonsaari not only remains important as a sacred place for Sámi people but has also become a major tourist destination. While in the past Sámi people's livelihood was characterized by traditional activities such as hunting and fishing, today people often combine these traditional livelihoods with tourism and other services. Tourism plays a major role in the sustainability of the site considering that almost 10,000 people visit the island every year.

Touristic appeal of the island derives both from the natural and cultural values which Ukonsaari represents. The challenge is to ensure a sustainable balance between spiritual and biodiversity preservation, and economic development. The management of the Ukonsaari Island is entrusted to Metsähallitus Parks and Wildlife Finland, a public authority which is in charge of the protection of all the wilderness reserves in Lapland, all designed as Natura 2000 sites. Wilderness reserves were established to preserve nature, safeguard Sámi culture and subsistence livelihoods, and to develop the diverse use of nature and its potential. Metsähallitus P&WF must implement the Nature Conservation Act (1096/1996), which includes site-specific conservation objectives for each Natura 2000 site, but also design and implement land-use strategy fostering economic and touristic development of the area in full respect of Sámi culture.

To identify measures and strategies Metsähallitus P&WF applies also the “Akwé: Kon guidelines” that have been defined in the context of the CBD (Convention on Biological Diversity), which recognises that indigenous people and their communities have a vital role in environmental management and development because of their knowledge and traditional practice. According to the CBD States should recognize and duly support the identity, culture and interests of indigenous people, and enable their effective participation in the achievement of sustainable development. The application of the

Akwé: Kon guidelines in land use planning of the Sámi Homeland area was outlined as a final report of a national expert group set up by the Ministry of the Environment in 2009 to work on the indigenous traditional knowledge. The guidelines map out the procedure by which indigenous peoples’ participation in the preparation of projects and plans, in impact assessment, and in decision-making can be safeguarded. By following the guidelines, possible harmful effects on indigenous peoples can be identified and minimised. In Finland, the Akwé: Kon guidelines are to be applied to cultural, environmental and social impact assessments and to plans carried out in the Sámi Homeland which may affect the Sámi culture, livelihood, and cultural heritage.

Metsähallitus P&WF is responsible for establishing and maintaining active interaction and cooperation with the Sámi. Important matters, including strategic resolutions about nature tourism, are negotiated in accordance with and respect of the cultural and natural heritage to be protected. According to the Act on the Sámi Parliament, Section 9, the authorities are obliged to negotiate with the Sámi Parliament on all far-reaching and significant measures which may, directly or indirectly impact the status of the Sámi as an indigenous people and which concern the management, use, leasing and assignment of state lands, conservation areas and wilderness areas in the Sámi Homeland.



Although rules and procedures are in place, finding the balance between conservation and promotion may be challenging. One of the main problems at the Ukonsaari island, to furnish just one example, is the steady erosion of the island's soils and landscape. To face the threat, Metsähallitus created a set of steps to guide visitors safely and directly to the hilltop, thus protecting the island from erosion as visitors must keep to the designated areas. There are no camp fire sites or any other rest-spot services. The solution put in place was aimed at safeguarding the area allowing its sustainable use. Nevertheless, some representatives of Sámi still believe that the island loses some of its sacredness by being built upon and walked over.

Ukonsaari-Inari area is experiencing an important process: mapping of the Sámi cultural heritage and the cultural environments, implementing Natura 2000 requirements for habitat and species conservation, designing land use plan, promoting sustainable tourism without neglecting active interaction and continued cooperation with Sámi.

The challenge faced in Ukonsaari is twofold, both as a Natura 2000 and a spiritual site: often tourism can put at risk the conservation of a natural or of a sacred place, but if regulated it can increase the knowledge and awareness of the area, leading to a more effective protection.

### Conclusions

Ukonsaari is one of Finland's most valuable and renowned ancient remains and the most famous sacred place of worship for the Sámi people. The sacred natural sites form an important part of the Sámi culture and identity. The combination of the spiritual and natural value of the site, together with its limited accessibility, has helped preserve it over the centuries. The strong ethnic identity rooted in the Sámi people is the key factor which allows the natural and cultural heritage to be effectively recognized, preserved and encouraged.

Ukonsaari, as a sacred place and a Natura 2000 site, is not a priori a strict reserve from which all human presence and activities should be excluded. Ensuring the sustainable management of the site, both ecologically and economically, the approach adopted at Ukonsaari seems to be going in the right direction: a mapping, planning, monitoring and implementing process designed specifically for each site, in collaboration with indigenous representatives, setting the rules and measures for proper and sustainable use.

The promotion of Ukonsaari as both natural and sacred valuable site, combining different land uses with

the traditional practices, represents a good example for areas in which Natura 2000 and spiritual values coincide. The recognition of the spiritual and cultural values of Natura 2000 sites reinforces their relevance to people, increasing the feelings of ownership and belonging.

The integrated management approach avoids losses of cultural, natural and spiritual values.

Sustainable tourism in natural and spiritual valuable sites may also contribute in reconnecting people with nature through culture.

### References

- Principles of protected areas management in Finland, Nature Protection Publications of Metsähallitus, 2016.
- The Diversity of Sacred Lands in Europe: Proceedings of the Third Workshop of the Delos Initiative – Inari/Aanaar, IUCN/Metsähallitus Natural Heritage Services, 2010.
- The Sámi in Finland, Sámi Parliament Publications, 2008.
- Nature and Spirituality, 1st Workshop of the Delos Initiative, Conference proceedings, chap. 6
- Cases studies, Montserrat 23-26 November 2006.

<http://www.metsa.fi/web/en>

<http://whc.unesco.org/archive/websites/arctic2008/finland.htm>

<http://inarilapland.fi/en/ukonsaari/>

Bulgaria

## The Rila Monastery Natural Park: among majestic mountains and wildlife

- ◀ A coordinated effort of Church and State institutions to manage and preserve cultural, spiritual and natural assets

### Spirituality and nature

The Rila Monastery Natural Park is a unique, harmonious entity tucked away amongst mountain valleys and lakes, centenary forests and impressive rock massifs all of which combine to form some of the most dramatic and emotionally charged landscapes in Bulgaria.

Because of its outstanding cultural and natural values, the area is protected as a Natural Park, within the larger National Park Rila. A small area of the Natural Park is also designated as a Natural Reserve - Rilomanastirska gora" / Rila monastery forest. These are in turn integrated into a much larger Natura 2000 area, the SCI/ SPA Riski manastir (BG0000496). The monastery was also designated as a World Heritage Site by UNESCO, as it is the most important spiritual and literary center of the Bulgarian national revival, with an uninterrupted history from the Middle Ages until present times.

### Cultural values

The Rila Monastery is the second most important Eastern Orthodox religious complex in the Balkans, funded at the beginning of the 10th century. Although reconstruction work was required following a fire, and sections of the monastery, a new church and other structures date from more recent times, the spirit and feeling of the site have been properly preserved.

The Park is an example of land managed over 9 centuries by monastic communities that preserved its high natural values. It is the only place in Bulgaria, and among only a few worldwide, to have such an exceptional harmony of remarkable spiritual and natural values.

### Natural values

The Rila Monastery Natural Park also hosts an exceptionally high concentration of habitats, communities and species of conservation significance. It is among the territories with the highest diversity of habitats in Europe: 85 different types of habitats located within an area of only 0.25% of the territory of Bulgaria;



of those, 22 habitat types are endangered on a European scale, therefore requiring special protection measures.

The flora of the Park is unique with impressive stands of Beech (*Fagus sylvatica*), Winter Oak (*Quercus petraea*), Spruce (*Picea abies*), Fir (*Abies alba*), White Fir (*Pinus peuce*), Maple (*Acer campestre*), Sycamore (*Acer pseudoplatanus*) and Birch (*Betula pendula*), among others. Especially valuable in terms of biodiversity are the European Yew (*Taxus baccata*), Boris Fir (*Abies boris regisi*), Rila Oak (*Quercus protorubroides*), and European Hop-hornbeam (*Ostrya carpinifolia*). In total, the Park hosts 1,400 species of higher plants and features a multitude of protected relict and endemic species. Several of these are included in the European List of Rare, Threatened and Endemic plant species under different conservation statuses such as the Rhubarb (*Rheum rhoponticum*), the Rila Primrose (*Primula deorum*), the Common mullein (*Verbascum jankaeanum*) or the St. John's Chamomile (*Anthemis sanctijohannis*). Widely distributed throughout the park are also approximately 150 species and subspecies of moss,



several of which are protected.

The forest, rivers, lakes, cliffs and alpine meadows of the park are ideal sanctuaries for many fauna species and over 150 species of vertebrates occur within the park's boundaries, many of which are endemic species protected on a national and international level.

Above 2,000 meters it becomes the realm of the Golden Eagle (*Aquila chrysaetos*), Chamois (*Rupicapra rupicapra*), Horned Lark (*Eremophila alpestris*), Water Pipit (*Anthus spinoletta*) and Rock Thrush (*Monticola saxatilis*), among many others. The dense and ancient forests host Brown Bear (*Ursus arctos*), Wolf (*Canis lupus*), Long-eared Owl (*Asio otus*), Stock Dove (*Columba oenas*), amongst others. Close to river and stream banks, Golden Oriole (*Oriolus oriolus*), Mountain water frog (*Rana temporaria*) and Dipper (*Cinclus cinclus*), can be found, among others.

The territory of the Park is also one of the three most significant mountainous areas in Bulgaria, a natural source and repository of drinking water, constituting the most significant fresh water source for Southwestern Bulgaria.

#### **A fine balance: integrating the management of spiritual and natural values**

Because the Rila Monastery Natural Park is characterized by different features, its management is carried out on

the basis of diverse legislation, including the Religious Affairs Law, the Cultural Heritage Law, the Protected areas Law and the Forest law. Its uniqueness has an impact on the Park's management goals and the philosophy and principles of the management plan.

The implementation of the management plan involves a coordinated effort of the Bulgarian Orthodox Church as the largest landowner in the Park, and the state institutions responsible for the conservation and management of the protected areas and the cultural and historical assets.

The Park is administered by a directorate based in the town of Rila and subordinated to the Executive Forest Agency of the Ministry of Agriculture and Food. The directorate implements the management of the protected area and ensures the coordination between the Bulgarian Orthodox Church and the state institutions.

The territory of the Rila Monastery Natural Park is subject to local, regional and national planning and the Park's management plan prescribes a functional and territorial zoning regime which is made up of the following:

A Reserve Zone aimed at affording strict protection to animal and plant species and communities threatened nationally or internationally. It also aims to conserve the natural Rila monastery environment, preserving the

harmony between spiritual and nature values.

A Buffer Zone is intended to help reduce the physical impact on ecosystems and pollution in the areas surrounding the Reserve; to that end, certain activities are banned in this zone, which instead provides conditions for short-term rest and relaxation, extraction of timber through special woodcutting practices and construction, according to site development plans connected with the Rila Monastery, as well as the practice of tourism activities.

The High Conservation Significance Zone aims to preserve the larger territories beyond the perimeter of nature reserves in a natural or close to natural state. These areas also serve as ecological corridors linking the Reserve Zone with the Rila National Park. In this zone, the land owners have the possibility to use natural resources – pastures, medicinal plants, fish – but only in defined territories and with fixed regimes and norms consistent with the main goal of biodiversity conservation. These territories are also used for scientific research and educational and interpretative activities.

An Environmentally Sound Use Zone was created to ensure the sustainable use of biotic and abiotic resources. Regulated, ecologically sound extraction and use of natural resources, as well as specialized tourism are allowed in this zone. Visitors seeking seclusion away from the beaten trails can experience a direct contact with nature and wildlife, without, however, being able to rely on information, interpretation or other tourism services, or any established infrastructure.

A Technical Infrastructure Zone aims to ensure the normal functioning of facilities and installations by providing proper maintenance and security.

The Sustainable Forestry Zone has the purpose of allowing for the development and implementation of sustainable forest use. Although efforts in this direction have been put in place in other parts of the country, there has been no practical experience to date for their efficient implementation. Therefore, this is an important zone in terms of developing good practice guidance to be later applied elsewhere. The long-term plan of the zone is to demonstrate leading sustainable and nature-friendly forest management techniques, which could generate additional income for the owners.

The cultural values of the area are also preserved through the Cultural Heritage Law and the legislative regimes that regulate the research, study, protection and promotion of the immovable cultural heritage in Bulgaria, and the development of conservation and management plans for its cultural sites inscribed in the

World Heritage List. The regulations adopted for the Rila Monastery and its buffer area not only determine the prohibitions but also identify the allowed activities and set out the responsibilities of the interested parties, including the state, local institutions and owners.

## Conclusions

The Rila Monastery Natural Park is located about 100 km south of Sofia, in the central and highest regions of the Rila Mountains. This area contains rare and endangered wildlife species and communities, self-regulating ecosystems of biological diversity, as well as historic sites of global cultural and scientific significance. Some of the largest rivers in the Balkan Peninsula originate in this area and it is no coincidence that the name Rila, derived from the Thracian word roula, means 'lots of water.'

This Natural Park is among Bulgaria's most popular protected areas: while the Rila Monastery is the most frequently visited cultural and religious destination in Bulgaria, the Natural Park is the second most widely visited protected area in the country, welcoming about half a million tourists every year.

With such levels of human pressure, visitors' management is a crucial issue when it comes to achieving a sustainable use of the area. This is why the main goal of the Rila Natural Park management plan is to ensure harmony between the public and private interests, and to guarantee the optimum correlation between the conservation of the Park's natural and cultural assets, the use of its resources, and the ability to make the most of the opportunities that the Park provides. Consensus among all interested parties has led so far to the successful implementation of the management plan and ensured that the Park remains as a symbol of the inseparable link between nature and spirit.

## References

<http://whc.unesco.org/en/list/216>  
[http://pdf.usaid.gov/pdf\\_docs/PNACY613.pdf](http://pdf.usaid.gov/pdf_docs/PNACY613.pdf)  
<http://www.parkrilski-manastir.eu/en>  
<http://rilanationalpark.bg/en/>

Greece

## The Mount Athos: a perfect balance between nature and culture

- ◀ A place where natural values coexist with spiritual values
- ◀ An unusual example where natural and cultural values are managed by the same authority
- ◀ A case when a monastic community applies an integrated and multi-disciplinary approach



### Background

The Athos Peninsula, also known as 'Mount Athos, the 'Holy Mountain' or – more simply– the 'Mountain' (Oros), is located in north-eastern Greece and is the third of the three Halkidiki peninsulas in Northern Greece. It is approximately 50 km long and 10 km wide and because the isthmus with the mainland is closed, it is only accessible by sea, contributing to its sense of isolation.

Mount Athos is well-known for its cultural and spiritual traditions, as well as for its magnificent landscapes and high biodiversity, recognised as a World Heritage Site both for nature and for culture values (mixed UNESCO site).

Except for a small part in the north-west area, the Athos Peninsula is part of the Natura 2000 Network (SCI GR1270003) ensuring the protection of its natural heritage.

### Natural values

The peninsula is characterised by the predominance of forests and wooded areas (covering 93% of the total territory), home of one of the most ancient monastic communities of the world, which carefully manages the forest by implementing comprehensive rules of sustainable forestry and management of natural resources. The rapid succession of diverse climatic conditions and ecosystems, from alpine (on the summit of the Holy Mountain) to Mediterranean, provide habitats for a large number of plants and animal species, including endemic species.

Coastal and marine areas are also rich in biodiversity, as shown by the presence of the Mediterranean Monk Seals (*Monachus monachus*).

### Cultural values

Mount Athos is well-known for its 20 monasteries with their millenary cultural and spiritual traditions of Orthodox Christianity. Limited access and the philosophy and practices of the 20 monasteries on the peninsula have contributed to the maintenance of cultural values and a rich natural environment, both terrestrial and marine.

The landscape includes a unique architecture, which melds many different styles from various epochs and countries, in perfect harmony with each other and integrated in the rich natural environment of the Peninsula. The exhibits include invaluable collections of artefacts, frescoes and icons, manuscripts, objects of religious art and precious gifts from devout leaders and pilgrims.

### Integrated regulatory and management of natural and cultural values

Mt. Athos has a special autonomous status and is self-governed. The Holy monasteries govern the peninsula, promoting an integrated approach to the management of the cultural and natural heritage. The monks of

Mount Athos are the unremunerated custodians, protectors, and preservers of the peninsula's natural and cultural treasures. From their own funds, and with state and private grants, they care for the various monuments, and, either through services that they organize, or that they entrust to outside collaborators, they oversee various studies and restoration projects and plans.

The integrated and systemic Management Study of the Athos spiritual, cultural and natural heritage was a critical step in the long history of the area. Financial needs for carrying out activities aiming to maintain the site's values have been defined by the 'Athos Programme', prepared in the mid-1990s by the Holy Community for restoration of buildings, nature conservation and risk mitigation. The total amount needed has been estimated at one billion Euros, over a twenty-year period. Funding of the first phase of the Programme, which focused on works of immediate urgency, mostly restoration, has been secured through the 3rd Community Support Framework 2000-2006 (approx. eighty million Euros). The second phase of 'Athos Programme', implemented in cooperation with the Ministry of Environment, Energy and Climate Change, has included a wide range of activities as restoration and enhancement of buildings, preservation

---

### Regulatory tools for the protection of the Mt.Athos

Mount Athos today constitutes a self-governed body within the Hellenic Republic, as recognised by Article 105 of the Greek Constitution and by the Joint Declaration made during the accession of Greece to the European Union in 1981.

*Natural heritage is protected mainly by:*

- Natura 2000 network
- The forests and the natural environment are managed and conserved directly by each monastery.

*Cultural heritage is protected mainly by:*

- the monasteries who own the monuments and sacred objects. To assist in this task the Hellenic State has founded the Centre for the Safeguarding of the Athonite Heritage in Thessaloniki, which approves all relevant scientific studies and supervises the execution of all works carried out in the peninsula.
- 



and enhancement of heirlooms, protection of the natural environment and ecosystems, development of solid and liquid waste management infrastructures, construction of fire protection infrastructures, development of renewable energy sources, etc... Other important restoration works have been integrated in the National Strategic Reference Framework (NSRF) 2007-2013 (EU 4th Programmatic Period) and are currently being implemented. The Holy Community has completed also a Special Environmental Study with the assistance of an expert scientific team, and will address forest management, road and port construction and waste management in terms of ecological sustainability. The document provides also a consistent approach to conservation and a risk preparedness plan for all the monasteries and their dependencies.

The management of the area has always been the result of a delicate balance between the needs of the monastic communities and the services provided by the Greek state. The Mt. Athos authorities believe that all protection initiatives and measures must respect the autonomy of the area and must be initiated and controlled by the appropriate monastic organs.

### **Best practices of a multidisciplinary approach**

The Holy Community and the Monasteries have the final say in all management and conservation actions, from tourism to forests management and agricultural practices. The monks have a very special relationship to their natural surroundings and this ensures that their views and aspirations provide for equitable sharing of benefits and active involvement in site management.

They believe that nature is a direct expression of God and, as a consequence, they try to preserve its integrity in any way. Mount Athos has therefore retained the authenticity of its natural environment for more than a thousand years.

Due to the geographic isolation of the peninsula and of the very low degree of anthropogenic impact, special privileged status of self-governance, which has always been respected by state authorities, and the traditional way of life of the resident monastic community, that has remained relatively unchanged through the centuries, the 33,000 ha property has been protected from significant man-made threats, thus preserving its rich natural heritage in an almost intact condition to this day.

Suffice to say that Mount Athos can be approached only by sea, there is no visitor centre in the town and the monk control the number of visitors with a specific profile (religious tourism is predominant). Special

regulations restrict the maximum number of visitors at 120-150 people per day representing an important and critical measure for the preservation and the management of the area. This is a crucial measure adopted to safeguard the spiritual heritage of the island but also the natural values, considering that the anthropic pressure is often one of the main threats for conservation inside Natura 2000 areas.

The peninsula harbours a large area of forest, mostly broadleaved, but some coniferous forests also exist, along with mixed forests, maquis and alluvial forests along streams. The quality of chestnut wood has made it a favourite with the monastic community for over a thousand years. The monks support the use of traditional management practices in natural and cultural resource management, especially in regards to forest management and agricultural practices. The forests and the natural environment are managed and conserved directly by each monastery and most have had approved management plans – mainly concerning forest exploitation – prepared by expert foresters.

The father appointed to this task, an individual who is highly experienced in this field, works closely with a forester in implementing a management plan covering the entire forested area of the monastery. The Holy Community and the monasteries launched several landscape conservation initiatives aimed at conservation and restoring the forest and assessing the impact of infrastructural development on the environment and overall ecological management of the area. The first of such studies concerned the ecological management of the Simos Petra area, destroyed by a fire. This project was co-founded by Life European funds (LIFE03 NAT/GR/000093 “FRINETTO WOODS Mt.ATHOS – Rehabilitation of Coppice *Quercus frainettowoods* (9280) and *Quercus ilex* woods (9340) to high forest”) and aimed at increasing biodiversity by re-establishing high forests, focused on selective-inversion thinning applied experimentally to a pilot area of 500 ha.

Other significant management activities include:

- Continuation and enforcement of the ban on grazing, which allows the rapid natural regeneration of the forests, especially after fires.
- Existence of forestry management plans for most of the monasteries, prepared by forestry consultants, on the basis of which timber exploitation is practiced by the Monasteries.
- Various studies for the improvement of forests and remedial action from road construction.
- More efficient fire protection, due to better organisation, material and personnel.

## Conclusions

The case of Mount Athos is a unique case of conservation of culture and biodiversity by a religious community. The natural environment of the peninsula is an inseparable element of its cultural heritage. Natura 2000 and LIFE funds have helped monks in restoring the image of the peninsula's flourishing virgin forests and re-creating a landscape worthy of the spiritual and cultural importance of Mount Athos and its monasteries.

The successful and systematic implementation of an integrated and multi-disciplinary management plan, covering all aspects of land and cultivation, forests and vegetation, biodiversity, water, energy, waste, buildings and infrastructures, is undoubtedly linked also to the special status of the monastic order, but the best practices that have been developed in Mount Athos could nonetheless be reproduced by communities living in similar isolated areas of the UE.

## Reference

- EC, 2015. LIFE and new partnerships for nature conservation.
- Kakouros, P. (2007) Landscape conservation actions on Mount Athos Athos Peninsula, Halkidiki, Central Macedonia, Greece. In the volume *The Sacred Dimension of Protected Areas*,
  - Proceedings of the Second Workshop of the Delos Initiative - Ouranoupolis 2007. Edited by Thymio Papayannis and Josep-Maria Mallarach • •
  - Mallarach, J.M. (2008). *Protected Landscapes and Cultural and Spiritual Values*. Volume 2 in the series *Values of Protected Landscapes and Seascapes*, IUCN, GTZ and Obra Social de Caixa Catalunya. Kasperek Verlag, Heidelberg
  - Mallarach, J.M. & Papayannis, T., (2011) *Understanding community conservation in Europe*, Gerace, Italy, Monastic community conserved areas in Europe<sup>1</sup>. Joint-Coordinators of The Delos Initiative, IUCN/WCPA.
  - Papayannis, T., (2007), *Mount Athos, in Protected Areas and Spirituality: Proceedings of the First Workshop of the Delos Initiative - Montserrat 2006*, ed. J.-M. Mallarach, and T. Papayannis, Barcelona: IUCN - Abadia de Montserrat, 2007, pp. 263-278.
  - Papayannis, T. & Mallarach, J.M. (2009). *The Sacred Dimension of Protected Areas: Proceedings of the Second Workshop of the Delos Initiative - Ouranoupolis 2007* IUCN; Athens,
  - Greece: Med-INA, 2009. pp. 262.

### Websites

- <http://www.med-ina.org/delos>
- <http://www.inathos.gr/>
- <http://www.worldheritageoutlook.iucn.org/>
- <http://whc.unesco.org/en/list/454/documents/>

Latvia

## Nature Concerthall

- ◀ Using culture to improve knowledge and awareness about nature protection



### An innovative approach for raising public awareness on nature conservation

Since 2006, the non-profit association Nature Concerthall (Society “Dabas Koncertzale”) has been raising the awareness of the importance of nature conservation by inspiring interactive multi-disciplinary events in more than 17 municipalities in Latvia in or near Natura 2000 sites. Each event consists of three components: an interactive exhibit combining graphic panels, displays and hands-on components for the public to gain knowledge linked to the selected theme; a discussion between a poet and a scientist on stage to capture the main themes and a concert with songs, dance and light/video performances. Combined, these give the practical information and emotional charge to encourage empathy and the public’s deeper understanding and appreciation for nature.

The Nature Concerthall association was created by a trio of artists, scientists and environmental project managers who were committed to a vision that awareness could be better communicated if the creative arts and scientists came together. This core artistic background brought a new approach to communication

in the area of nature and conservation.

Each year a specific species is selected and an event is created around it. The species dictates the development of the event in terms of location, so that audiences can see it first-hand, listen to the music created anew each year, and participate in the interactive workshops, which are specifically developed to showcase the species in question.

The habitats and species targeted along the years include several which are listed in the annexes of the Habitats Directive, such as Lowland hay meadows with *Alopecurus pratensis* and *Sanguisorba officinalis*, Coniferous forests, Reefs, Petrifying springs with tufa formation or *Bombina bombina* to name just a few.

Although concerts in nature or about nature are not new, the concept of dedicating an entire production to one species or habitat, and of teaming scientists, musicians and educators to prepare such a performance is original. The underlying assumption of this approach is the belief that developing empathy towards nature strengthens the public’s capacities to absorb knowledge and motivate action. The activities turn out as a coherent set of interconnected components which start being prepared nearly one year in advance of the performances. The originality of the event is confirmed by the fact that it has won several awards and prizes already including the Natura 2000 Award in 2016 within the Communication category.

### An integrated approach to communicating about sustainable management of natural and cultural values

After realising that standard, project-driven and campaign-driven approaches with traditional seminars, info campaigns and brochures were not enough to really change in the long term people’s behaviour towards their natural environment in the long term, the musicians, scientists and educators who work with Nature Concerthall felt that mobilising people’s empathy for nature would strengthen their capacities to absorb knowledge and motivate them to act in a positive way.

Between 5,000 and 10,000 people participate each

year in the Nature Concert hall events, including elderly people, families with small children as well as young adults. The results of a survey undertaken to the visitors show that 53% of respondents felt they would not attend such event if it was not combined with music, videos and performances. A clear indication that the combined form of activities attracts people who would not traditionally attend nature conservation events. An indication that people's attitude also change for the better is demonstrated by the fact that after each event there is no waste left in the area, which is in strong contrast to other public events assembling similar audience numbers. The initiative has also increased the interest of educators on topics and methods for integrated and innovative learning approaches and contributed to reviving Latvian literature on nature with new stories and poetry on the species and habitats highlighted each year.

The events are free of charge, which has been made possible by the cooperation developed with the Nature Conservancy Agency of Latvia, municipalities, a large team of volunteers and the support provided by the Latvian Environmental Protection Fund. In-kind contributions are secured each year by the municipalities where the event occurs – the organizers select technical and administrative elements that the municipalities can provide from their own resources, so that the events can continue free of charge, even though they are not commercialised and include no advertising.

The Natura 2000 network in Latvia includes 333 sites, all of which have general management rules, including a list of what is allowed or prohibited as well as measures aimed at the protection of both natural and cultural heritages. By promoting eco-tourism in less known areas and by facilitating the interest of the public in sustainable approaches to economic development, the Nature Concert hall events provide support to the municipal decision-makers in implementing long term environmental measures. As a result of these activities a number of municipalities have invested in infrastructures linked to nature protection and communication.

### Conclusions

Nature Concert hall shows it is possible, through a specially targeted, interactive and multi-disciplinary approach, to attract people from different backgrounds, improve their knowledge of nature protection and promote pro-environmental behaviour.

Due to their success, the Nature Concert hall initiatives have been ongoing for over 10 years, organised in close collaboration with the Nature Conservation Agency of Latvia, which uses its information platform to create continuity on information generated from each event. The workshops, materials and methods are distributed to educators in seminars and on the website beyond the specific timeline of the concrete events. Over the years, CDs and DVDs have been produced with original



songs dedicated to each year's featured species, along with a musical score for orchestra, teaching materials for schools, as well as poetry and literature pieces. The scientists and professionals who engage in the events often apply the same methodology in their activities in universities, environmental NGOs and other associations and meetings with targeted groups such as beekeepers, fishermen and farmers organizations, while many municipalities are lining up for Nature Concerthall events in their territory.

The combination of music and science to raise awareness about aspects of the environment and the need to protect it, can be easily replicated across the EU adapting them to the particular features of each location. Networking and the availability of the educational materials produced facilitates the replication of these initiatives. The Nature Concerthall organization has participated in lectures in educational institutions and municipalities in many countries and explained its concept within the framework of a TEDx talk as well as other international events. Initiatives to replicate the methodology in other countries have taken place in Finland, Norway, Italy and Canada among others.

### References

<http://www.natureconcerthall.com>

[http://www.daba.gov.lv/public/eng/protected\\_areas/natura\\_2000/](http://www.daba.gov.lv/public/eng/protected_areas/natura_2000/)

[http://ec.europa.eu/environment/nature/natura2000/awards/2016-edition/winners/communication/index\\_en.htm](http://ec.europa.eu/environment/nature/natura2000/awards/2016-edition/winners/communication/index_en.htm)

<https://www.youtube.com/watch?v=QULoeSQtV8c&amp;feature=youtu>

<https://vimeo.com/search?q=Dabas+konzert%C4%81le>

Denmark

## Stevns Klint, the history of science for biodiversity protection

- ◀ A collaborative effort for inclusive management based on science
- ◀ Public and private entities engaged in an integrated and sustainable management

### Background

Stevns Klint is a 15 km long scenic coastal cliff in Denmark that offers a unique insight into the impact of the Chicxulub meteorite that crashed into the Earth about 65 million years ago marking the extinction of more than half of all species, including land-living dinosaurs.

### Cultural values

The million years recorded in the rocks of Stevns Klint provide evidence of life before impact. The fossils show which species became extinct and which survived. They also reveal the time and mode of evolution of the successful fauna that diversified and evolved into those that we see today.

In 2014, Stevn Klint was inscribed in the UNESCO's World Heritage List for Denmark for its outstanding geological value and also for its historical, natural and cultural heritage. Stevns Klint has also been designated a GeoSite and a 'Site of National Geological Interest' by the Danish government.

### Natural values

The Stevns cliff and coast represents even today one of the most important natural terrestrial and marine areas in Denmark. Stevns Klint lies on an important bird migration route, connecting the large breeding areas of northern Scandinavia to their wintering grounds in the Mediterranean and tropical Africa. A total of 260 bird species (including the largest population of house martin in Europe and several species of eagles) have been observed along the cliff, an estimated 200 of which are migrating birds; one of just three pairs of the peregrine falcon in Denmark breeds at Stevns Klint. Based on the annual passing of 20,000 migrating birds of prey, Stevns Klint has been designated under the Natura 2000 network. The marine area, which greatly overlaps with the national 300m coastal protection zone, has also been included in the Natura 2000 network (DK00VA305-SAC Stevns Rev). It has been designated for reefs (1170 of the Habitats listed in Annex I of the Habitats directive) and sandbanks (1110) as well as for the presence of harbour porpoise, *Phocoena phocoena*.



On land, the entire area is characterized by the presence of dry grasslands which has been further enhanced by the transformation of 43 ha of agricultural fields into new biodiversity rich grassland over the last 30 years. Also the abandoned quarry of Holtug Kridtbrud, which has been designated as a Natura 2000 site, now hosts a large population of Smooth Newt (*Triturus vulgaris*) and the rarer Great Crested Newt (*Triturus cristatus*).

### The integrated management of Stevns Klint

Stevns Klint was among the original study localities that first led scientists to the hypothesis of an asteroid impact as a cause for mass extinction, and is thus of high value for the understanding of key evolutionary processes. Since the presentation of the asteroid impact theory in 1980, the scientific interest in the site has been very high.

This interest encouraged the protection of the area. A comprehensive management strategy was drawn up to preserve its geological significance and to help deal the expected increase in number of visitors whilst at the same time protecting its nature values under Natura

2000. The conservation strategy has been further strengthened by a framework of national legislation and protective designations as well as by local planning policies. There are two forms of ownership of the site: public (governmental and municipal) and private (associations, companies and individuals), but the actual cliff is primarily private property. Over the past 20 years, Stevns Municipality has acquired several pieces of land along the cliff in order to improve the protection of nature and accessibility to the areas.

As a basic planning tool for the Stevns Klint area, included the buffer zone, a Planning Act (Consolidated Act no. 937 of 2009) has been approved to ensure that the overall planning combines social interests and the protection of nature and environment. The fundamental point of the Planning Act is that no buildings may be erected and no new activities or alterations may take place without extensive consideration of their impact on the geology, Natura 2000 and landscape values.

Even though today the site is not exploited, there are still traces of past exploitation (chalk, ground lime and burnt lime quarries) and exploitation activities are still being continued in neighbouring areas. Parts of the area along the cliff are being transformed into dry grassland in order to restore the diversity of flora and fauna along the geological site. A buffer zone has been defined with the primary purpose of achieving protection of the site.

The buffer zone has been outlined following boundaries

of existing areas of legal protection, namely the Natura 2000 network. In addition to the protected flora and fauna of significant natural value, the buffer zone includes a range of cultural heritage sites, including remnants of limestone production facilities, buildings of stones from the cliff, and the Cold War fortress dug out into the rock.

The buffer zone was established, after consultation with local stakeholders, as part of the application process for the UNESCO World Heritage List. The purpose of the buffer zone is to secure the core value – which is dynamic due to erosion – from uncontrolled development in its proximity. The buffer zone is identical to the national appointed coastal protection zone (Nature Protection Act §15).

The protection ensured by the Planning Act is reinforced by a series of acts which concern specific aspects, as for example: the Danish Act on the Protection of Nature (Consolidated Act no. 933 of 2009) which protects fauna and flora species and, in particular, within the cliff area; the Act on Coastal Protection (Consolidated Act no. 267 of 2009) and the Museum Act, (Consolidated Act no. 1505 of 2006) which protects geological objects and fossils of unique scientific or exhibition value. The area of the world heritage plus a 25 m wide protection zone is currently being listed as a natural site under the Danish Natural Protection Act (cap. 6). This will give the area the best and strongest protection possibly according to Danish legislation.



The Stevns Municipality has also prepared an action plan for Sand Lizard (*Lacerta agilis*) and is collaborating with the Danish Nature Agency, the Danish Ornithology Association and the Royal Danish Aero Club on the protection of Peregrine Falcon.

### **Sustainable growth through science and education**

The natural and cultural values protected in the Stevns Klint have fostered the development and exploitation of the area in more modern ways in terms of sustainable economic growth. In recent years, a number of attractions have been developed, such as a local museum which today houses exhibitions, facilities for visiting scientists as well as educational and visitor programs that are expanding and form part of the conservation effort. Stevns Klint hosts every year researchers from all over the world.

The Museum has at its disposal two professional communicators, 25 part-time guides and five fulltime employees who are responsible for taking care of its natural values and the maintenance of buildings used for dissemination purposes. To enjoy the site, a “Stevns app” was prepared so that visitors can use GPS maps to be guided through hundreds of stories, films, animations and games.

Stevns Municipality has also developed a tourism strategy (Tourist Policy Report) to secure sustainable tourism in the coming years that takes account of its natural, cultural and geological value.

### **The role of the World Heritage List designation in the collaborative management approach**

Officially, Stevns Klint became a candidate to the World Heritage List at the beginning of 2010 and was inscribed in 2014. Since then, work has been targeted at documenting Stevns Klint’s outstanding universal value and planning the management of the area’s values.

The management plan for the nominated World Heritage Site, produced and approved by the Municipality of Stevns, set out agreed objectives stressing the importance of considering the value of Stevns Klint as part of a whole.

The management plan has been the subject of local public consultations and local residents, owners and experts, local advisory organs, interested organisations and other stakeholders have all helped to identify the values and challenges in relation to Stevns Klint. A revision of the management plan is currently in progress. It will develop a set of operational tools for the monitoring and protection as well as for the future development of the area. The management plan will

further focus on the organizational structure of national and local agencies and local owners. The designation of Stevns Klint as a World Heritage site has produced significant local interest in developing the area resulting in the engagement of the local community in the elaboration of a “vision” applicable through to 2026. The designation fostered a close cooperation among different bodies ensuring a collaborative management approach based on the acknowledgement and valorization of all cultural and natural values that make Stevns Klint one of world’s site of universal outstanding value.

The Heritage Agency of Denmark, Stevns Municipality and the Østsjælland Museum, which collaborated on the inscription of Stevns Klint on the UNESCO’s World Heritage List, formalised the collaborative management through the creation of a “Steering Group for Stevns Klint”.

Nature preservation is carried out in collaboration between Stevns Municipality, the Danish Nature Agency, the local branch of the NGO Danish Society of Nature Conservation, the local museum and private plot owners and is funded by the Danish Nature Agency, the Stevns Municipality, the Østsjælland Museum and private associations.

### **Conclusions**

Stevns Klint is an interesting example of a collaborative effort to engage public, business and private entities in the sustainable and inclusive management of natural and cultural values.

The scientific value of the site laid the foundation for a comprehensive protection strategy, encompassing biodiversity and cultural heritage, and promoting a more sustainable fruition of the area.

The legislative framework sustains a conservation and management strategy that protects each value.

The Municipal Authority was able to envision the future development and to actively engage the local community in its attainment.

### **References**

- Milàn et al, First record of a vertebrate coprolite from the Upper Cretaceous (Maastrichtian) chalk of Stevns Klint, Denmark, 2015.
  - Tove Damholt and Finn Surlyk, Nomination of Stevns Klint for inclusion in the World Heritage List, 2012.
- Kalklandet, Explore Stevns Klint, Flyer, 2015.

<http://www.kalklandet.dk/english>

<http://natura2000.eea.europa.eu/Natura2000>

Denmark | Germany | The Netherlands

## Wadden sea, a trilateral commitment for a unique heritage

- ◀ An interesting example of a transboundary commitment for a landscape management
- ◀ Developing a common vision to solve conflicts and define priorities



### Background

Extending over 500 km along the North Sea coast of the Netherlands, Germany and Denmark, the Wadden sea is a vast ecological transition zone between land and ocean which is made up of a large-scale complex matrix of semi-natural coastal habitats ranging from shallow waters, mudflats and sandbanks to beaches and dunes, all of which host numerous rare and endangered species. It represents the only tidal flat and barrier island system of this scale and diversity in Europe.

### Natural values

As such the Wadden Sea is internationally recognised as a biologically highly productive ecosystem of great natural, scientific, economic and social importance. The salt marshes host about 2,300 species of flora and fauna and the marine and brackish areas support a 2,700 more species including grey and harbour seals as well as internationally important numbers of porpoises. It is estimated that the whole Wadden Sea Area provides habitats for up to 10,000 species in all. It is also one of the most important wetlands for staging, molting and wintering with up to 12 million birds being

recorded in the area at various times of the year.

No surprise therefore that most of the Wadden Sea Area has been designated as Natura 2000 (with the exception of the main shipping lanes and some adjacent offshore areas).

### Cultural values

In addition to the natural values there is also an important feature often neglected: the Wadden Sea is a valuable example of a unique cultural landscape. While the Wadden Sea was initially a product of the sea, the landscape we see today is largely thanks to the intervention of humans that have created, adapted, shaped, destroyed and rebuilt the area over centuries.

The marshes have been settled uninterruptedly since 600 BC and during the first millennium AD they belonged to one of the most densely populated parts of Western Europe. In the 7th and 8th centuries, Frisia was in fact the trading hub of Western Europe. Thousands of dwelling mounds and miles of ditches (partly of natural, partly artificial) provide archaeological and visual evidence of this occupational history.

Many of the hydraulic engineering techniques, as well as the colonization of the moorlands that have made the Dutch famous, were developed initially by this colonising population. The growing importance of merchant shipping, inland shipping and fishing in towns and villages along the coast expressed itself not only by hosting new commercial buildings, harbours and art works, but also in the structure and architecture of the villages (e.g. market squares, fishing districts, trading and craftsmen quarters, grand streets with patrician mansions, new houses and churches in the Renaissance, Baroque and Classical styles).

Moreover, the Wadden Sea is rich in a number of other important cultural heritage features such as the Friesian language, regional traditions, inundated archaeological traces of agriculture and salt mining. It is also an incomparably richly preserved environment for shipwrecks of all periods, providing a significant information on the cargoes and materials used. In recognition of its importance in terms of natural and

cultural values, the Dutch German and Danish Wadden Sea was added to the UNESCO list of World Heritage sites in 2009.

### The Wadden Sea Plan, a trilateral commitment

In 1978 the three countries bordering the Wadden Sea created the Trilateral Wadden Sea Cooperation in order to provide a common framework for the cooperative and integrated management of the entire region. The cooperation meets every four years to discuss the development or updating of the protective policy for the Wadden Sea area, which takes account of both the important economic uses of the area as well as the need to conserve its immense cultural and natural values.

The resulting Wadden Sea Plan, contains projects and actions for safeguarding wildlife and is constantly monitored by the Trilateral Monitoring and Assessment Program. It is re-evaluated every 6 years. The principles, structure and detailed objectives of the Plan represents a very impressive example of an effective integrated cross border management planning system.

The fundamental goal is to implement the objectives of the Trilateral Cooperation which are to ensure:

- a natural ecosystem, its functions and characteristic biodiversity;
- resilience to climate change and other impacts;
- maintenance of the landscape and cultural heritage;

- sustainable use as defined by the Convention on Biological Diversity and the Habitats Directive;
- public support for the protection of the Wadden Sea.

The focal point of the trilateral nature conservation policy and management is directed towards achieving the Guiding Principle as laid down in the Joint Declaration, i.e. “to achieve as far as possible, a natural and sustainable ecosystem in which natural processes proceed in an undisturbed way”.

Recognising that the Wadden Sea hosts a varied range of natural and dynamic habitats, the plan sets out a state of the art analysis, specific targets, guidelines on how to proceed, trilateral policies and management strategies for each of the main target areas (the tidal area, the offshore area, estuaries, salt marshes, beaches and dunes, the rural area, water and sediment quality, fish, birds and marine mammals, landscape and cultural aspects), so that the quality of each main target area can be maintained or improved by following proper conservation and management strategies in line with the Habitats and Birds Directives, as well as the Marine Strategy Framework Directive.

The Wadden Sea Plan foresees and supports a balanced coexistence of socio-economic development and ecosystem integrity, regulating all the activities having a considerable economic significance for the region such as tourism and recreation, agriculture, industry, shipping and fisheries.



## 38 The Atlas of cultural features

The Lancewadplan project (INTERREG funded for the period 2004-2007) aims at enhancing the development, management and sustainable use of the common transboundary landscape and cultural heritage of the Wadden Sea Region and at complementing the natural and environmental facet of the region by taking into account the regional diversity. In pursuing this goal, the project developed an Atlas showing the cultural entities present in the Wadden Sea region with a specific description and a topographic map highlighting the typical cultural elements of the selected area.

One of the best practice examples described in the framework of the Lancewadplan project is the Nature Experience Areas in Schleswig-Holstein designed in order to increase awareness of historic man-nature interaction. The aim is to promote the acceptance of nature protection and enhance the opportunities for nature education and recreation.

The Stollberg collective municipality, for instance, includes an area of around 380 acres around the eponymous hill of Stollberg north of Bredstedt in North Frisia. The basis for information and education is a guide through the landscape with detailed explanations on signposts and possibilities for children to play and discover the natural and cultural heritage.

Landscape elements like hedgerows, habitats around pools, forests and heath land are explained, together with a Bronze Age urn cemetery or bog iron ore, present within the park. Single projects within the framework of the nature experience areas are usually financed by EU-funds and local sponsors. The lead partners for the nature experience areas are generally corporations under public or private law, with a status acknowledged by the state nature protection agencies. New ideas are constantly developed and turned into applications.

Another example is the Integrierte Station Unterelbe project which aims to promote tourism and nature conservation in collaboration with agriculture in the lower Elbmarschen, a riverine marsh located along the northern banks of the Elbe River, designed as a Natura 2000 site. The Integrierte Station Unterelbe fosters historic forms of land use and crafts like the Bändreißerei (a craft using local willow rods for cooperage) or Binsenmahd (juncus mowing in the marshes, and fruit-growing).

The station organises the festival of Holsteiner Apfeltage, during which historic landscape aspects are promoted and runs the Obstgarten Haseldorf, a public collection of historic, and mainly local, fruit cultivars.

<http://www.lancewadplan.org/Cultural%20atlas/cultural%20atlas.htm>

### Conflict solving and stakeholder engagement

A key element in ensuring the sustainable management of the Wadden Sea area is to ensure the full consultation and involvement of its multiple stakeholders who live, work and spend their leisure time in the area, and who want to ensure the long term conservation of the area's unique cultural and natural heritage. It is estimated that around 3.7 million people live along the coast, of which around 75,000 live inside the Wadden Sea Area.

To this end, the Wadden Sea Forum was established in 2002 to better engage the stakeholders in the management of the Wadden Sea. The Forum acts as a cross-border stakeholder forum and as an independent body consisting of representatives of Agriculture, Energy, Fisheries, Industry and Harbour, Nature Protection and Tourism, as well as local and regional authorities from the Netherlands, Germany and Denmark.

Resolving conflicts with commercial fishing activities has, for instance been a major discussion point for the Forum. The technique used to harvest the mussel seed by dredging the seabed with a blade net, for instance, is considered to have a negative impact on the ecosystem.

After a long standing conflict an agreement was finally reached: the current technique is allowed until 2020 and, in the mean time, the Federation of fisheries associations will invest in the development of a new technique (floating or suspended installations on which the young mussels will grow, thus catching the mussel seed without causing disturbance of the seabed). This experience illustrates how the Wadden Sea management is working towards the engagement and harmonization of all the different interests concerning the safeguard of the area.

### Conclusions

The Wadden Sea is a unique area in a densely populated region facing an enormous number of threats from agricultural/ forestry effluents, invasive non-native/ alien species, fishing / harvesting aquatic resources, shipping lanes, renewable energy, storms/flooding, temperature changes, impact of tourism/ visitors/ recreation but thanks to strong cooperation across different countries and sectors, an integrated approach is being taken to manage the area sustainably whilst preserving its unique cultural and natural heritage.

Although the area has undergone serious damages in the past, and continues to be faced with significant challenges, the conservation measures undertaken are

showing positive results: monitoring activities indicate that the natural values in the area are, for the most part, being preserved. Fluctuations in the numbers of migratory and breeding waterbirds have been recorded over the last decades with both declines as well as increases. The marine mammal populations, also intensively studied, show a positive trend.

The approach adopted by the Integrated Ecosystem Management system seeks an appropriate balance between integration, conservation and use of biological diversity. The Wadden Sea Plan, although not legally binding, represents a coherent approach to the protection and management of the area in a trans-boundary context.

Despite the local and regional diversity, the Wadden Sea has a common history in developing and shaping the landscape, in the human survival adaptation strategies and in the techniques that have created a unique cultural heritage. The Wadden Sea Plan recognizes that the landscape and cultural heritage complements the natural and environmental heritage and expresses a shared vision of the ecological state of the Wadden Sea as a unique tidal transitional water body and ecosystems.

Over the past decades, the Tri-Lateral Agreement helped fostering the development of a unified vision for the future of the Sea, harmonizing respective development objectives and policies. The Trilateral Convention for the Management of the Wadden Sea provides a unique framework that can help ensure national parks plans and other management measures are developed whilst addressing both national priorities and international obligations under conventions, treaties and other international agreements.

The cooperation between different State Parties helps to ensure an institutional, financial and technical capacity to cope with the existing and future conservation challenges. The management authorities are moreover being supported by an active and committed NGO community and by the civil society in the region.

Finally, an important amount of research and monitoring activities is ongoing in the area, including research and modelling applied on climate change predictions.

## References

• Common Wadden Sea Secretariat - Trilateral Monitoring and Assessment Group, *Wadden Sea Ecosystem*, No. 25, 2009.

• Common Wadden Sea Secretariat, *Wadden Sea Plan*, 2010.

• I.M. Bouwma, R. van Apeldoorn, A. Çil, M. Snethlage, N. McIntosh, N. Nowicki & L.C. Braat, *Natura 2000 – Addressing conflicts and promoting benefits*, Alterra, Wageningen, 2010.

• Essex County Council, *Comparative analysis of landscape and cultural heritage of the Wadden Sea Region*, 2010.

• J. Bazelmans, D. Meier, A. Nieuwhof, T. Spek, P. Vos, *Understanding the cultural historical value of the Wadden Sea region. The co-evolution of environment and society in the Wadden Sea area in the Holocene up until early modern times (11,700 BC-1800 AD): An outline*, Elsevier, 2012.

• Trilateral Wadden Sea Cooperation, *Communication guidelines*, 2013.

• IUCN, *World Heritage Conservation Outlook – Wadden Sea*, 2014.

Wadden Sea World Heritage: [www.waddensea-worldheritage.org/](http://www.waddensea-worldheritage.org/)

LancewadPlan Project: [www.lancewadplan.org](http://www.lancewadplan.org)

Slovenia

## Secoveljske Soline

- ◀ A place where natural, landscape and cultural values are maintained through the tradition of salt-making
- ◀ An example where Natura 2000 and a LIFE project have helped in reinvigorating a traditional activity



### Background

The Secoveljske soline are located in the south-west of Slovenia, next to the boundary with the Republic of Croatia. Together with the adjacent Strunjanske soline, it comprises the only traditional salt-pans in Slovenia, located along the shores of the Adriatic Sea.

### Natural values

In 1993, the saltworks were put on the list of Ramsar wetlands of international importance. Since then, salt production is carried out in order to preserve both the natural and cultural heritage of the area. Traditional salt-making process here has never been stopped but, since the establishment of the Nature Park and active management of the area, salt production is now being carried out taking into account the need to preserve the natural values and cultural heritage of the area.

The Park overlaps with three Natura 2000 sites, which are an important breeding and staging place for a large number of waterbird as well as several rare Mediterranean species. Outside the breeding season

the area supports internationally important numbers of *Larus melanocephalus* (more than 1% Mediterranean population). This territory (with the exception of few plots of land) is entirely owned by the State.

Apart from the remarkable diversity of their habitats, plants and animals, the Secoveljske salt-pans are also an example of the exceptional and continually endangered Mediterranean landscape and of a heritage based on the centuries-old culture of salt-pan life.

### Cultural values

According to the available written records, the Secoveljske salt-pans are more than 700 years old, and even older according to some other sources. The salt-pans enclose the salt-fields, the channels and banks with stone walls, steps and sluices, the dwellings with their immediate surroundings, paths, bridges and pumps. For centuries the soline of northern Adriatic had a great influence on the economies of states and municipalities in the region. It was the subject of political strife and war, because salt was a precious raw material and an important asset for the preservation of food and for the production of gunpowder.

### Integrated management of natural and cultural values

Today the production of salt and conservation of natural and cultural heritage is managed by a private company (SOLINE Pridelava soli d. o. o.) and the economic role of the saline is linked with environment conservation and cultural protection: the preservation of the customs of salt workers supports the awareness of the cultural heritage while the salt marshes provide shelter to rare or special animal and plant species. Today the main management instrument is the management plan of the Park which includes the preservation of the art of traditional salt production as an economic activity, and which has influenced the development of the territory and the ecosystem of the salines for centuries.

The long-term conservation objectives of the management plan and use of the natural values of the Secoveljske Salina aim at protecting the rich natural

biodiversity of the Salina and preserving the cultural heritage of the coastal landscape of Slovene Istria. To this end, the Nature Park has defined the following general objectives:

- preserve the traditional salt-making (production) process and technology within the region;
- conserve the salt-pan ecosystem, habitat types, and biodiversity;
- promote cooperation with local and regional stakeholders, particularly with local civil society groups;
- promote participatory processes to support the SSNP's management and financing.

The management plan of the Secoveljske Soline Nature Park (SSNP) for the 2011–2021 period includes an analysis and assessment of the existing situation and sets the long-term and operational objectives together with measures for their implementation and monitoring their effectiveness. The specific objectives of the management plan include five core programs:

- i) Conservation and protection;
- ii) Valuation and public awareness;
- iii) Contribution to sustainable use and benefits for the local community;
- iv) Operations and maintenance;
- v) Effective management and administration.

A business plan was also produced in order to identify existing barriers to achieve the park's financial sustainability, providing a detailed assessment of the park's financial needs and gaps, based on the cost of core programs and subprograms and an assessment

of the value of the real estate property within the Park owned by the State. Among the main investments in the park a control of over flooding (both from the sea and from the rivers) has been planned, so as to provide direct benefits for biodiversity, protection of

---

### Regulatory tools for the protection of the Secoveljske Salina Nature Park

#### *Institution of the Natural Park (2001)*

Decree on the Secoveljske Salina Nature Park with the intention of protecting the natural area and preserving the biodiversity of this typical saline ecosystem, together with the cultural and economic aspects, the latter embracing saltmaking, tourism, recreation and other supplemental activities.

#### *Ramsar Convention (1971)*

Slovenia joined the Ramsar family in 1992, with the Secovlje Salina inscribed on the List of wetlands of international concern. The second Slovenian wetland inscribed on the list is the system of underground wetlands in the Skocjan Caves (see the short case).

#### *Birds and Habitat Directives*

The area of Secoveljske Salina has been included in Natura 2000, the network of special protected areas of European concern.

---



by controlling flooding and, second, by managing the impacts of visitor flows.

### Stakeholders involvement: a key to success

The Secoveljske salt-pans are one of the few examples where salt is still being produced in the traditional way. Stakeholders, in the case of Secoveljske Soline, have been placed into two main groups, that, in different ways, are involved in, and are of fundamental importance for, the subsistence and development of the Soline:

#### *People who work in the salines*

One of the crucial points of the management plan for the park is to promote cooperation with local and regional stakeholders, particularly with local civil society groups that are preserving the traditional saltmaking (production) process and technology within the region. The management of the area is entrusted to a private company that has created several jobs for the local population (salt-workers, rangers, guides, etc.) thus strengthening the cooperation with the local community. This followed the completion of a LIFE project, MAN-SALT- "Man and Nature in Secoveljske Soline", which helped to restart salt production by restoring the frontal and high-water embankments that had eroded after a long period of abandonment. Conservation efforts are seen as an added value both for the development of sustainable land use practices and the provision of benefits for the local community. The cultural heritage of the salt-pans reflects the centuries-old life and work of the salt-workers on the north-eastern coast of the Adriatic Sea. It has been preserved and exhibited in the Museum of Salt-making that was housed in a complex of restored traditional salt-workers' houses, and includes restored salt fields demonstrating traditional methods of salt production. The reconstructed buildings and salt fields initiated an educative type of tourism in this part of the salina.

#### *Tourists*

The saline mud (peloid) of the Secoveljske Soline was used for healing purposes since the 13th century. In 2013 the SOLINE Pridelava soli d. o. o. decided to bring thalassotherapy and therapeutic medical treatments directly to the healing source by creating a Spa Center inside the salt pans, providing a good example of how economic activity and environmental protection can coexist.

The eco-touristic valorisation of the Salt-pans is also the objective of an Italy-Slovenia Interreg project, SALTWORKS. The aim of the project was to promote sustainable development by boosting local production of high-quality salt, creating a new leisure areas, organising educational tours and workshops and

increasing knowledge and awareness of the natural and cultural value of Mediterranean salt-pans.

### Conclusions

Secoveljske Salina in Slovenia in the north-eastern Adriatic is an important area in biodiversity and cultural heritage terms. Its main values are maintained through the process of traditional salt-making which offers opportunities for ecotourism, organic products and local community development.

The valorisation of a traditional activity, the designation of a protected area and of a Natura 2000 site, the management of a public property by a private company and the funding of a LIFE project have been successful in reinvigorating an activity which was on the way to being abandoned and in assuring the long term funding for the conservation of natural and cultural resources of exceptional value in the area.

### Reference

- EC, 2015. LIFE and new partnerships for nature conservation.
- European Salt Producers Association (EuSalt), 2015. Proceedings of the International Conference on Solar Salt Works & The Economic Value of Biodiversity.
- Eusalt, 2015. Proceedings Of The International Conference On Solar Salt Works & The Economic Value of Biodiversity.
- Krajinski park Secoveljske soline (nacrt upravljanja 2011-2021).
- WWF Mediterranean Programme, 2010. Financial Strategy and Business Plan Secovlje Soline Nature Park, Slovenia.
- Papayannis, T. and Pritchard, D. E. (2011), Culture and Wetlands in the Mediterranean: an Evolving Story, Athens, Med-INA.

[http://www.ita-slo.eu/projects/projects\\_2007\\_2013/2012110811544976](http://www.ita-slo.eu/projects/projects_2007_2013/2012110811544976)

<http://www.kpss.si/>

<http://www.naturazoo.si/>

<http://www.parks.it/world/SI/parco.saline.sicciolo/index.php>

Romania

## The Vanatori Neamt Natural Park: a sacred natural site

- ◀ Management and conservation of spiritual, cultural and natural values involving all key stakeholders

Situated in the Carpathians, in the North-East of Romania, the Vanatori Neamt Natural Park covers more than 30,000 ha of mountains and hills, mostly covered by coniferous, deciduous and mixed forests.

The area has been well known as a hunting reserve since 1475 (Vanatori means 'hunters'), when hunting in this area was the preserve of the Moldavian prince and his court. It is protected as a Natural Park since 1999 because of its outstanding natural and cultural values, namely the ancient monasteries and old forests, the splendid landscape and rich local traditions.

The Natural Park was also designated as a sacred natural site according to the Delos Initiative of the Specialist Group of the IUCN World Commission on Protected Areas, which focuses on sacred natural sites throughout the world with the aim of helping to maintain these sites through a better understanding of the complex relationship between spiritual, cultural and natural values.

### Cultural values

A total of 16 monasteries and many small hermitages are scattered across the Park, most of them laying in beautiful forest settings. The living monastic communities (about 1,100 monks and nuns) represent the second largest Christian monastic concentration in Europe, after that of Mt. Athos in Greece. Owing to the succession of invasions during the Middle Ages by Turks and Tartars, among others, some of the older religious buildings were heavily fortified. The monasteries are important not just from a spiritual but also from a cultural point of view. The Neamt monastery, for example, is famous for its museum and library, which contains more than 10,000 medieval books written in Slav, Greek and Romanian. The entire area is a popular destination for pilgrims and tourists, especially during Orthodox feasts and summer holidays.

In modern times, many important artists, including Romania's most famous poet, novelist and painter, lived in this unique region.



### Natural values

The Natural Park is also designated as a Natura 2000 site for the protection of species and habitats of European interest. Forest habitats cover more than 85% of the Vanatori Neamt Natural Park, mainly beech and oak forests and mixed forests of beech, spruce and oak. In all, more than 2,600 species are recorded, including many rare, endangered and endemic animal and plant species. The presence of old forests creates a habitat for rare protected beetles such as the *Rosalia longicorn*, *Rosalia alpina*. The flora of the Park is also unique, harbouring 50% of all endemic plant species and subspecies found in Romania as well as several plant species of Community interest such as the Carpathians' endemic *Campanula serrata* or the rare Lady's slipper orchid *Cypripedium calceolus*.

The Park has a rich mammal fauna, which includes 41 species, such as the brown bear (*Ursus arctos*), the wolf (*Canis lupus*) and the European lynx (*Lynx lynx*). In addition, the European bison (*Bison bonasus*) has been the subject of an ongoing reintroduction program since 2012 and can now be observed in the Natural Park in



both free and semifree conditions, inside an 180 ha acclimatization enclosure. It is for this reason that the Park is also known as the “BisonLand”.

A total of 103 bird species have been recorded in the Park, many of them strictly protected by international conventions such as the Corncrake (*Crex crex*) or the Lesser Spotted Eagle (*Aquila pomarina*).

At the edge of the forests, shrub and meadow habitats, including species rich *Nardus* grasslands, a priority habitat, create optimum conditions for invertebrates and birds. A total of 149 species of butterflies have been so far recorded in the area of the Park. Lowlands are dominated by agricultural land fragmented into small plots. Most of the field work is done mainly by hand or using horses.

### **Integrating the management and conservation of spiritual, cultural and natural values**

The management of the Vanatori Neamt Natural Park is entrusted to the Romsilva – the Romanian National Forest Administration, by the Ministry of Environment, Water and Forests. A Scientific Council approves and coordinates the activities related to biodiversity conservation and an Advisory Board, incorporating key stakeholders like the monasteries administrations, NGOs and local village councils, contribute to the integration of the different interests at stake.

The management objectives of the Vanatori Neamt Natural Park include maintaining biodiversity by conserving species and key ecosystems, supporting local communities in preserving cultural and spiritual values of the region, encouraging close collaboration with stakeholders and promoting ecotourism, natural, spiritual, traditional, historical and cultural values.

The last version of the Park’s management plan was amended and approved in 2016, using for the first time in the country the concept of “natural site with spiritual value”. The plan prescribes a functional and territorial zoning regime, which includes a full protection zone aimed at protecting the most valuable natural heritage, buffer areas and sustainable development zones, where sustainable human activities are permitted.

The most important economic activities in the villages and towns of the Natural Park are still timber extraction and the manufacture of wood-based products. Tourism comes lower down the economic scale together with construction (e.g. cottage building), agriculture, and livestock-raising. Pastures and meadows are on the whole privately owned or in the hands of municipalities and are used for grazing and hay production.

Logging is also the main economic activity in the forests belonging to the Orthodox church, which make up around 10,000 ha of the Park area. Some monasteries’

have their own sawmills, forest tractors, loglifters, chainsaws, and even a whole timber factory as in the case of the Neamt monastery. These forests have been traditionally managed in a sustainable way, having obtained in the past a Forest Stewardship Council certificate. A Forestry Council provides advice on the policy for all the forests in Moldavia that are property of the Romanian Orthodox Church.

The management of the lands owned by the Orthodox Church (forests, agricultural lands, etc.) is under state supervision (via differing ministries) although in practice the abbots play the most important role.

Tourism is becoming an increasingly important source of income for the whole area and for the monasteries. The Park receives an average of 200,000 visitors annually, 90% of them from Romania, which is a relevant number taking into account that the resident population of the Park is less than 40,000 inhabitants. In 2016, after a certification process, the Park area was recognized by National Authority for Tourism as an "ecotouristic destination" under the name of "The Bison Land".

Every monastery has its own accommodation facilities, some of which are being modernised respectfully with great attention being paid to old Orthodox traditions and architecture. The Orthodox Church also encourages nature conservation and good management in the surroundings of the monasteries. They are seen to play an important role in environmental education.

At a local level, the park is seen as being beneficial to the local economy: it promotes the area as a whole via its positive image, it encourages eco-tourism and offers local people the possibility of earning a living from eco-tourism, entertainment and local attractions. The possibility of seeing the European bison in captivity, semi-free or in total freedom may also increase tourism and provide visitors with a reason to remain in the area for longer. The new environmental educational trails that are designed to provide a better idea of the park's biodiversity are another point of attraction.

## Conclusions

The Vanatori Neamt Natural Park is a protected area where natural values are intertwined with religious and cultural-historical values. The area hosts an uninterrupted monastic tradition of 700 years.

Local people in the Vanatori-Neamt Natural Park have lived for hundreds of years in close harmony with the surrounding forests, using its timber and other resources as a source of income, in traditional activities, many of which still exist. Horses are still used for

transport and labour in forests and fields. Houses, tools and many of the objects used in day-to-day life are made using local materials and traditional techniques. Traditional local architecture is characterised by wooden buildings with wooden tiles and ornaments, surrounded by wooden sculptured poles and decorated gates.

The main objective of the Park, as described in its management plan, is to maintain the harmonious interaction of man with nature by protecting habitats, species and landscape diversity, and at the same time preserve traditional land uses, by encouraging and strengthening the local activities, practices and traditional culture.

According to the Natural Park managers, the conservation of the natural heritage and the protection of the cultural and spiritual heritage have a lot in common. It is much easier to protect sacred sites if the surrounding natural heritage is also being conserved. Moreover, the existence of a sacred site implies that environmental protection will also have a spiritual component. The Vanatori Neamt Nature Park has a unique approach among the Romanian protected areas, which integrates in a holistic way the conservation of natural, cultural and spiritual features.

Portugal

## Pico Island Vineyard culture landscape

- ◀ Bringing together the efforts of all actors to manage a unique vineyard landscape of high cultural and natural value



### A volcanic stone maze hiding a diverse life

The Landscape of the Pico Island Vineyard Culture dating back to the 15th century, is an outstanding example of the adaptation of farming practices to a remote and challenging environment. The stone walls forming thousands of small, rectangular plots locally known as *currais* were built on the volcanic island of Pico, the second largest in the Azores archipelago, to protect the vines from wind and salt spray. Because of its outstanding cultural and natural values, the area is protected as a Natural Park and includes several Protected Landscape Areas according to national and regional law. Part of it is also designated as a World Heritage Site by UNESCO and part overlaps with Natura 2000 areas SCI Montanha do Pico, Prainha e Caveiro, SPA Zona Central do Pico and SCI/SPA Ponta da Ilha as well as geo-sites from Azores UNESCO Global Geopark.

#### Cultural values

The Landscape of the Pico Island Vineyard Culture has evolved over 500 years. The resulting impressive coastal landscape sits at the foothills of Pico Mountain, a volcano that dominates the topography of the western part of

the island. The site comprises areas of abandoned stone-walled enclosures where grape production continues to take place under a regime designed to ensure economic viability and sustainability while retaining traditional farming techniques.

The extensive system of small elds, as well as the outlying buildings, pathways, wells, ports and ramps that were produced by generations of farmers has enabled the production of wine to this day.

#### Natural values

The Landscape of the Pico Island Vineyard Culture and its surrounding area also harbours a diverse natural vegetation that includes, among others, endemic Macaronesian heaths and Juniperus forests, fields of lava and natural excavations and vegetated sea cliffs with endemic flora of the Macaronesian coasts. This rich variety of habitats hosts a rare and unusual wildlife which includes the Azores subspecies of Woodpigeon – *Columba palumbus azorica*. Threatened marine birds such as the Roseate and Common Terns, *Sterna dougallii* and *Sterna hirundo* and Cory's Shearwater *Calonectris diomedea* can also be watched in the coastal areas, as they have important colonies in nearby islets.

The volcanic stone walls make up an ideal substrate for lichens, moss and ferns, including some which are protected under the Habitats Directive or important given their restricted distribution range at global level. Some examples are the Near Threatened Woolly Tree Fern *Culcita macrocarpa*, endemic to Portugal and Spain or the Killarney Fern *Trichomanes speciosum*, restricted to western Europe and Macaronesia. These plants, as well as other species, benefit considerably from the removal of invasive plants which is done during the process of rehabilitation of the traditional vineyards.

#### Integrated management of natural and cultural values: many actors, one common objective

The Landscape of the Pico Island Vineyard Culture is well protected through a system of legislation, management plans, and a multi-layered administrative system. Laws to protect both the vine growing areas and the standards of wine production on Pico Island

were passed in 1980, 1988, and 1994. The area covered by the World Heritage site and the Natura 2000 site, as well as areas beyond the buffer zone are carefully zoned in a hierarchy of planning control. At one end, there is a complete ban on any new building and the use of mechanical equipment while at the other, although there are planning constraints on buildings, normal village life is maintained just as in other unprotected parts of the island. Later, in 2008, the area became enclosed by the Pico Island Natural Park, the largest of the Azores archipelago. Part of the area is also designated under the Natura 2000 network.

A series of management plans have been developed for the vineyard landscape of Pico Island, beginning with a 'Safeguarding Plan' (1993) and a regularly revised five-year management plan. A programme was undertaken over the period 2001-2006 so as to co-ordinate the activities of vine growers and agencies responsible for environment, roads, ports, water and public lands, waste disposal, buildings, culture, tourism, licensing and funding. The management plan imposes planning constraints on new buildings, and ensures the use of appropriate local building materials, the reconstruction of ruins, the revitalisation of abandoned vineyards e.g. by removing invasive plants, and the progressive replacement of modern vines by vines cultivated under traditional methods. A detailed land planning was

approved in 2006 and updated in 2013 regulating the restoration and development of traditional vineyards while safeguarding biodiversity values.

### Conclusions

Over the centuries, the people from Pico managed to overcome natural adversities. Using traditional wisdom and creativity, they turned bare stone into productive land by planting vines and protecting them from strong winds and salty sea breezes through a maze of volcanic stone walls.

Maintaining such a peculiar landscape that has lasted from the first settlers to the present, demands that the management bodies and regulations approved for the cultural site and the natural protected area, as well as the interests of private owners and wine producers are adequately integrated. Private owners and wine producers benefit through a financial support programme put in place by the Azores Government to encourage the rehabilitation of abandoned vines using traditional cultivation methods. Wine growers can receive up to € 2,350 per hectare per year depending on the vine varieties used. In the last 9 years the traditional vineyard area has nearly doubled. Financial incentives are also available for the recovery of private viticulture buildings that are in ruins and the elimination of architectural dissonances. The wine market is in this



**48** way linked with nature as well as cultural heritage through the marketing strategy that promotes different types of wine highlighting its geographic origin.

There is a major flow of economic benefits to local communities from activities in and around the World Heritage property (e.g. income, employment).

The management of the vineyard landscape is achieved through the designation of a Management Committee, appointed by the Regional Secretary for the Environment, including regional, island, municipal and protected landscape levels. An executive Technical Department for the Protected Landscape area (and so for the World Heritage site), led by the director of the island's Environmental Service based in Lajido de Santa Luzia, receives support from other regional services. The Pico Island Department of the Environment provides scientific expertise. The municipalities of Madelena and São Roque exercise planning control.

The maintenance of the vineyard plots and private buildings is ensured through the engagement of the local communities which include many private owners, though their actions and methods are tightly controlled by tradition, law and regulation as described above. Local authorities are also involved. For example, the local roads are the responsibility of the Regional and local authorities; small ports are administered by the Regional Secretariat for the Sea, Science and Technology and other public property is the responsibility of the Regional Secretariat for Agriculture and the Environment. The division of the responsibilities over the different sectors enhances control and cooperation in safeguarding valuable resources and thus there are continuous efforts to improve the coordination among the range of administrative bodies involved in the management of the property.

The Pico Vineyard Landscape receives thousands of visitors every year who come to enjoy both the historical heritage and the rich natural value of the area and its surroundings. Several support and visitation structures are available, adapted to the architecture and naturally occurring materials of the island including a vineyard landscape interpretation centre in Santa Luzia with a permanent exhibition display and guided visits. At the end of the circuit, visitors can indulge in a wine tasting produced in the protected landscape.

Android and iPhone applications are available with information on the Vineyard Landscape, natural protected areas and visitors centres and trails. According to the regional statistics bureau, the number of visitors in Pico island has greatly increased in the last two years, particularly the number of tourists using rural tourism and visiting environmental interpretation centres,

which is important for a small island with little more than 14,000 inhabitants. The Pico vineyard landscape and associated facilities have probably played a role in this boost whilst also taking into account the need to protect the rare and unusual wildlife hosted by this unique landscape.

## References

<http://www.patrimoniocultural.pt/>  
<http://siaram.azores.gov.pt/>  
<http://parquesnaturais.azores.gov.pt/en/pico-eng/>  
<http://www.monumentos.pt/>  
[http://siaram.azores.gov.pt/centros-interpretacao/ci-paisagem-protogada-cultura-vinho-pico/\\_texto.html](http://siaram.azores.gov.pt/centros-interpretacao/ci-paisagem-protogada-cultura-vinho-pico/_texto.html)  
<http://whc.unesco.org/en/list/1117>

Ireland

## Burren, where people work together to preserve nature and history

- ◀ An example of a historical landscape and a natural protected area
- ◀ A place where local communities play a key role in a bottom-up integrated approach

### Background

The Burren is located in the north-west of Ireland. The Gaelic term *Boireann*, meaning “place of stone”, identifies the main characteristic of Burren: a karst landscape with the presence of exposed limestone which extends over an area of approximately 72,000 ha.

The Burren was designed as Irish National Park in 1991 and from 2011 it was included in the UNESCO Global Geopark Network. It is also on the Tentative World Heritage List, nominated by Ireland since 1992, for both culture and nature values (so called “mixed site”).

### Natural values

The Burren region is internationally famous for its remarkable flora and beautiful limestone landscape, characterized by glacially planed limestone pavements.

In particular, the area is characterized by around 18,000 ha of limestone pavement, which harbours an unusual range of rare plant species as well as around 25% of the remaining orchid-rich grassland to be found in Ireland.

In order to protect these rare habitats and species, three different Special Area of Conservation (SAC Black Head-Poulsallagh Complex, SAC Moneen Mountain, SAC East Burren Complex) have been designed as part of the European Natura 2000 Network of protected areas.

### Cultural values

The Burren is also a cultural landscape of great importance. The karst topography elicited a distinctive cultural response from its people, as seen in the extensive winter-based pastoral systems that prevail to this day and that contribute directly to the rich natural and cultural heritage of the region. It is therefore an excellent example of the ongoing creative utilization of natural resources by an agricultural society over six thousand years, and reflects the combined works of nature and man. As richly fascinating as the Burren is in terms of its landscape and ecology, its archaeological landscape is no less remarkable. The Burren has been



aptly described as one ‘vast memorial to bygone cultures’. For instance, some 75 wedge tombs of Neolithic origin have been found in the region, as well as hundreds of ancient cooking sites or “*fulachta fiadh*” (a type of archaeological site found in Ireland) and ancient cist graves, 500 ring forts, tower houses and Early Christian church sites.

### Integrated regulatory and management of natural and cultural values

The natural and cultural heritage of the Burren is regulated and managed under different instruments which reflect to the numerous recognitions it has gained.

The real integration at management and regulatory level of natural and cultural values in Burren area concerns principally the Burren Farming for Conservation Programme (BFCP) and to Burren Community Charter.

BFCP, is a programme designed during the BurrenLIFE



project (LIFE04 NAT/IE/000125- winner of a 'Best of the Best' LIFE Nature award 2011) and presented as a Flagship project by the EC on the theme of 'Financing Natura 2000'.

The aim of the programme is to conserve and support:

- heritage favouring positive management of the Burren landscape and cultural heritage
- environment, also considering the impact of agricultural practices, and ensuring the sustainable agricultural management of high nature value farmland in the Burren communities.

The Burren Community Charter provides a very good example of bottom-up models of strategic management that started in 2010 bringing together a wide range of Burren stakeholders – farmers, conservationists, tourism interests, local authorities – to work together to safeguard the Burren while supporting the local economy and enhancing community wellbeing.

### **Best practices on stakeholders involvement**

The recent development of a Community Charter for the Burren, designed under the Burren Connect Project, represents an important development, involving local communities and proposing a voluntary agreement between the people who live and work in the Burren and the organisations that have responsibilities for the region, to safeguard the area, its people and its heritage while supporting the local economy and enhancing the community life of its residents.

The aim of the Burren Connect project is to achieve

### **Regulatory tools for the protection of the Burren National Park**

*Institution of Burren National Park* by the Government for nature conservation and public access.

*Natural and cultural heritage is protected mainly by:*

The EU Birds Directive 79/409 and EU Habitats Directive 92/43. Under the SAC designation, certain activities have been restricted, and list of 'Notifiable Actions' have been prepared for each of the habitats.

Burren Farming for Conservation Programme (BFCP).

BFCP is a unique agri-environmental programme that aims to conserve and support the heritage, environment and communities of the Burren.

*The Sites and Monuments Record (SMR)* provides a numbered list of archaeological sites and monuments together with a set of control maps indicating their location and extent.

*The Burren Community Charter:* a document produced by stakeholder to safeguard natural and cultural heritage of the Burren while supporting the local economy and enhancing community wellbeing.

(for more information see chapter below).

sustainable visitor management and environmental protection in the Burren region through the development of: ecotourism, information and training, traffic management, conservation, education, research, development of trails on the Burren and Cliffs of Moher Geopark.

The Charter brings a wide range of communities and sectors together to forge a common approach for the future management of the Burren, defining the role that each of groups aspire to play within that approach and identifying how this approach can be implemented.

Through the comprehensive community consultation process a list of challenges was identified. Successively any gaps, priority actions, local initiatives and proposals have been listed under each of the six groups of challenges.

In particular, for the Landscape and heritage cluster, a series of challenges have been underlined at land and heritage management level, and for each challenge a series of actions to improve the management have been proposed.

### Conclusions

The Burren represents a resource of inestimable value for the communities who live there, a unique national treasure for the people of Ireland and a landscape of remarkable cultural and natural values.

The main conclusions and best practice drawn from wide-ranging experience over many years is that the conservation and development of the resources benefit more from an integrated approach developed by the people and local communities and not imposed from outside.

Natura2000, through the development of the Burren Farming for Conservation Programme (BFCP), in conjunction with the Burren Connect Project, the Heritage Council, Galway County Council and Clare County Council, has helped to create a Community Charter which will support communities to sustain biodiversity, natural and cultural heritage and develop local business, farming and tourism in the Burren.

### Reference

- EC, 2014. Farming for Natura 2000 Guidance on how to support Natura 2000 farming systems to achieve conservation objectives, based on Member States good practice experiences.
- Gorman, M., J. Mannion, J. Kinsella and P. Bogue (2001), Connecting environmental management and farm household livelihoods: the Rural Environment Protection

Scheme in Ireland. *J. Environ. Policy Plann.* 3: 137–147.

- Hoctor, Z. For the Burren Community Charter Management and Advisory Groups (2011). Burren Community Charter Draft 3. For Discussion Purposes.

[http://www.heritagecouncil.ie/fileadmin/user\\_upload/Publications/Wildlife/Draft\\_Burren\\_Community\\_Charter.pdf](http://www.heritagecouncil.ie/fileadmin/user_upload/Publications/Wildlife/Draft_Burren_Community_Charter.pdf)

<http://www.burrenbeo.com/>

[www.burrencommunitycharter.com/](http://www.burrencommunitycharter.com/)

[www.burrenlife.com](http://www.burrenlife.com)

<http://www.undergraduatelibrary.org/system/files/3602.pdf>

<http://www.burrengeopark.ie/>

<http://www.burrennationalpark.ie/>

<http://whc.unesco.org/en/tentativelists/5522/>

[https://wcd.coe.int/com.instranet.](https://wcd.coe.int/com.instranet)

[InstraServlet?command=com.instranet.](http://www.instranet.com/InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=2014819&SecMode=1&DocId=1848086&Usage=2w)

[CmdBlobGet&InstranetImage=2014819&SecMode=1&DocId=1848086&Usage=2w](http://www.instranet.com/InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=2014819&SecMode=1&DocId=1848086&Usage=2w)

Spain

## The Teide National Park: when nature becomes culture

- ◀ Managing over two million tourists in a unique landscape treasure and promoting benefits for locals



### A unique landscape of craters, volcanoes and petrified lava

The Teide National Park is a protected area situated in the middle of Tenerife Island (Canary Islands). It covers 18,990 hectares and is dominated by the 3,718 m Mount Teide, the highest mountain of Spain, and the world's third tallest volcanic structure. It was declared a National Park in January 1954, making it one of the oldest and the largest national park in Spain, and was included in the Natura 2000 network owing to its peculiar flora and fauna, which includes a high percentage of endemic species.

#### *Cultural values*

The entire park is an extraordinary geological treasure where volcanoes, craters, chimneys, lava flows and various volcanic materials form an impressive array of colors and shapes. This unique landscape is one of the main resources of the National Park and one of the main reasons for its inclusion in the World Heritage List. The Teide has always had a significant cultural importance. This majestic volcano is part of the

mythology of the aboriginal population that lived in the Canary Islands about 80,000 years ago, the Guanches. In the classical world, the Teide exerted great fascination. The Greek historian Herodotus called it "the Atlante", and claimed it was so high that one could not see its summit. Its inhabitants called it the Pillar of Heaven.

During the Renaissance, many historians and adventurers identified the Atlantic Islands with the remains of Atlantis and Mount Teide with Atlas, in which the Canary Islands were seen as the highest parts of the sunken continent. The Teide, with its imposing altitude, was considered the highest mountain in the world during the era of European expansion, and was used as a beacon by Spanish, Portuguese and British navigators when they sailed the Atlantic to the South.

#### *Natural values*

The site holds outstanding natural values. It includes over two hundred species of plants, 58 of which are endemic, and six habitat types listed in the Habitats directive. It harbors a rich and diverse community of animal species, including an impressive array of endemic bats. Invertebrates have also a great importance in the park, with over 400 species of which 70% are endemic.

#### **Integrated management of natural and cultural values**

Since the administration of Spain is decentralised, the responsibility for Teide's management lies with the regional authority. A new transfer of powers has recently taken place, further shifting authority to the local level, delegating powers relative to Teide NP to the Tenerife's Island Council (Cabildo de Tenerife).

The site has a management plan that aims to protect and preserve natural and cultural resources, and to develop public use and visitor access, scientific research and resource monitoring, as well as traditional uses and practices, equipment and facilities to help improve the Park's relationship with its surroundings. The management plan was based on an exhaustive analysis of the different resources (landscape, geological elements, flora, fauna and archaeological sites) and a clear definition of the various threats. The major threats

for conservation of both natural and cultural sites are related to the pressure by tourism, the presence of alien species and fires. The surface of the Park has therefore been spatially zoned and the activities within the park are managed according to this zoning in order to minimise any possible negative impacts.

The Teide National Park is the most visited of all Parks in Spain. Since its declaration, tourism in this area has been gaining increasing importance and is an important source of income for the economy of the island of Tenerife. Over 2.5 million visitors have been recorded every year since 2012. A Master Plan for visitors' access aims to establish a system of visits consistent with the conservation of resources and the dissemination of the values of the Park, adjusting the intensity of the use of the sites to their carrying capacity.

The core funding for the park comes from the State via the budget of the Ministry of the Environment, through to the Autonomous Organisation of National Parks, which assigns and distributes funds to the parks and finances specific projects and activities of institutions and individuals that are present within the limits of National Parks or in its socio-economic areas of influence. These economic grants are provided through annual calls and are earmarked for the improvement of

infrastructure, social and cultural activities, which promote job creation in the local communities. They are allotted to local governments, businesses, private owners and non-profit organisations that contribute to conservation and sustainable use in the socio-economic area of influence of the National Park. Several activities related to the conservation of biodiversity and management of habitats and protected species have also been carried out with funding from the European LIFE programme.

### Conclusions

The Teide National Park provides an example of integrated management of a Natura 2000 site and sites of cultural importance for its landscape. The integration of outstanding universal values into the insular planning framework appears highly effective. The protection and management of the site has improved over time with great efforts undertaken by the local administration as well as insular and national authorities. The park has been able to obtain funds from several types of sources, (EU, national, regional, municipal, private), which allows it to have a more substantial budget to manage the various activities. The management plan that emphasizes and considers as a priority the conservation of both natural and



cultural values is a great strength of the Park. The research and monitoring of all the possible threats enables it to suitably focus the actions to be carried out and the allocation of resources from the available budget.

Another good practice to highlight is the definition of a suitable zoning that determines the types of activities allowed in the different areas and the classification of hotspot biodiversity areas as reserves that need to be managed and preserved especially with regard to tourism and recreational activities. Local communities and many small companies and entrepreneurs from the island take advantage of the great attraction for tourism that the national park represents.

The park also provides a good example in terms of stakeholder engagement and in promoting their awareness and appreciation of the natural and cultural value of the area. The Teide National Park Trust gathers all the main stakeholders including representatives of local town halls, councils, relevant associations from the island, scientific institutions, etc. This trust ensures social participation and supervises all the management activities and policies adopted in the national park.

#### References

- Parque Nacional del Teide. Ministerio de Agricultura, Alimentación y Medio Ambiente. <http://www.magrama.gob.es/es/red-parques-nacionales/nuestros-parques/teide/>
- Gobierno de Canarias, Declaración ambiental del Parque Nacional del Teide, 2012. [http://www.magrama.gob.es/es/red-parques-nacionales/nuestros-parques/teide/Declaraci%C3%B3n\\_ambiental\\_2012\\_tcm7-314054.pdf](http://www.magrama.gob.es/es/red-parques-nacionales/nuestros-parques/teide/Declaraci%C3%B3n_ambiental_2012_tcm7-314054.pdf)
- Gobierno de Canarias, Proposal to inscribe Teide National Park on the World Heritage List. 2006 <http://whc.unesco.org/uploads/nominations/1258.pdf>
- Natura 2000 - Standard Data Form. ES7020043. Parque Nacional del Teide. [http://www.magrama.gob.es/es/biodiversidad/temas/espacios-protegidos/ES7020043\\_tcm7-154728.pdf](http://www.magrama.gob.es/es/biodiversidad/temas/espacios-protegidos/ES7020043_tcm7-154728.pdf)

Sweden

## Gotland, investing in culture and nature for the future of the island

- ◀ Sustainable tourism based on a long tradition of respect of natural and cultural values
- ◀ An interesting example of citizens' engagement towards a more sustainable economy

### Background

Located in the middle of the Baltic sea, with 770 kilometers of coastline, Gotland (approximately 57,000 inhabitants), has always been of great interest. At first it was prized for being the hunting grounds for the first human settlements, then it was witness to numerous power struggles during the Middle Ages, and to day it has become an attractive tourist paradise.

### Cultural values

The island is studded with places of cultural interest: images carved on stones, up to 3 meters high; shipping graveyards dating back to around 1,000 BC; 92 mediaeval churches which host a wealth of religious art, including baptismal fonts, stonemasonry and paintings.

The highest expression of the cultural value of the island is the city of Visby, the only completely intact hanseatic walled city, inscribed on the UNESCO World Heritage List in 1995 as “...an extremely distinguished example of a Northern European walled Hanseatic town which has in a unique way preserved its townscape and its highly valuable architecture, the form and function of which clearly express the importance of this human settlement.”

### Natural values

In addition to these cultural attractions, Gotland contains rich natural assets that are closely related to the limestone bedrock that makes up much of the island. The northern end of the island is barren and rocky, while the southern end is greener, with deciduous forests and wooded meadows. More than 8% of Gotland's land area is now formally protected. The EU's Natura 2000 network covers over 70 of the island's 118 nature reserves with 129 sites designated under the Habitats Directive and 30 sites designated under the Birds Directive for a total of 200000 ha. Lilla Karlsö, a smaller island nearby is entirely within Natura 2000 and is home to giant colonies of auks. Thousands of pairs of guillemots, razorbills and cormorants also nest here every year. While Stora Karlsö, another small



island of the Gotland region, is known as “the only bird cliff in the Baltic” (SPA and SAC SE0340023). The sites are important breeding areas for sea-birds, (e.g. common murre, razorbill, great cormorant, lesser black-backed gull and common eider) and host species-rich alvar vegetation. The alvar habitat is characterised by openness (reinforced by grazing), flatness, limestone bedrock, exposure to winds causing dryness in summer and the impact of frost and freezing in winter. A main characteristic is a very thin soil layer (0-30 cm). Plant and invertebrate communities are mostly rich in species, and many of them have developed various adaptations to tackle the harsh conditions linked to dry summers, frosty winters and windy conditions. Within the European Union, more than 70% of the habitat is found in Sweden (primarily on the islands of Öland and Gotland).

### Sustainable management

Gotland is an island of contrasts: a modern society and economy in a landscape that includes innumerable



reminders of its heritage. In the last ten years the economic structure of Gotland went through radical changes: manufacturing and military installations were abandoned, together with the Swedish Customs service, causing a significant loss of jobs. To compensate for the loss, the governmental authorities made larger investments, relocating the National Heritage Board and the Swedish travelling exhibition from Stockholm to Gotland. These bodies were chosen due to their clear link to cultural activities.

For the people on Gotland, environmental issues have always been of central importance. The importance of long-term sustainable development is more evident on an island, where the conditions of life are shaped by local resources. This, joined to a long tradition of local and regional self-government, has led to a commitment towards an environmental-friendly development resolutely carried on in all sectors and institutions on the island. Businesses and the municipality co-operate on various projects in environmental management systems, ecocycle adaptation and eco-tourism.

Today, in addition to agriculture and the food industry, the tourism industry plays an important role within the growing service sector. The large number of visitors (1,950,000 passengers travelling to Gotland and 870,000 guest nights every year) has generated jobs in particular for service companies in the food and retail sector, transport, hotels and restaurants and suppliers

of activities and experiences. The travel and tourism industry on Gotland represents a turnover of about 150 million and provides employment for approximately 1,315 full-time employees (more than 5% of the total employees). According to Gotland University, more than a million tourists per year come to visit the island, attracted among others, by the landscape, architecture and interesting geological sites.

Many initiatives, researches and studies are being produced to support and plan a sustainable development based on the natural and cultural values of the island. In 2010, the City Council adopted a Gotland Municipality plan for 2010-2025, which provides a comprehensive planning tool for the future development of the island, taking into consideration the natural and cultural hotspots for sustainable tourism. In the 2010 – 2025 plan, the development of sustainable and environmentally conscious tourism has been stated as one of the most important objectives.

Gotland's natural and cultural heritage contribute to favourable preconditions for offering nature/culture tourism services. According to the plan the attractiveness of nature tourism should be increased.

Moreover, the National Heritage Board and the Blekinge Institute of Technology developed a study to analyse and illustrate the contribution to the regional economy linked to the cultural heritage cluster. The study is based on the assumption that, with their excellent

preserved historic structures, Gotland and Visby possess sites comparable to Dubrovnik or Venice and that culture has become part of the global economy with benefits comparable to other economic sectors in terms of production, trade and consumption. Ecotourism is considered one of the fastest growing market in the tourism industry, according to the World Tourism Organization with an annual growth rate of 5% worldwide and representing 6% of the world gross domestic product, 11.4% of all consumer spending.

For the development of Gotland's tourism potential, there are several private-public initiatives that take into consideration sustainability, nature protection, local community and cultural heritage. The community living in Gotland is conscious that conserving nature and local characteristic features are important for keeping Gotland attractive for tourists.

Some interesting examples of sustainable nature and culture tourism are:

- The creation of a "Nature Best" brand that marks all the products and services that are of quality, protect nature and are sustainable.
- A dedicated websites ([www.gotland.se](http://www.gotland.se), [www.gotland.net](http://www.gotland.net), [www.destinationgotland.se](http://www.destinationgotland.se)) that provides in-depth descriptions of numerous outstanding nature and cultural heritage sites worth visiting.
- As large areas of sea around Gotland are part of the Natura 2000 Network due to their ecological values, Destination Gotland, responsible for the ferry traffic from the mainland has invested a great deal in catalytic converters, more efficient emission control, sorting at source, environment-friendly paint and staff training.
- With the aim of safeguarding the natural fish population with a broad biological diversity and to use it as an attraction for fishing tourism FishYourDream.com is running several conservation projects. With a pike tagging project the movement, growth, and reproduction of northern pike in the Baltic are studied together with the effects of catch and release of the species. All the clients of FishYourDream.com are informed and involved in the project.
- The Natureship project, an international project financed by the Central Baltic Interreg IV, focused on sustainable planning and management of coastal areas and networks of key areas and habitats, choosing Gotland as a pilot area. A GIS model has been produced illustrating the conservation values of the island including a description of potential conflicts of interests. The conservation values have been divided into classes depending on their assessed value so as to indicate the parts of the coastal zone that are of greatest value.

## Conclusions

Gotland is an island characterized by a series of important natural and cultural hotspots.

The identification of nature protection and eco-tourism as a driver to sustainable development represents a best practice to be studied in the rest of Europe.

Important aspects of the new policy is obtaining consensus from the local civil society and introducing land-use policies aimed at protecting green areas together with the goal of reaching an efficient use of water, energy and land, within one generation.

The integrated planning and management of natural and cultural resources experienced in Gotland represents an innovative approach also in terms of civil society engagement and the active involvement of the research.

## References

- Gotland Region, Gotland in figures, 2014.
- Braunova V., Uppsala University, Impact Study of Wind Power on Tourism on Gotland, 2013.
- Natureship, County administrative board of Gotland, Integrated coastal zone planning and management In the Baltic region, a GIS-model developed in Gotland, 2012.
- Baltic Sea Development & Media Center, Nature tourism marketing on Central Baltic islands, 2011.
- GEOGuide Baltoscandia, Geotourism highlights of Gotland, 2010.
- Gotland Municipality, Bygg Gotland – översiktsplan för Gotlands kommun 2010-2025, 2009.
- Eriksson M.O.G. & Rosén E., Management of Natura 2000 habitats. 6280 \*Nordic alvar and precambrian calcareous flatrocks. European Commission, 2008.
- National Heritage Board and Blekinge Institute of Technology, Cultural heritage based cluster on Gotland, 2008.
- Evans B. et al., Governing sustainable cities, Earthscan, 2004.
- Celion L., Sustainable tourism on Gotland, 2001.

<http://www.lansstyrelsen.se/Gotland>

<http://www.tunhemsbygden.se>

<http://www.rettig.fi/en>

<http://www.svt.se/>

<http://whc.unesco.org/en/list/731>

France

## Iroise Marine Park, conserving maritime natural and cultural heritage

- ◀ Managing a marine protected area giving particular emphasis on the relations between nature and culture



### Iroise Marine Park, conserving maritime natural and cultural heritage

The Iroise Marine Natural Park is the first marine park created in France. It was established in 2007 off the coast of Finistère, in Brittany, between the Channel and the Atlantic. It is also a marine protected area under the Oslo-Paris convention (OSPAR) and a large part of its perimeter is designated as Natura 2000 and as a UNESCO biosphere reserve.

#### *Natural values*

Over the 300 kilometres of coastline and beneath the water's surface, it features a great variety of landscapes representative of the marine environment of Brittany and, by extension, of the northeast Atlantic: dunes, cliffs, archipelagos, heaths, islands, bedrocks and marine sediments. The variety of these landscapes combined with the fact that some sites are difficult to reach for a good part of the year, explains why this sea is a refuge area for numerous species. Some are protected, such as the grey seal, the basking shark,

the common bottlenose dolphin, the little tern and the vast fields of algae; the rocky drops of the coasts and the shallow bays provide spawning grounds and nurseries for marine species.

#### *Cultural values*

The area is also remarkable for its traditional fishing. Fishing activities have been carried out in the Iroise over millennia, as witnessed by the fishing traps from the Neolithic Period found in recent research carried out in the area. Fishermen are still fishing in these waters all year long, often on small boats, to catch highly prized crustacea such as lobster and common spiny lobster, carnivorous fish like sea bass and pollack, shellfish such as scallops or to gather seaweed.

Moreover, the maritime cultural heritage of the Iroise is particularly rich. It reflects the strength of the ties between the region and the sea and contributes to forging its identity. This maritime cultural heritage has many outstanding elements: from majestic lighthouses on the coast and offshore lighthouses to old harbour architecture, traditional seafaring vessels, shipwrecks, the oral memories of the inhabitants of the coast and the ancestral fishing know-how.

### **Integrating the knowledge, conservation and promotion of cultural heritage and traditional activities in the management of the site**

The management of the park focuses on the conservation of the key natural and cultural values of the area, the preservation of traditional activities and knowledge, as well as on promoting sustainable use of fisheries and other maritime resources.

A management plan was approved in 2010, which makes particular emphasis on the relations between nature and culture in the area. In addition to defining clear objectives and actions for the preservation of the natural habitats and species present in the park, the management plan includes a specific chapter dedicated to the maritime cultural heritage, which is focused on the conservation and promotion of the architectural,

maritime and archaeological heritage, and the local traditional know how.

This cultural heritage is often not known even by the inhabitants of these coasts, and must be protected and developed. The Marine Natural Park Iroise has carried out a detailed inventory of the main elements, promotes the development of tools and supports initiatives for their protection.

Although the lighthouses are no longer as important as they were in the past, owing to technological advances, they are part of the Iroise maritime history and landscape.

The Iroise coast boasts the greatest light intensity per kilometre of coastline and witnesses the biggest marine traffic. The first lighthouse to guide seamen was lit on Saint-Mathieu headland in 1692. Today, there are 11 lighthouses in the Iroise Marine Nature Park perimeter, including some remarkable elements: the Créac'h lighthouse (Ushant) is the most powerful in the world with a reach of 32 nautical miles.

The marine natural park promotes the recovery of lighthouses in the Iroise coast, supports the recovery operations carried out by local or national stakeholders and is committed to the creation of an observatory of offshore lighthouses.

Marine traffic has always been considerable in the Iroise sea. The strong winds, frequent mist, and currents are

among the most powerful in Europe and have caused many shipwrecks. Several hundred wrecks of historical and archaeological interest thus lie at the bottom of the Iroise. The interest they arouse among divers could be a source of development for the territory. Several organisations work in the field of marine archaeological research in the Iroise area since the '60s.

The sea-related architectural heritage of the Iroise is vast. It encompasses harbours, military fortifications designed to protect the coast, kelp fires, traditional fishermen's houses, seamen's shelters, constructions against coastal erosion, religious buildings relating to the sea and memorials for seamen. Most of the harbours in Finistère developed during the 16th and 17th centuries as a result of a specific fishing activity (sardine, shellfish, kelp, etc.). Today, there are 58 in the marine park perimeter and 112 items of military heritage have been listed near the shores of the Iroise.

Commercial fishing is an important activity within the Park. It generates jobs and is part of the cultural heritage of Iroise. The Park includes among its objectives supporting the sustainability of professional coastal fishing, through concrete projects that promote and support the dissemination of best fishing practices and contribute to improve marketing of marine products. In partnership with Normapêche Bretagne, the department allows to certify product quality in compliance with measures aimed at ensuring the conservation of the stock.



## 60 Working together for preserving and promoting the cultural heritage in the natural park

The Government, local authorities, regional and local councils are involved in an ongoing programme to improve knowledge and foster the preservation of the maritime cultural heritage of the Iroise. From academics to historians via local associations, many people and entities work on the Iroise maritime cultural heritage, which is thus gaining recognition. Moreover, the maritime cultural heritage of the Iroise often belongs to individuals or local authorities, which are therefore the main parties concerned by its conservation.

Better knowledge of the Iroise maritime cultural heritage and more widespread dissemination of that knowledge to the general public will promote its recognition and thus respect for it.

While one of the challenges in the Iroise is to achieve extensive knowledge of all the forms of maritime cultural heritage, another lies in improving the way heritage is protected. Such protection particularly involves listing monuments or objects (like traditional boats) as Historic Monuments.

Since the early 1990s, greater consideration has been given to the diversity of the maritime cultural heritage by the regional cultural affairs department (Direction régionale des affaires culturelles). The lighthouses in Créac'h, Saint-Mathieu and Le Stiff and the Seamen's shelters in Douarnenez and Sein were listed as Historic Monuments. Furthermore, the maritime heritage was recognized as a national priority by the department of architecture and heritage of the Ministry of Culture and Communication in 2007.

Facilitate public access to the Iroise maritime cultural heritage is also a priority objective of the Iroise Marine Nature Park. To achieve this objective, the management plan of the park lays down several bases for action, namely support for the creation of museum structures, discovery trails, and participation in designing cultural tools and initiatives.

### **Making maritime cultural heritage a vehicle for sustainable development of the area**

The Natural Park intends to promote the Iroise maritime cultural heritage as a vehicle of development for the territory. This will also strengthen the identity and sense of belonging to the Iroise and generate territory-wide cohesion, stakeholder commitment and social cohesion by building or strengthening social ties.

New environmental prospects may also emerge from improved knowledge of traditional know-how. Intangible cultural heritage, as the oral memory of fishermen,

receives particular attention in this regard.

The natural park managers started a project in 2015 to collect and transmit the memory and the experience of fishermen in the Iroise sea. The project called "Fishermen of Iroise" aims to preserve and transmit an intangible cultural heritage, i.e. the memories of people, but also to meet management objectives, in particular those relating to the preservation of the maritime heritage.

By collecting the direct testimony of fishermen through personal interviews, the project will improve knowledge and understanding of the history of fishing and the evolution of fishing practices in Iroise, and will valorize the expertise of fishermen and an essential professional activity in the Iroise. The memory of the Iroise fishermen will also contribute to promote a more sustainable development of fishing activities in the park.

In a previous initiative, the memories of the custodians of lighthouses were also collected and published, having received a prize of the Marine Academy.

### **Conclusion**

The Iroise Marine Natural Park is an example of protected area with a rich cultural heritage, which pays particular attention to the promotion of this heritage and properly integrates its preservation into the site management.

The park managers believe that this contributes to improve the identity and sense of belonging to the Iroise and generate territory-wide cohesion. The natural park and its cultural heritage can thus become a real economic driver for the region and particularly for tourism.

Traditional knowledge of fishing practices and the memories and experience of old fishermen, can also be useful to guide management action aimed at promoting more sustainable fishing practices in the area.

### **References**

<http://www.parc-marin-iroise.fr/>  
<http://www.parc-marin-iroise.fr/Le-Parc/Objectifs/Plan-de-gestion>  
<http://forumdesgestionnaires.espaces-naturels.fr/2016/programme>

Hungary | Slovakia

## Caves of the Aggtelek and Slovak Karst

- ◀ Coordinated management of a transboundary area to protect and preserve the natural and cultural assets while developing ecotourism

### Outstanding Natural and Cultural Transboundary Features

Located in the north-eastern border of Hungary with the south-eastern border of Slovakia, the Caves of the Aggtelek and Slovak Karst are distinctive by the large number of different types of fairly intact caves concentrated into a relatively small area. Shaped over tens of millions of years, the area provides an excellent demonstration of karst formation during both tropical and glacial climates, which is very unusual and probably better documented here than anywhere else in the world.

This exceptional transborder group of caves lies within a protected area of nearly 60,000 ha and a larger buffer zone across which more than 1,400 caves are known. Here, karst processes have produced a rich diversity of structures and habitats that are important not just from a geological but also from a biological and palaeontological point of view. This is why the area is classified as National park on both sides of the border: the Aggtelek National Park in Hungary and the Slovensky Kras National Park in Slovakia. In addition, both the Aggtelek Karst and the Slovak Karst are classified as an Important Bird Area and the transboundary Domica-Baradla cave system is a Ramsar Site, a wetland of international importance. All caves within the area are designated as Natura 2000 sites.

### Cultural values

The caves preserved different prehistoric cultures spanning 35,000 years, among them several paleontological sites of European significance. To this day, some are still regularly used for different cultural activities such as classical concerts.

Because of its outstanding cultural and natural values, the karst cavern systems of Aggtelek in Hungary, and across the border in Slovakia were also awarded the UNESCO World Heritage status in 1995, as some of them are significant archaeological and cultural localities as well. A part of the area in both Slovakia and Hungary is in addition classified as a Biosphere Reserve under the UNESCO's Man and Biosphere Programme.



The Aggtelek and Slovak Karst is better known for its caves but the karst formations on the surface are also very diverse and valuable. Swallets, dolinas, blind valleys and bizarre rock formations can be found on the karst plateaus and slopes.

### Natural values

The area hosts about 500 taxons of cave-dwelling animals living permanently or temporarily in caves, namely troglobiont or troglophil species, including some which are endemic such as the Aggtelek cave shrimp, *Niphargus aggtelekiensis*, the carabid beetle, *Duvalius hungaricus* and the *Allolobophora mozsaryum* worm. The caves are also important roosting and hibernation places for various bat species.

Due to its geographical location, covering both the Alpine and Pannonian biogeographical regions, the Aggtelek and Slovak Karst area has unique geographical and microclimatic characteristics which result in a high diversity of habitats and species. The base rock, relief and surface formations are especially important in this region, determining the habitats present and resulting in eye-catching differences between the vegetations

of covered and uncovered karst. More than 20 habitats listed in the Habitats Directive can be found in the area, which hosts approximately 8,000 animal species and more than 1,000 plant species, including one of the 100 rarest plants listed in the European Red List, *Onosma tornense*. This endemic species of Hungary and Slovakia has a distribution area of less than 1,000 km<sup>2</sup> and can be found on sunny, dry, southerly orientated karstic slopes at five locations only, on the border between both countries.

About three quarters of the Aggtelek and Slovak Karst area is forested, the dominant tree species being the oak and the hornbeam. Species signalling the closeness of the Carpathian mountains can be found on cold northern slopes and beech-wood in ravines, such as the European lynx *Lynx lynx*, the White-throated Dipper *Cinclus cinclus*, or the saproxylic beetle *Bolbelasmus unicornis*. Recent research indicates that the wolf, *Canis lupus*, and brown bear, *Ursus arctos* find this area an increasingly suitable habitat. Warm preferring oak-woods are situated on dry, warm southern slopes, while scrub forests can be found on steep, rocky slopes with several continental and sub-mediterranean species. Scrub forests alternate with steppe meadows and grasses on steeper, southern slopes, where species

preferring drier and warmer habitats such as the Eurasian Toothed Grasshopper *Stenobothrus eurasius* or the Rock bunting *Emberiza cia* can be found. Half-dry grasslands on higher plateaus used for hay-making host several valuable and rare plant and animal species.

South from the uncovered karst, a different vegetation preferring acidic soil has evolved on the so called covered karst. Because of the varied habitats, an extremely rich butterfly fauna is also present. Special management restrictions and requirements are designed for the traditional hay-fields, grazing lands (meadows) and orchards, as these are the last harbours of *Onosma tornensis* and other important plants like the Pontic dragonhead *Dracocephalum austriacum* as well as near threatened butterflies like the Large Copper, *Lycaena dispar* and the Scarce Large Blue, *Maculinea teleius* or even birds like the Corncrake *Crex crex*.

### Challenging protection and management requirements on and below the surface

Maintenance of the integrity of active geological and hydrological processes requires integrated management of the entire water catchment area. Because cave systems are exceptionally sensitive to environmental changes, including agricultural pollution, deforestation and soil erosion, the main protection and management requirement in the Aggtelek and Slovak Karst is on one hand, to ensure careful management of visitors inside caves and on the other, strict control over surface activities that may affect the quality and quantity of water infiltrating the karst.

All of the caves of the Aggtelek and Slovak Karst are State-owned and the land above them has protected status, irrespective of ownership. In both countries most of the surface has National Park designation. The Aggtelek Karst is administered by the Aggtelek National Park Directorate (Hungary) and the Slovak Karst is managed by the Slovak Karst National Park Directorate (surface areas) and by the Slovak Caves Administration (caves) under the Ministry of the Environment of the Slovak Republic. These administrative bodies carry out joint projects including research, protection and monitoring activities.

An integrated management plan has been prepared for the transborder site and monitoring systems are being completed to ensure that the water quality in the catchment area of the caves is appropriate, which includes the control of the use of agricultural chemicals, and to prevent large-scale soil erosion and the infiltration of humus and alluvial soil into the caves. This means establishing buffer zones where appropriate, completing sewage systems and eliminating illegal



garbage disposal and building debris in the surrounding settlements.

Because the sites are managed to protect and preserve the natural and cultural assets but also to develop ecotourism, a zone system is defined with areas dedicated to wildlife, areas that can be visited only using specific marked trails and others that can be freely used. More than 99% of the Caves of Aggtelek Karst and Slovak Karst is preserved in its original natural condition. The remaining 1% has been substantially modified as to allow human use – the number of visitors is estimated in 300,000 annually. Levels of sustainable tourism are determined with the involvement of local communities but further research and exploration is still needed with regard to the interconnection of the karst cave system. The self-regulation of cave geosystems and limit values of their resistance are important from the viewpoint of cave protection and it is on the basis of monitoring these changes, that the attendance of show caves is regulated and limited. A zoning system has been implemented which includes two core areas, a buffer zone and a transition zone. Only a limited number of caves are open to the public and visitors access is possible only through guided visits accompanied by expert guides. Those caves which are not open to the public have been locked with safety doors to prevent unauthorised entry.

### Conclusions

The Aggtelek and Slovak Karst landscape has evolved along the past tens of millions of years since the times the area was covered by a warm sea with many marine animals whose deposited calcareous shells formed the basis of the karst rock. About three million years ago, karst caves began to evolve into today's well known unique landscape. Excavations in and around some of the caves have proved that they preserved different prehistoric cultures spanning across 35,000 years, including several palaeontological sites of European significance. Maintaining such sensitive systems demands that the management bodies and regulations approved for the subterranean World Heritage site and the natural protected areas on the surface, as well as the interests of farmers, foresters, scientists, visitors and other users are adequately integrated.

With very high and increasing trends in the number of visitors, the primary task of the National Parks has been to explore, protect and preserve the natural and cultural assets while also diversifying and developing ecotourism. With this aim, several unique caves have been opened to visitors on both sides of the border.

Besides the cave tours, the Parks offer zoological, and botanical tours as well as guided visits to learn about the cultural environment of the Parks' villages.

Seasonal events such as Folk and Art Festivals organised by local villages and NGOs, others focusing on biodiversity issues such as reactivating abandoned extensive orchards and maintaining local fruit breeds or philharmonic and chamber music concerts inside local churches and some of the caves open to the public represent important ways of binding cultural and nature experiences. Because this is a transborder area, the harmonised and coordinated management approach, in which the management plan plays an important role, is vital.

### References

- <http://www.anp.hu/en>
- <http://www.anp.hu/en/vilagorokseg>
- <http://www.anp.hu/en/kincskereso-jatekosveny>
- <http://www.anp.hu/en/deneverek-ejszakaja>
- <http://www.anp.hu/en/magyar-szlovak-egyuttmukodes-1>
- <http://tourism4nature.org/sites/aggtelek/index.htm>
- <http://whc.unesco.org/en/list/725>
- <http://whc.unesco.org/en/news/1332>
- <http://whc.unesco.org/uploads/nominations/725ter.pdf>
- <http://worldheritagesite.org/tags/tag.php?id=1192>



## Short cases

## The European Green Belt



### The ecological value

The Green Belt's 12,500 km host a large number of nature reserves:

- 40 national parks of which 16 are transboundary national parks.
- 3,272 nature protected areas. Among these are Natura 2000 sites, nature reserves and biosphere reserves.

The Green Belt initiative aims to harmonise protection efforts and to integrate human activities with the natural environment.

### A memorial landscape

The European Green Belt, developing along the former Iron Curtain, is an exceptional symbol of European history in the period of the Cold War. One of the main aims of the European Green Belt initiative is to preserve, as a memorial landscape, the remains of border fortifications: watchtowers, patrol paths, ditches or border buildings.

### A cross boundaries initiative to unite through nature

The Iron Curtain, running from the Barents Sea to the Bosphorus, divided Europe for almost 40 years creating a 'forbidden zone' where no activity was allowed.

Elsewhere landscapes were being shaped and modified by intensive agricultural and development processes,

while habitats within the forbidden zone remained comparably undisturbed.

The Green Belt initiative aims at having these key habitats, as well as the connected areas, become part of an ecological network. The Belt would act as a symbol of union between East and West and as a key element to Europe's global commitments to halting biodiversity loss.

Over 150 governmental and non-governmental entities have teamed up in the Green Belt Initiative which currently forms a transcontinental axis 12,500 km long, passing through eight biogeographic regions and touching 24 states, and with different landscapes and habitats serving as a refuge for numerous threatened species.

Although the old barrier has now been removed, it will always remain as a cultural reminder of how communities can become divided. The natural values within the Belt represent the only positive heritage of the Cold War. Actually, it serves as a refuge for numerous threatened species and habitats. Main target of the initiative is to develop and to protect the Green Belt as one of the most important pan European habitat axes in Europe.

### Vision

*The European Green Belt, our shared natural heritage along the line of the former Iron Curtain, is to be conserved and restored as an ecological network connecting high-value natural and cultural landscapes while respecting the economic, social and cultural needs of local communities.*

### Management structure

The European Green Belt Initiative was born in 2003, when various existing regional initiatives merged into one European initiative, including four organizational regions: Fennoscandia, the Baltic Region, Central Europe and the Balkans. The project's overall steering is done by a coordination group consisting of members from all the regions.

### Lessons learned

1. The European Green Belt proves that biological diversity goes hand in hand with cultural diversity.
2. Besides its extraordinary ecological importance, the initiative is a living example of how Europe and its diverse cultures can truly grow together.

*For more information:*

<http://www.europeangreenbelt.org/>

Portugal

## Côa Valley: Rock birds, Paleolithic engravings and more



### Best practice: Stakeholders involvement

The Vale do Côa Archaeological Park has a visitor system to promote the balance between enjoying the area and preserving both the engravings and the natural landscape that hosts them. The area hosts historical medieval towns and villages among the granite and schist, including architectural traces of the presence of an ancient Jewish community that lived in the region since Medieval times.

Although the Archaeological Park does not yet have an approved management plan, it is located within the boundaries of the SPA Vale do Côa, managed by the country's national authority for nature conservation, ICNF.

The Grand Route of Coa Valley was launched in 2008 and consists of 26 km of marked pedestrian trails, to be expanded to 220 km, linking the Côa river spring to the river mouth, ending at the Côa Museum, and connecting 5 counties (Sabugal, Almeida, Pinhel, Figueira de Castelo Rodrigo and Vila Nova de Foz Côa). This project, together with the creation of Faia Brava, the first Portuguese private protected area, is very interesting particularly

in terms of the demonstration value for environmental management with the involvement of a high number of stakeholders in an integrated strategy. It was financed by RDP funds and promoted by a local development association - Associação de Desenvolvimento Territórios do Côa – in cooperation with several other partners, including the 5 local municipalities and the NGO *Associação Transumância e Natureza (ATN)*, responsible for the definition and maintenance of the trail. As a regional infra-structure, the Grand Route will result in medium-term and long-term economic impact in the region.

A partnership model was developed in which partners are public or private entities who directly contribute to:

- trail maintenance, including shrub management, painting of marks and paintings and installation of signs;
- promoting the Grand Route at national and international level;
- organising activities related to the Grand Route;
- making the initiative sustainable.

Neighbours have the task of monitoring a small part of the Grand Route and reporting to the managing organization any problems (e.g. river floodings,



Pedro Nuno Caetano

landslides) or needed intervention such as trail clearing or signpost maintenance.

The Grand Route crosses the 214 ha Faia Brava Reserve, owned by ATN. It hosts important habitats for cliff breeding birds, holm and cork oak areas, riverfront habitats, Mediterranean temporary ponds, an engravings nucleus and 10 traditional pigeon houses. The area has a management plan in place. The key management guidelines are the recovery, repopulation and maintenance of old pigeon houses and reforestation with cork oak, holm oak and ash, extensive grazing management (horses and cows), fire surveillance and sustainable forest management, through a Forestry Intervention Area plan, aimed at making the Grand Route an example of blending culture and nature.

#### References

<http://www.icnf.pt/portal/naturaclas/rn2000>  
<http://www.atnatureza.org/index.php/visitar/64-grande-rota-pt>  
<http://www.icnf.pt/portal/ap/amb-priv/resource/doc/plano-gestao-faia-brava>

## The SASMAP project: a 7 EU MS initiative

#### Project objectives

The SASMAP project – Development of Tools and Techniques to Survey, Assess, Stabilise, Monitor and Preserve Underwater Archaeological Sites – funded under the Seventh Framework Programme for the period 2012-2016, was aimed at developing new technologies and best practices in order to effectively locate, assess and manage Europe's underwater cultural heritage, preferably *in situ*.

#### The consortium

Locating of underwater archaeological sites, assessing the state of preservation of waterlogged wood and stabilizing them are some of the techniques which have been improved by the Consortium of seven research institutions and four companies from seven EU Member States - Denmark, Germany, Greece, Italy, The Netherlands, Sweden and the United Kingdom.

#### Possible application for marine Natura 2000 sites' conservation

The project developed a structured and optimized approach to document and safeguard, with non-destructive and non-intrusive methods, underwater



cultural heritage. The same approach could be adapted and applied to biodiversity conservation in marine Natura 2000 sites.

In particular, the following methods seem to be interesting for this purpose.

*Location:*

- development of geological models that could aid in the prediction of where interesting sites can be found at a regional level;
- development of surveying and prospection methods including cutting edge satellite imagery which looked through the seawater so as to make topographic maps and visualise in 3D the seabed of the selected sites.

*Assessment:*

- development of remote and diver held data logging devices that characterised the site environment *in situ*;
- development of a diver held sediment coring device which enabled the taking of sediment samples that could also be used for characterising the site environment or obtaining information;
- development of a diver held non-destructive device for testing the state of preservation of the archaeological materials (in particular archaeological wood) on a site.

*Protection:*

- development of an artificial sea grass to protect archaeological material from the threat of underwater currents, which can rapidly remove sediments leading to the exposure and loss.

As evidence of the results achieved by the project, SASMAP has been awarded the EU Prize for Cultural Heritage / Europa Nostra Award 2016, one of the European highest honour in the heritage field.

**References:**

- SASMAP, Final report, 2016.

<http://sasmap.eu/>

<http://www.europanostra.org/awards>

## Belgium

# Natura 2000 in the Belgian part of the North sea



The marine Natura 2000 sites cover 36% of the Belgian North Sea, where the most important habitats are sandbanks and reefs:

- SAC – BEMNZ0001; ZPS – BEMNZ0003; ZPS – BEMNZ0002.
- The area is also covered by two terrestrial sites: SPA - BE2524317; SAC - BE2500001

### Cultural heritage

In the Belgian North Sea there are 215 registered wrecked ships laying on the sea-floor, besides a lot of unknown wrecks. Wrecks have a great cultural value and are very popular with wreck divers and sport fishers. Moreover, they are of great ecological value as they are effective refuges and nurseries for various fauna and flora species.

### Best practice: the Marine Spatial Plan

The Belgian part of the North Sea is one of the most intensively used seas in the world and it is crucial to have all activities geared to one another protecting, at the same time, the sea and the life it contains. In order to make this all balance, the Belgian authorities have drawn up a Marine Spatial Plan which has been



approved on March 2014 by Royal Decree. The plan will be reviewed every six years and is legally binding. The plan lays out principles, goals, objectives, and long-term vision, and spatial policy choices for the management of the Belgian territorial sea. The Marine Spatial Plan allows an integrated management of a number of activities, values and interests, such as:

#### *Nature conservation*

Improve the conservation in existing areas protecting more than 2,000 species. A specific location is provided to perform coastal protection experiments.

#### *Energy, cables, pipelines*

Provided specific spaces to generate “green energy” for which a concession and an environmental permit are needed, along with a report on the environmental impact.

#### *Fisheries and aquaculture*

The most valuable areas are reserved for fishing only when using techniques which do not disturb or touch the seabed. Sustainable aquaculture is allowed on two wind farms.

#### *Sand and gravel exploitation*

The activity is allowed with restrictions. A permit is required as well as a prior environmental report. Sand exploiters pay a compensation for their activity.

#### *Military use*

Allowed in designated areas.

#### *Tourism and recreation*

It is one of the most important activities in the coastal region but certain activities are not allowed in order to reduce the environmental impact.

#### *Shipping and dredging*

Specific shipping routes have been designed. Specific sites for disposing dredged material have been designated.

#### *Scientific research*

Measuring poles, radars and masts are foreseen to prevent ships from colliding but also monitoring the state of the environment, as well as for its conservation and restoration.

#### *Stakeholders consultation and cross-boundaries cooperation*

The Plan has been approved after a process of consultations and advice from an advisory commission, in addition to expert consultation, stakeholder participation and preparation of a strategic environmental assessment of the plan.

Cross-border consultation was carried out with the Netherlands, France, and the UK.

#### **References**

- Belgian Federal Public Service, Something is moving at sea, 2014.
- Douvere, Vision for the future, MSP in Belgium, 2007.

Austria

## The Hallstatt Dachstein region



The Dachstein massif is the largest nature reserve in Upper Austria and a Natura 2000 area SAC AT3101000 – Dachstein. The site (14,575 ha) has been designated as the highest mountain (2,995 m) and only glacier of the Upper Austria, which hosts widespread habitats suitable for important species as golden eagles and grouses.

### Cultural heritage

The diverse landscapes of the Alps are reflected within this relatively small area and the cultural significance of Hallstatt and its salt-based economy date back into prehistory. Here are the oldest salt mine in the world and a widely ramified network of ice caves.

Several prehistoric burial places discovered in the area led researchers to name the entire culture of the time the “Hallstatt culture”.

A rich architectural and cultural heritage is derived from this long-standing tradition of salt mining and trade, and the landscape inspired many painters and writers.

### From salt mining to tourism development

The region of Hallstatt Dachstein is characterized by an intensive interaction between humans and nature which is rooted in history, as human activities have had an impact on the natural environment since pre-historical times.

The management of the natural resources, mainly linked to salt mining activities, as well as the appreciation of cultural heritage are the result of a long evolving cultural tradition which is still practices today.

As early as 1500 B.C., the world’s oldest salt mining was established and already in 1.100 B.C. the mine covered an area of 30,000 m<sup>2</sup>. Even in the Bronze Age, this “white gold” was mined and traded in the upper valley of Hallstatt, and later, salt became an important trade item for the Habsburg Monarchy.

Roman Klementschitz



A rich architectural and cultural heritage is derived from the tradition of salt mining and trade, but Dachstein also has a special status in geological terms. Its karst formations, in particular the cave landscapes, and its wide range of plants and animals have made it a subject of research for natural scientists as well as a source of inspiration for artists.

Natural and cultural features of the region act as a strong baseline for tourism development in the area.

At the beginning of the 19th century, first archaeological excavations were undertaken to bring to light the area of pre-historic salt mining activities and settlements. Increasingly, visitors were attracted and interested in learning about the early civilization of the “Hallstatt Culture” and fascinated by the outstanding beauty of the natural landscape.

With increasing tourism in the second half of the 19th century, touristic infrastructures such as accommodations, shops, hiking trails and lakeside resorts were built.

Tourism played a crucial role in regional development: associations to encourage local customs were founded, Austria’s first regional planning (1950) defined the “beauty of the scenery” as resource that had to be protected and stated that the “cultured landscape” should be developed as basic resource for the region.

The region is well structured today as an attractive touristic site: museums, Natura trail, hiking trail, excursions through ice caves and glaciers, school trips and events are organised all the year.

This “cultural landscape that combines nature and culture in a harmonious and mutually supportive manner” has been included in the list of World Heritage sites in 1997.

*For more information:*

<http://www.hallstatt.net/>

<http://www.dachstein-salzkammergut.com/>

## References

- CHERPLAN, Enhancement of Cultural Heritage through Environmental Planning and Management, (SEE/0041/4.3/X), 2012

Austria

## Biosphärenpark



### Nature

The area includes: more than 20 types of forest (dominating are beech, oak and hornbeam forests), more than 17 types of meadows; over 2,000 species of flora; 15 nature reserves; 4 nature parks and approximately 150 breeding birds for which part of the area has been designated as a Natura 2000 site: SPA AT1211000 – Wienerwald Thermenregion.

### Culture

In many locations it is possible to find historical and cultural heritages dating back several centuries: abbeys and monasteries, fortresses and castles. The Park is also enriched by numerous museums.

Moreover, the traditional wine production has characterized the cultural life of wine-growing areas and its landscape with a high natural and recreational value.

### Biosphärenpark Wienerwald, a UNESCO Biosphere Reserve

Since 2005, the Wienerwald is acknowledged as a biosphere reserve: special cultural and natural landscapes awarded by UNESCO (United Nations

Educational, Scientific and Cultural Organization). Here the focus is on the conservation of biodiversity, sustainable economic and social development as well as the conservation of cultural values. Thus, the Wienerwald became a model region for sustainable life, economy, education and research.

*Vision ecological balance, economic security and social equality are the three pillars for sustainability of the Biosphärenpark Wienerwald. By taking equally into consideration the three aspects, favourable living conditions for present and future generations is guaranteed.*

The designation as biosphere reserve was decreed by the federal states of Vienna and Lower Austria, and the Biosphärenpark is Austria's largest conservation area of this kind. As with all biosphere reserves, a division into different zones has been established: nature has priority in the core areas, therefore these zones are legally well preserved. The core areas were selected and arranged by contract with experts and landowners. They are established as nature reserves and as landscape preservation areas; the goal of the landscape conservation area is to preserve typical landscapes as recreational areas for its inhabitants.

In the buffer zones responsible activity and resource-use is encouraged, provided that natural habitats and the diversity of species are protected. In the transition area priority is given to economic and recreational activities in order to enhance a sustainable local economy and improve quality of life.

The total area of the Biosphärenpark amounts to 105,645 hectares with approximately 750,000 inhabitants living in the biosphere reserve communities. The engagement and awareness raising of the communities are fundamental aspects for the success of the reserve.

For example, to make the public aware of the farmers' commitment to preserve the beauty of the Wienerwald landscape, every year a Meadow Championship is organised: the farmers' achievements are rated and awarded by an expert jury, that examines meadows and pastures using scientific indicators.

Numerous education and research activities are hosted and encouraged and a number of engagement activities are in place as: guided tours, displaying the diversity of nature and culture; recreational activities, as hiking trails, panoramic view towers, educational routes, cycle paths, caves; activity routes, an itinerary self planning system offering detailed information about hiking and mountain bike tours which includes route description, altitude profile, track history, pictures, and GPS data to download.

Finally, numerous education and research activities are hosted and encouraged.

*For more information:*

<http://www.bpww.at/en/biosphaerenpark/>



Latvia

## The Gauja National Park



### Nature and biodiversity

The Gauja National Park is the largest and oldest of the national parks in Latvia, characterized by great biological diversity. It is located in an extensive raised bog and coniferous forest geobotanical region notable for its prevailing road-leaved (*Quercus-Fagetum*), mixed broadleaved forests and a remarkable amount of vascular plant species and migration paths.

For these natural values it has been designated as a Natura 2000 site: LV0200100–Gaujas Nacionālais Parks.

### Cultural heritage

There are over 500 cultural and historical monuments in the territory of the Gauja National Park – castle mounds, brick castles, churches, manor houses, watermills, windmills and other archaeological, architectural and art monuments. Scattered along the Gauja River, there are 19 ancient castle mounds, six Medieval castles and three towns – Straupe, Sigulda and Cēsis.

### Sustainable tourism and heritage values

The Gauja National Park was established in 1973. It stretches over more than 90,000 hectares, protecting the most beautiful section of the valley along the

Gauja River. According to the Law on Gauja National Park, the territory is divided into five functional zones: strict nature reserves (4%), restricted nature areas (31%), neutral zone (18%), landscape protection zone (44%) and zone of cultural and historical value (3%).

Magnificent rocks, cliffs, caves and sandstone outcrops, which were formed 350-370 million years ago, are among the park's major attractions. The Gauja National Park has a wealth of tradition in environmental protection and tourism being one of the most popular tourist destinations in Latvia.

The Gauja National Park represents an example of how cultural heritage, such as traditional farming methods and buildings, can be a way of maintaining active land management for biodiversity conservation. Farm buildings in Bekas village support breeding birds and bats, including 20 pairs of white wagtails, *Motacilla alba*, and a maternity colony of approximately 200 Nathusius's pipistrelle, *Pipistrellus nathusii*, occurring in a wooden wall of the farmhouse. Today the farm (140 ha) comprises several previous holdings, land management is sensitive and there is no intensive agriculture. Pastures are grazed at low stocking densities to encourage a species-rich sward, with over 60 species per square metre recorded.

Moreover, the Park has developed specific activities to enhance the sustainable fruition and education on the natural and cultural heritage of the region.

CC BY-SA 3.0



The Vienkocu Park, for instance, hosted inside the Gauja National Park, seeks to promote green lifestyle. Walking through the park visitors may see the manor and models of historical buildings, expressive wooden sculptures, ethnographic buildings, dugout boats, tar kiln, and the first sandbag house in Latvia where visitors will be introduced to its construction process and inspired to start a green lifestyle. Guides have been made available to tell visitors the history of Ligatne, a centre with historical buildings related to a paper mill and the wooden houses of the mill's workers, which was included in the list of cultural monuments of national importance.

Of considerable interests is also the newly built Neikenkalns' nature concert hall, within an open-air stage inside the Gauja National Park built as an amphitheatre. Its unique acoustic features are developed with a water mirror, wooden structures, greenery in the park, terraces, and slopes. The nature concert hall highlights the heritage value of one of the most fascinating Latvian traditions, the song festival, which originated in Dikli on 1864.

*For more information visit:*

<http://www.entergauja.com/en/>

#### References

<http://archnetwork.org/forest-management-in-latviajoint-report/>

## Spain

### Almendralejo Church: a shelter for hawks



#### Cultural values

- Spiritual and cultural values: a Gothic style church with Baroque details in a small town of Extremadura (34,000 inhabitants).
- Almendralejo town is in the centre of an area that has one of the most fertile lands in the region (Tierra de Barros) and is well known for its wine production.
- Almendralejo wineries are also famous.

#### Natural values

- The Almendralejo Church is a Special Protection Area for Birds (Natura 2000 site).
- It is the first SPA designated in an urban area in the European Union.
- The roofs of the church provide refuge and nesting sites for birds.
- The building hosts a big colony of Lesser Kestrel and other protected bird species

#### Best practice: stakeholders involvement

The Church of the Purification of Almendralejo is the official name of this Special Protection Area for Birds included in the Natura 2000 network, a historical building which hosts a hundred breeding pairs of Lesser





Kestrels between February and July every year.

The colony of kestrels settled in the church long ago and has significantly increased thanks to proper management of the roofs of the building. The protection and preservation of the colony was achieved through a close collaboration between the Church, the regional and local authorities and a local NGO, which joined their forces to promote the actions that have led to a significant enhancement of the colony and to the designation of the church as a Special Protection Area according to the Birds Directive. This church was the first urban SPA designated in Europe.

Most pairs occupy artificial nests integrated in the roofs of the building. The kestrels' colony is related to other smaller colonies that are located in different buildings in the same locality. Moreover in the surrounding of the Almendralejo town there are suitable hunting grounds for the species, with open vine crops, olives and cereal. The Church also hosts other protected bird species, as the White Stork (*Ciconia ciconia*), the Common Kestrel (*Falco tinnunculus*), the Common Barn-owl (*Tyto alba*) and the Jackdaw (*Corvus monedula*).

A local NGO (DEMA, *Defensa y Estudio del Medio Ambiente*) manages the birdwatching activities that are carried out around the site, so as to allow proper observation by the visitors without disturbing the birds, in particular during the nesting period.

The main responsible for this organisation has stressed that the work carried out during the last two decades

has shown that the conservation of natural heritage and cultural heritage is possible with mutual agreement and understanding, and that the colony of kestrels has also become a tourist attraction and an incentive for local development. The presence of these birds is very beneficial for the hotels and restaurants of the town. With the support of the Church, the City Hall and the neighbours, a place that had not a particular importance for tourism has become a reference site for the observation of the Lesser Kestrel.

A set of surveillance cameras installed in the church transmit images of the birds to the headquarters of this organization in Almendralejo, for a continuous monitoring of the birds in real time any, which allows detecting any incidents, as a fall of chickens from their nest or attacks from other birds, and provide the necessary data to improve the conservation of the species.

#### References

<http://www.turismoextremadura.com/viajar/turismo/es/explora/ZEPA-Iglesia-de-La-Purificacion-de-Almendralejo/>

Italy

## Majella National Park: an example of management of religious, natural and landscape values



### Natural values

Majella National Park encloses wide lands with peculiar aspects and high conservation value. 2,114 vegetal species, including 142 endemisms, are distributed in the Park in more than 50 different habitats. The Park, completely made by mountains, represents the ideal habitats for the wild ungulates and predators such as the marsican brown bear, the Apennine chamois, the wolf and the deer. The Park houses different bird species such as Golden Eagle, Lanner, Dotterel and amphibians and reptiles species of high conservation value (e.g Apennine Salamander, Spectacled Salamander and the Orsini Viper). Natura 2000 is represented in the Park with several sites (IT7140129, IT7140203, IT7110204, IT7140043, IT7130031).

### Cultural values

- Hermitages and monastic settlements
- Palaeolithic and Neolithic rests, in particular human skeletons, one of which, found with skull, was found in 1914 in the Fonti Rossi locality of "Lama dei Peligni" and allowed to document the presence of the "Homo of Majella".

### Integration at regulatory and management level: best practice to replace.

The Plan for the Majella National Park aims to ensure the coordinated management of natural environmental as well as historical, cultural and anthropological values.

Enrico Pighetti



The Performance Plan (2014-2016) identifies strategic areas and main objectives:

1. Conservation of landscape and biodiversity;
2. Restoration and environmental rehabilitation;
3. Park management as ecological and socio-economic element of the Apennine chain, taking into consideration the protected surrounding areas in order to identify all the ecological-landscape connections;
4. Conservation and restoration of archaeological, artistic and cultural values of the Park integrated with natural resources;
5. Economic and social development of local communities, favouring sustainable activities and tourism;
6. Regulation of public access in the Park and promotion of adequate use of the territories.

The plan also distinguishes strategic and operational objectives for each area and, for each operational objectives, activities, personnel, timetable, indicators and financing sources are specified.

#### Stakeholders involvement

One of the strategic areas identified in the plan is the protection of the environment in connection with land and promotion of sustainable activities. This strategic area includes many sub-objectives linked with various stakeholders. In particular the plan aims to develop and/or improve:

- Relationships with local operators as, for example, apiculture
- Trademark of the park
- Religious tourism: on this “Sacred Mountain”, the religious feeling permeates all areas of the mountain. The holidays of municipalities within the park are important evidence of a forest, rural and pastoral culture. Local rites and practices are often connected with an archaic religiousness: the calendar of holidays marks the time of communities’ life.

Another element of interest is relative to the local crafts, that of the goldsmith, the lacemaker, the carver, the stonecutter, the ceramist, the smith and the weaver practiced in the communities located within the Majella

*For more information visit:*

[www.parcormajella.it/](http://www.parcormajella.it/) Park.

Italy

## Dolomites, landscape and Stradivari violins



#### Natural values

- The main features which distinguish the Dolomitic flora are, to one side, the very high number of species and, to the other, the fact that some of them are really unique in their kind. There are at least 1,400 types of plants with flowers and plants with leaf, trunk and roots (vascular flora). The large variety of environments contained within the territory of the Dolomites has allowed the settlement of numerous animal species, some of which have adapted to very extreme habitats (e.g. golden eagle, the grouse and the white partridge, the brown bear, the chamois, the deer and the mouflon). Natura 2000 network is here represented by several sites (more than 25).

#### Cultural values

- On 26 June 2009, UNESCO listed the Dolomites as a World Heritage Site for the aesthetic value of its landscape and for the scientific importance of its geology and geomorphology.
- Some unique productive activities are closely linked to the Natura 2000 network, as in the case of the mountain range of Pale di San Martino, in the Dolomites, where violins and other musical instruments are produced using

the “resonant fir trees” which grow in the surrounding mountains.

**Best practice:**  
**integration at regulatory and management level**

On May 2010, the provincial and regional authorities charged with managing the Dolomites World Heritage Site established the “Fondazione Dolomiti – Dolomiten – Dolomites – Dolomitis UNESCO”. It includes five Italian provinces (Belluno, Bolzano, Pordenone, Trento, Udine) and two regions (Friuli Venezia Giulia and Veneto) working together to ensure the effective, coordinated management of the Dolomites. The Foundation plays a fundamental role in coordinating and harmonising management policies for the Dolomite property, with the aim of devising a common strategy and pursuing three main objectives: conservation, communication and enhancement. The provincial and regional authorities retain their own administrative and governmental powers according to current legislation, including the management of Natura 2000 sites. At the end of 2014, the Foundation carried out a study that analysed the management practices in the different Natura 2000

sites: state of art, methodology and strategy. The differences have been outlined and best practices in each province or region has been identified in order to avoid conflicts and differences and create a common strategy, common guidelines and recommendations.

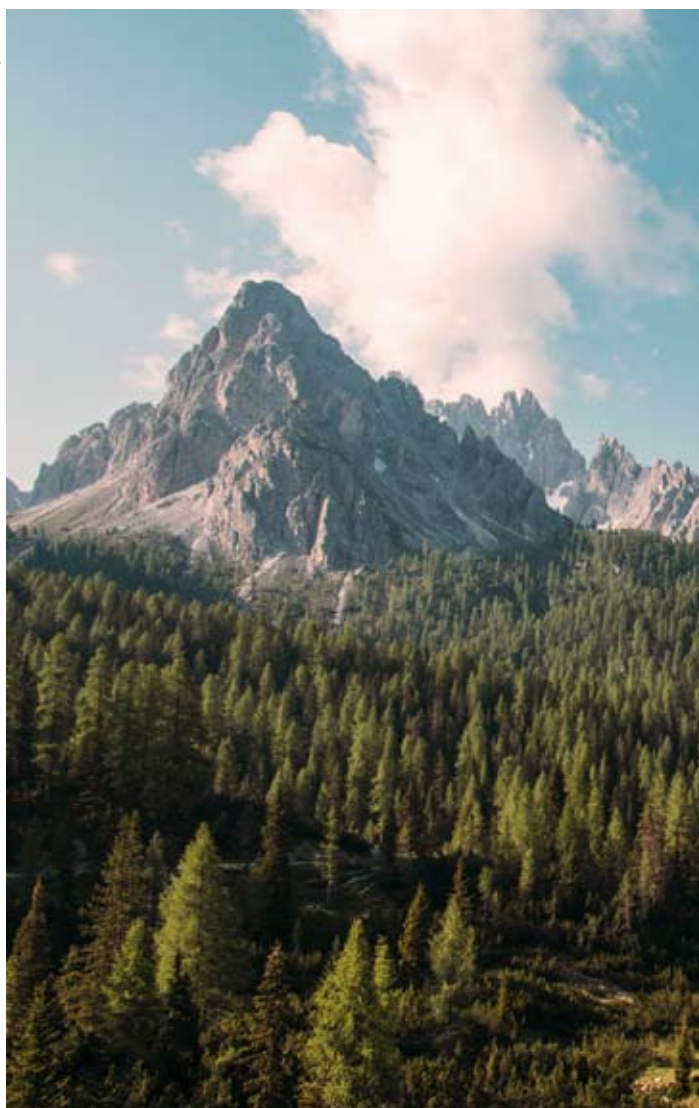
**Stakeholders involvement**

Among the different purposes of the Foundation there is the development of a shared culture among the communities involved in managing the area. The procedure followed involves a series of round-table discussions on the management and enhancement of the area have been planned involving local residents and visitors.

The overall management plan indicates the main categories of stakeholder to be involved, including representatives from municipalities, park authorities, environmental organizations and cultural interests associations, business associations (hoteliers and cableway companies), Alpine clubs (CAI-SAT-AVS), mountain guides, mountain refuge owners, tour operators, museums and research bodies (foundations and local cultural institutes), universities, schools and other educational institutes. All the measures relating to conservation, communication and enhancement, as set out in the Overall Management Strategy, are based on networking, ensuring the involvement and participation of the vast number of stakeholders with both direct and indirect responsibilities for the management of the area.

The Foundation includes a Board of Supporters, consisting primarily of representatives from municipalities, parks authorities, universities and local research centres and trade associations, all of whom share the Foundation’s goals and contribute to the management of the area. The Foundation has launched a process to define a comprehensive tourism so as to make it possible to gauge the dimensions of the touristic phenomenon in the Dolomites area, to identify the features of internal and external mobility and a set of indicators to quantify the levels of tourism. Once the results have been assessed, the operating networks will be involved in defining guidelines and measures to be undertaken.

*For more information visit:*  
[www.dolomitiunesco.info/](http://www.dolomitiunesco.info/)



Slovenia

## Skocjan Caves ranking as the most important caves in the world



### Natural values

- N2000 sites: SI5000023, SI3000276 and a small part of the area pSCI SI3000223.
- In 1999, the area of Skocjan Caves was included in the Ramsar List of Wetlands of International Importance.
- From 1996 the area is a Regional Park.
- In October 2004, the Skocjan Caves Regional Park became a member of the international network of Man and Biosphere as the Karst Biosphere Reserve.

### Cultural values

- Unesco World Heritage site.
- Impressive archaeological finds, dating from the Mesolithic to the Bronze and Middle Ages, indicate the importance of the site as a special place for settlements, burial grounds and rituals.
- This exceptional system of limestone caves includes collapsed dolines, some 6 km of underground passages with a total depth of more than 200 m, many waterfalls and one of the largest known underground chambers. The site, located in the Kras region (literally meaning "karst"), is one of the most famous in the world for the

study of karstic phenomena.

### Best practice: stakeholders involvement

Skocjan Caves is a very interesting case study in terms of local community engagement, public awareness, international cooperation and network of schools. Stakeholders consultation and communication tools developed here could be replicated in other similar situations.

The designation of the protected area has significantly contributed to local development: the park is the main touristic attraction playing a crucial role for the sustainable development of the area.

Citizens and local communities have their representatives in the Council of the Skocjan Caves Park Public Service Agency, and are involved in the management of the protected area and in safeguarding and maintaining the natural and cultural heritage. The managing authority organizes common activities with stakeholders, such as traditional and social events. The Skocjan Caves Park Public Service Agency provides



training on natural and cultural values, as well as on the use of natural resources, to local residents.

The income generated by the entrance fee to the caves and museum collections (the main financial source of the protected area) is used for renewing and maintaining the infrastructures, providing an important contribution for research activities, training and employing local guides. The management of the area involves the participation of a school network and local communities. Best practices implemented in the Skocjan Caves represent an approach combining the school network and participation of young people and the involvement of local communities in the management of the area.

The Skocjan Caves Park Public Service Agency provides training and raises public awareness of local people and visitors, acting as a training centre on natural and cultural values, as well as on the use of natural resources. The income generated by the entrance fees to the caves and museum collections (the main financial source of the protected area) remains in the area and it is used for working with local people, renewing and maintaining the infrastructures, raising public awareness, providing education, research, training and employing local guides.

**Also interesting:  
integration at regulatory and management level**

The Programme for protection and development of the Skocjan Caves Park encompasses a comprehensive assessment of the state in the Park, protection and development aims as well as strategies for achieving these goals.

Another element of interest is that the Government of the Republic of Slovenia has set a document on sustainable development of the Karst region that involves all the ministries, local communities and decision makers at national and local level to assure adequate and sustainable financial resources for implementing the management measures.

*For more information visit:*

<http://www.park-skocjanske-jame.si/it>

Croatia

## The Plitvice National Park: an example of integrated management of landscape and Natura 2000



### Natural values

- Natura 2000 sites: HR5000020 plus several other potential areas.
- The Plitvice Lakes were proclaimed a national park in 1949.
- The area is rich in endemic species and habitats, specific to morphology and hydrology of the local terrain are very specific.
- Plitvice Lakes National Park was a beneficiary of the Karst Ecosystem Conservation (KEC) Project funds via a grant (IBRD GEF TF 050539 HR) from the Global Environmental Fund (GEF).
- Plitvice Lakes National Park encompasses five areas under special protection (Corkova Uvala Special Reserve, Golubnjaca Cave Natural Monument, Supljara Cave Natural, Crna Cave-Vile Jezerkinje Natural Monument, Yew Tree (*Taxus baccata L.*) Landscape Architecture Monument in Sertic poljana).



### Cultural values

- The cultural and architectural heritage confirms the presence of human activity characterized by a number of traditional buildings, house yards and hamlets as well as villages and memorial sites.
- The Plitvice Lakes were registered in the UNESCO World Heritage List in 1979.

### Stakeholders involvement

Plitvice Lakes National Park became a beneficiary of the Karst Ecosystem Conservation (KEC). The basic objective of this project is to safeguard biodiversity and facilitate sustainable development in local communities based on available natural wealth.

The management plan was approved with an agreement reached during the KEC project workshops, to which all stakeholders participated from 2003 to 2007. All stakeholders will be involved in the development of each action plan, so that any potential conflicts are resolved at the very start. The Plan includes, in Appendix 4, a summary of problems and proposals by stakeholders.

### Best practice: integration at regulatory and management level

In Croatia the fundamental legislation governing the conservation of biological and landscape diversity is the Nature Protection Act (as published in Croatia's official journal, Narodne novine, no. 70/05). The Ministry of Culture, through its Nature Protection Department, is responsible for implementation of the Nature Protection Act and international conventions governing nature protection, and it coordinates administrative and

technical tasks pertaining to nature conservation and planning sustainable use of the natural heritage.

The development of a spatial plan for the Plitvice Lakes National Park started in 2005. Public consultations were held in 2011, 2012 and 2013, and in 2014 the Plan was adopted by the Parliament of Croatia. The management action plan achieves the following long-term objectives:

- Preserve the unique karst biological diversity by facilitating natural processes and securing protection of the area with minimal human impact.
- Cooperation between the local community and the Park's management to plan and implement local development.
- Secure visitor access to the authentic experience of the National Park's value. In the plan a series of sub-objectives, activities, budget needed and an estimation of timetable have been scheduled.

### Another element of interest:

Since 1976, all scientific research has been conducted as part of a program called "Plitvice Research Project," with costs covered by the National Park's annual budget.

*For more information visit:*

<http://www.np-plitvicka-jezera.hr/it/>

### References:

- Ministry of Culture of the Republic of Croatia. 2007. Plitvice Lakes. Management plan.
- UNESCO, 2010. Sustainability of the karst environment- Dinaric karst and other karst regions.

Malta

## Dwejra Heritage Park: an example of integrated management with the help of LIFE funds



### Natural values

- Natura 2000 sites: MT0000019
- Fungus Rock was established as a Nature Reserve and Areas of Ecological Importance (AEIs) and Sites of Scientific Importance (SSIs) as also il-Qattara and l-Gnadira ta' Sarraflu areas.
- Tree Reserve was designated near il-Qattara by virtue of the Trees and Woodlands (Protection) Regulations.
- "Dwejra Bay to San Dimitri Point" was designed as IBA (Important Bird and Biodiversity Areas).
- Il-Qawra was designed as Birds Sanctuary.

### Cultural values

- Archaeological artefacts
- National historical monuments
- Landscape and aesthetic qualities
- The whole area of Qawra / Dwejra was nominated as UNESCO site in May 1998.

### Best practice: stakeholders involvement

The LIFE project LIFE03 TCY/M/000047 is considered very interesting particularly in terms of the demonstration value for environmental management with the involvement of a high number of stakeholders in a comprehensive and integrated strategy, including an estimate of financial and human resources needed to implement the planned actions.

#### *Tools in place:*

The main result of the project was the preparation of a management plan with consultation of the local



community. The activities carried out included:

- Consultation meetings
- Information sessions
- Meeting stakeholders individually to find out problem areas and inter-stakeholder conflicts to be solved in plenary meetings.

*Results obtained:*

Despite the initial resistance of stakeholders, the consultation process has proved crucial. Results of actions and activities have led to:

- Solved conflicts that had been present for years (eg: the fishermen have understood that outside the protected marine area the fish population will increase);
- General understanding that the main problems were inter-stakeholders conflicts;
- Stakeholders ownership of the project;
- Gained trust (eg: Tour operators realized that information panels and tour guides ensure best value for money);
- Stakeholder awareness of added value of protection (eg: Operators of dive centers have realized that the establishment of a nature reserve and of the marine protected area will provide an attraction for a greater number of divers);
- Improved management.

**Also interesting:**

**integration at regulatory and management level**

The Qawra / Dwejra management action plan, produced during the LIFE03 TCY/M/000047 project, includes actions for the conservation of both natural and cultural values and is framed as an annex of the Gozo and Comino Local Plan (2002), where the site is defined as an Heritage Park. The plan includes the definition of a set of ideal goals and concrete actions to safeguard and promote the cultural and natural values of the island.

**References:**

- Qawra/Dwejra Heritage Park action Plan. 2005

Sweden

## Stora Alvaret and Ölands: a World Heritage Site by UNESCO for its extraordinary biodiversity and cultural heritage



### Natural and cultural values

- Stora Alvaret is a limestone barren plain on the island of Öland, in Sweden, characterized by special habitats which have developed in the shallow soils that cover the island's limestone base. There is a remarkable number of peculiar and endemic species (e.g. *Artemisia oelandica*). In terms of both biology and ecology, Stora Alvaret is an area of national and international interest protected also under the Natura 2000 Network (SE0330176).
- Stora Alvaret has been designated as a World Heritage Site by UNESCO due to its extraordinary biodiversity and prehistory.
- Ramsar convention recognized different areas are in Öland as Wetlands of International Importance Especially as Waterfowl Habitat.
- Remnants of viking settlements with standing stones forming a Viking stone ship.
- Paleolithic and Neolithic settlements.

### Best practice: stakeholders involvement

In Sweden stakeholders and, in particular, landowners are involved in producing the management plans.

In 1986 Sweden introduced support for farmers with valuable hay fields and natural grazing lands. In 1990 this support was extended to include entire agricultural landscapes.

In 1995, when Sweden became a member of the EU, this support was replaced by five different forms of environmental support, partially funded by the EU. The purpose of environmental support is to encourage farmers to engage in production conducive to the preservation and strengthening of biological diversity and cultural environmental values, and to increase the prevalence of environment-friendly forms of agricultural production.

The following forms of support have a bearing on natural and cultural environmental values:

- support for the preservation of natural and cultural environmental values in the cultivated landscape,
- support for the preservation of biological diversity and cultural environmental values in grazing lands,
- support for the preservation of biological diversity and cultural environmental values in hay meadows,
- support for the reinstatement of hay-meadows,
- support for the construction and reinstatement of wetlands and minor watercourses.

The LIFE+ project 96NAT/S/003185 Stora Alvaret – Protection and restoration of parts of Stora Alvaret – was the first LIFE-Nature project in Sweden aiming at financing the initial restoration of meadows and grasslands habitats and to ensure the long-term management through agri-environmental agreements.

### Integration at regulatory and management level

There are different legal instruments in the Ölands area to preserve natural and cultural values: the Cultural Monuments Act, the Environmental Code and the Planning and Building Act are the main tools to preserve historical landscapes. At the moment there is no single tool to manage these values, but it must be considered that the Swedish environment legislation includes culture reserves aimed at preserving historical landscapes. The County Administrative Board has anyhow started to work on a single natural and cultural environmentprogramme for Öland.

*For more information visit:*

<http://sodraoland.com/en/olands-world-heritage/>



Portugal

## Montesinho/Nogueira: a project for dogs and wolves



The Montesinho Natural Park is a protected area located in northeastern Portugal. Sections of the southern slopes of the Serra da Coroa (Sierra de la Culebra) fall within the park.

### Natural values

The fauna present in the park includes the Iberian wolf, the roe deer, wild boars, the Iberian lynx, the common genet, the red fox, the European otter and over 150 bird species, living in the midst of extensive forests of Pyrenean oak and other trees such as poplars, alders, willows, chestnut oaks and holm oaks.

### Cultural values

People living in the local villages preserve their traditions, sharing their common resources. Their wood-fired ovens, threshing floors, mills, and pastures have been used by the community for centuries following age-old traditions.

### Project objectives

The Transmontano Mastiff Dog Distribution Program was created by the Montesinho Natural Park to redu-

ce conflict between shepherds and herders and the presence of the wolf in the protected area, by placing puppies of this breed with herds to defend them from wolf attacks.

### Stakeholder involvement

The programme was developed and now runs in the framework of a cooperation protocol between the Transmontano Mastiff Breeders' Association (TMBA) and the Montesinho Natural Park.

### Possible application in other areas

The project developed a working protocol that was meanwhile adopted in other areas of the country with wolf presence. The same approach could be adapted and applied to biodiversity conservation in other EU Natura 2000 sites with similar shepherding practices.

The traditional sheep and goat herding in north-east Trás-os-Montes is called course herding: instead of being taken to a single pasture where they stay all day long, animals are led by the shepherd on a course through several grazing areas from when they leave the stable in the morning, until they return at the end of the day. This practice is responsible for the typical mosaic landscape



that helps keeping fuel charges low and decrease forest fire risk.

The Transmontano Mastiff Dog Distribution Program helped boost rural economy and rural cultural traditions by allowing the maintenance of a traditional activity and encouraging related activities like dog breeding by shepherds and other professionals. An annual monographic dog show and many smaller shows in rural fairs throughout North-east Portugal are now part of the regional rural cultural events calendar.

*Distribution rules:*

The distribution of puppies follows a waiting list permanently updated by the Natural Park. This list is ordered according to the following priority criteria:

- 1) higher need of dogs due to high number of wolf attacks;
- 2) members of the TMBA;
- 3) farms located within a protected Area;
- 4) time elapsed since enlisting.

*The Protocol:*

Registrations to apply for receiving Transmontano Mastiff dogs must be made at the offices of the local protected areas (which are also Natura 2000 areas) or with the Park rangers that inspect the reported wolf attacks.

Dogs are only purchased from breeders that accept the terms of the protocol for the distribution programme:

- The litter must be submitted to a strict health protocol;
- At least one of the puppies of each litter will be purchased by the program;
- Puppies cannot be given or sold before the end of all foreseen health treatments;
- Blood samples are taken from the parents and all puppies in the litter, in order to allow DNA analysis.

*Assessment*

- A comparison between the localities where puppies were delivered since the start of the programme and the parishes where wolf attacks occur shows that the increase in the number of dogs in herds contributed significantly to the reduction of damages caused by wolves.

**References**

<http://natural.pt/portal/en/AreaProtegida/Item/2>  
[http://racas.cpc.pt/1/gadotransmontano\\_en.html](http://racas.cpc.pt/1/gadotransmontano_en.html)

Estonia

**Soomaa: sustainable wetland tourism in the largest bogland of the EU**



**Natural values**

Estonia’s Soomaa National Park is a land of naturally meandering rivers, swamp forests, meadows on the rivers’ floodplains and, in particular, peat bogs. The area contains some of the best preserved and most extensive raised bogs in Europe.

Soomaa also has rich wildlife which includes golden eagles, black storks, woodpeckers, owls, various kinds of bog waders such as golden plovers, wood sandpipers, whimbrel, curlew, great snipe, and corn crane, as well as elk, wild boar, beaver, wolf, lynx, and brown bear all protected also thanks to the Natura 2000 Network: EE0080574 Soomaa.

**Cultural values**

The settlement and cultural traditions of Soomaa have been shaped by the local environment. Due to an extensive river network, human settlements have been present since ancient times. Villages were in their prime during the period before World War II, when people were involved in dairy farming and sales of dairy products. Unfortunately, not many survived until today.

**88** The Soomaa Park helps to maintain the cultural heritage of the region keeping alive the traditional Finno-ugric single-log dugout and preserving trestle and suspended bridges mainly as touristic attractions.

### **Preservation and tourism promotion at Soomaa**

The Soomaa National Park was established in 1993 to protect, study and raise awareness on the natural and cultural heritage of the region.

Since 1981, the establishment of mire conservation areas and of a non-extractive management strategy ensured the protection of the region's wilderness. With the national park creation, the areas were divided into special non-intervention management zones, to preserve the ecological character of bogs as well as all protected species dependent on these ecosystems.

With 45,000 visitors per year, the Soomaa National Park is the most popular wilderness tourism destination of the Baltic countries. Its tourism products are based both on wilderness experiences and cultural heritage.

In order to develop sustainable tourism, create jobs and businesses for local communities and help to preserve the local ways of life a Sustainable Tourism Development Strategy was adopted, setting out zoning for sustainable tourism.

Private entrepreneurs provide accommodation and restaurants, as well as most of the tourism activities

available with the Soomaa National Park. Boardwalks of different lengths have been installed, leading to various parts of the bogs and forests without damaging them.

In order to develop innovative tour products that give visitors' wilderness experiences while preserving nature, some operators organise tours off the designated routes and into the bogs using snowshoes, an innovative way to reduce negative visitor impact.

The method applied in Soomaa provides a great example of how zonation combined with visitors' management schemes can help solving conflicts between conservation of sensitive sites and public use areas and create a good balance between the two aims of preservation and promotion.

*For more information visit:*  
<http://www.soomaa.com/>

### **References**

- A Ramsar Case Study on Tourism and Wetlands, Wetland Tourism: Estonia - Soomaa National Park, 2012.
- PAN Parks Foundation, As nature intended – best practice examples of wilderness management in the Natura 2000 network, 2009.
- Environmental Board - Republic of Estonia, Soomaa National Park brochure



Ruukel

