



*for a living planet*

## NATURA 2000

successful – flexible – modern

Facts and findings



# Content

Nature is our home .....	4
European nature conservation policy .....	6
Equal rules of the game .....	8
Clear legal basis .....	10
Flexible management .....	12
Modern impact assessment .....	14
Achievement in nature conservation .....	16
The economy and nature conservation .....	18
Nature conservation: a socio-economic necessity .....	20
Nature conservation supports tourism and employment .....	22
Nature conservation supports economically weak regions .....	24
Bibliography .....	26

*Title: Cork oak harvesting in Coruche, Portugal. Cork oak landscapes represent one of the best examples of the interaction between people and nature in the Mediterranean region. Providing a source of income for hundreds of thousands of people in the region, cork ecosystems support a rich biodiversity, including endangered species.*

© Sebastian RICH/WWF-Canon

## Imprint:

Published by: WWF Germany, Frankfurt am Main, April 2009, 1st Edition

Author: Wolfgang Suske, [www.suske.at](http://www.suske.at)

Contact: Andreas Baumüller, WWF European Policy Office,

168 avenue de Tervurenlaan Box 20 1150 Brussels - Belgium,

Tel: +32 2 740 09 21, Fax: +32 2 743 8819, E-mail: [abaumueller@wwfepo.org](mailto:abaumueller@wwfepo.org);

Christian Neumann, WWF Germany, [christian.neumann@wwf.de](mailto:christian.neumann@wwf.de)

In cooperation with: Georg Bieringer, Thomas Ellmayer, Hemma Tomek.

Petr Roth (example Czech Republic), Rainer Raab (example Austria),

Reihold Schaal (example Baden Württemberg)

With expert input from: Alberto Arroyo, Peter Torkler, Alfred Schumm

Edited by: Janice Weatherley

Layout: Caroline Franz, Mannheim

Printed by: Meiners Druck oHG

Printed on recycled paper

© 2009 WWF Germany, Frankfurt am Main

Any reproduction in full or in part of this publication must mention the title and credit the above mentioned publisher as the copyright owner.

# Preamble

At the 6<sup>th</sup> Conference of Parties to the Convention on Biological Diversity (CBD) in April 2002, 188 nations committed themselves to take action to achieve a significant reduction in the current rate of biodiversity loss at global, regional and national levels by 2010. Furthermore, in Gothenburg in 2001, the European Union Member States adopted the stronger target of halting biodiversity loss by 2010, and in 2006 adopted an action plan to achieve this.

Nations are critical actors in furthering nature conservation, but national borders do not normally present physical barriers to the movement of animals or their habitats. Rivers flow through several countries, birds migrate along ancient flyways and bears and lynx live in large forests that cross national borders. Nature conservation can therefore only be successful if implemented cooperatively between countries and across borders.

This requires common rules for all nations, but ones which are flexible enough to allow for differences in landscapes and cultures.

The Birds and Habitats Directives, which amongst other achievements provide the legal framework for implementing the European NATURA 2000 protected area network, make a particularly important contribution to European nature conservation and to halting the worrying trend of species loss. First successes are already evident – with some populations showing signs of recovery and some habitat areas having been saved from irrecoverable destruction. However, the overall trend is further on negative.

The EU Nature Directives have resulted in significant changes over the past 10 years. Planners, investors, land users and authorities have had to adapt to the new standards required by the directives. Changes and adjustments are always a chal-

lenge. They have certainly generated discussion and questions from political leaders as well as the general public: “will NATURA 2000 have a positive or negative effect on structurally weak areas? Can important infrastructure projects be implemented in NATURA 2000 areas? Will jobs be generated or lost because of NATURA 2000?”

However, change also drives innovation. Progressive means of conservation planning have been developed. Rural regions receive ecotourism promoted in new ways, and many countries now support extensive agriculture otherwise not be viable in the global market. This brochure aims to provide insight, arguments, facts and figures, as a helpful resource for discussions about NATURA 2000. The collated facts combined with practical examples should help interested parties to gain a more comprehensive understanding of the implementation of the EU nature directives.

We hope you find this publication helpful and enjoy reading it and we wish you success in your joint activities and efforts to conserve our valuable natural resources!

**Tony Long, Director,  
WWF European Policy Office**



A handwritten signature in black ink that reads "Tony Long".

# Nature is our home



*Biodiversity loss means a loss of our cultural identity and home* © BMLFUW/AMA-Bioarchiv/Wiesenhofer

The European landscape is characterised by a particularly rich diversity of habitats. Pristine river beds, steep coasts, small terraced vineyards, wildflower meadows and vast natural forests define the character of Europe's natural heritage.

Europe's rich mixture of nationalities, cultures, languages and identities is strongly reflected everywhere in the landscape. Many of these habitats are the result of traditional land use practices, which have gradually evolved to become best suited to the natural environment. Nature and landscapes form the basis of people's livelihoods as well as their homes.

## **Dramatic loss of biodiversity**

But Europe's nature is increasingly under threat. Biodiversity has changed more dramatically in the last 50 years than in the whole history of humanity. Due to human activities, species are dying out 1,000 times faster than they would under natural circumstance. This may climb to 10,000 times the background rate during the next century. Some 100 species are being lost every day<sup>1</sup>. 10-30% of mammals, birds and amphibians are now globally endangered due to human activities. From 1970 to 2003, reductions in the populations of 1,300 monitored species averaged at 30%<sup>2</sup>.

Especially dramatic are the losses in fish species which are exploited by humans, such as codfish and tuna. The number of wetland butterflies has declined by 90% and grassland butterflies by 30%<sup>3</sup>. In Germany, for example, 50 species of butterflies have become much rarer since 1945<sup>4</sup>. Furthermore, farmland birds have declined over the last 20 years<sup>5</sup> mainly due to changes in farming practices. These changes also mean that only 15 – 25% of Europe's once extensive high nature value farmland remains<sup>6</sup>.

## Causes of the biodiversity crisis

The current extinction rate is much higher than the rate at which new species arise, resulting in a net loss of biodiversity<sup>7</sup>. In just a few decades half of Europe's valuable wetlands have been drained for land reclamation and agriculture. Heathlands, steppes and peat bogs have shrunk by 60–90% and almost three quarters of the dunes in France, Italy and Spain have disappeared because of mass tourism<sup>8</sup>.

Other main causes of the recent biodiversity crisis are: land use change, climate change, invasive species, overexploitation and pollution. These changes result from our changing lifestyles, global travel and international trade have brought in non-native species, and built-up areas have increased by 20% in the last 20 years<sup>9</sup>. Such losses diminish the productivity of nature and thereby threaten long-term human wellbeing.

## Little Owl

The Little Owl (*Athene noctua*) was once widespread in most of low-land continental Europe, except the north and the Mediterranean Islands. Its preferred habitats are traditional cultural landscapes such as olive-groves, orchards and pastures<sup>11</sup>. As a partly diurnal Owl species it is still well-known to many land users.

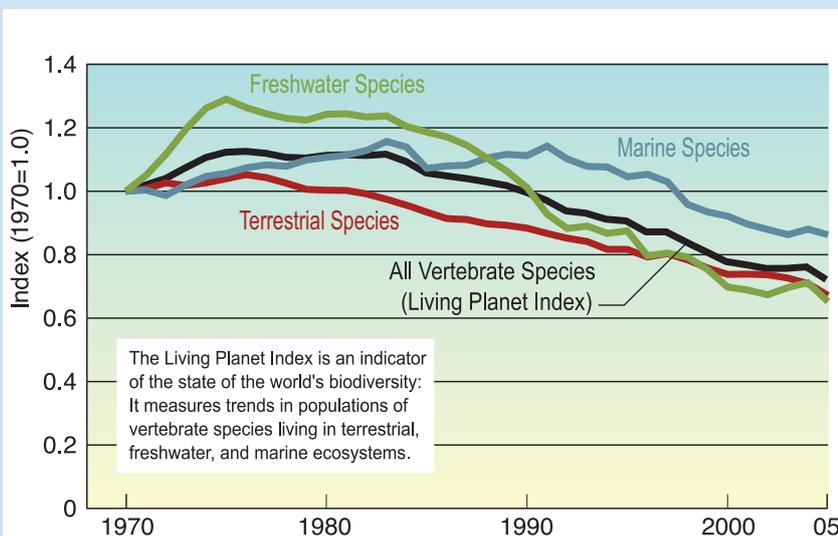
However, during the second half of the 20<sup>th</sup> century the European population of the Little Owl continued to decline<sup>12</sup>. Between 1990 and 2000 this trend halted in parts of the European range, but nevertheless there was still an overall decline of 10%<sup>13</sup>. The main threats are changes in land-use practices, the application of pesticides and road mortality<sup>14</sup>.



The Little Owl relies on long-established management practices for its continued survival © Jiri Bohdal



## WWF Living Planet Index



The WWF Living Planet Index currently incorporates data on the abundance of 1,686 species including terrestrial, freshwater and 267 marine species from around the world. While the index fell by some 30% between 1970 and 2005, the terrestrial index fell by about 33%, the freshwater index by about 35%, and the marine index by around 14% over the same period<sup>10</sup>. The Living Index is published by WWF, the Zoological Society of London, the Global Footprint Network and the Twente Water Centre.

# European nature conservation policy

The development of the two EU Nature Directives reflects the history of nature conservation during the second half of the 20<sup>th</sup> Century. During a period of economic boom it was recognised that unsustainable development can compromise biodiversity and thereby undermine humanity's basis of life.

The Birds Directive in 1979 was the first step in developing EU-wide nature conservation legislation. The same year, the Bern Convention was established which aims to preserve natural habitats with wild plants and animal species. The EU ratified the convention in 1982 and implemented it through the Habitats Directive in 1992. Many EU Member States merged both EU directives into one national law. The Birds and Habitats Directives are the cornerstones of EU nature conservation policy. Their implementation over the last ten years

has shown them to be successful, flexible and modern.

#### **Successful:**

Bear, Eagle or Lynx don't recognise provincial or country boundaries. Cooperation by all Member States ensures the protection of their habitats. On the basis of these directives and according to common criteria, the Member States have designated an EU wide network of protected areas called NATURA 2000. After just 10 years, the success of these protected areas is visible as first populations of rare species are recovering and the loss of valuable habitat is slowing down<sup>15</sup>. NATURA 2000 is successful.

#### **Flexible:**

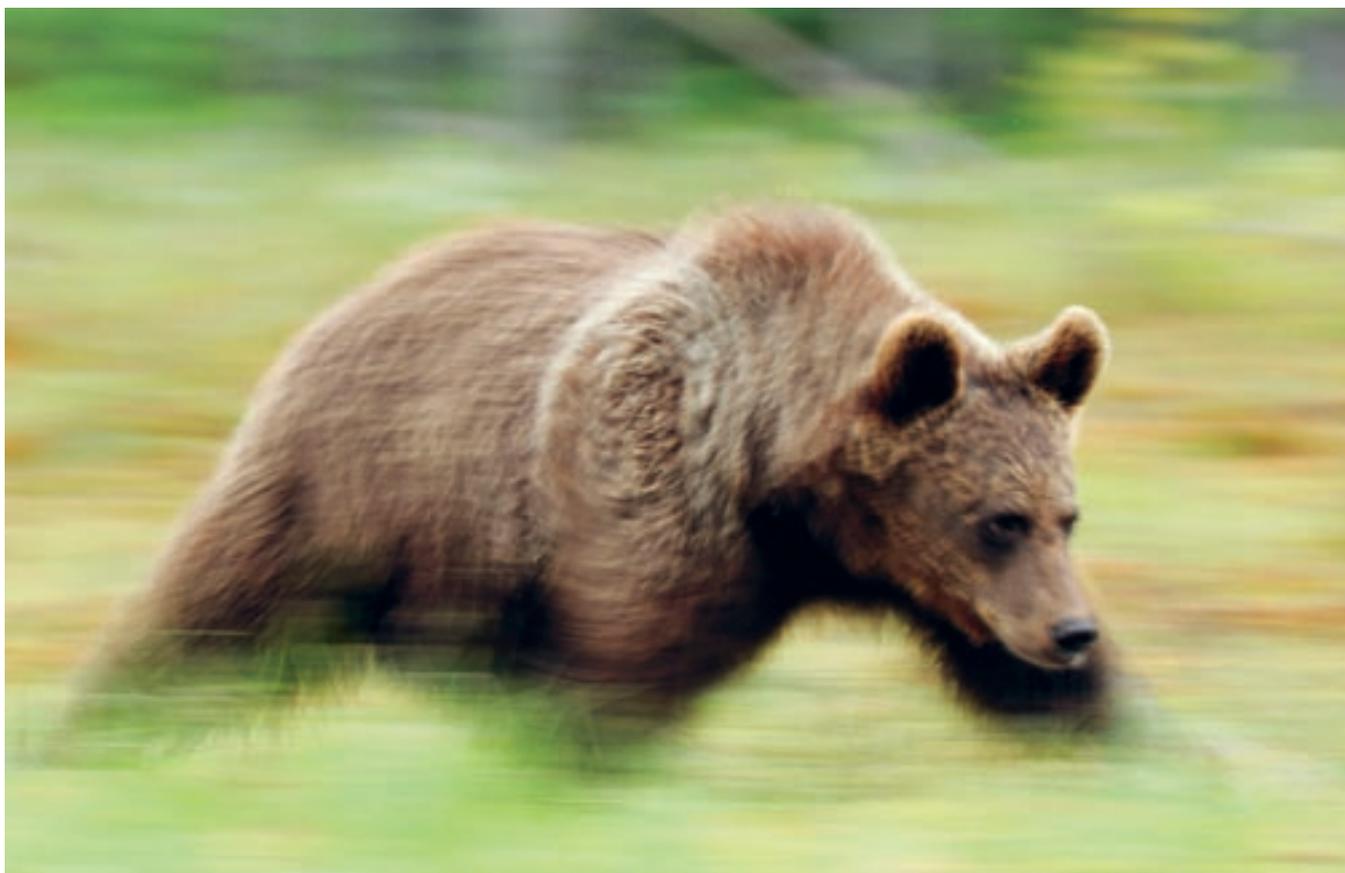
In addition to this relatively recent protection of the natural landscape, the EU attaches great importance to its centuries' old diverse cultural landscapes. NATURA 2000 al-

lows people to work with nature. It supports the development of sustainable forms of land use and incorporates ever changing cultural landscapes. NATURA 2000 is flexible.

#### **Modern:**

The Birds and Habitats Directives aim to achieve the same basic objective: the species and habitats for which the NATURA 2000 sites were selected, to remain in or reach 'favourable conservation status'. However the means by which this objective is reached is flexible and left open to each Member State. Therefore Member States are free to use the latest scientific findings in how they manage NATURA 2000 sites. NATURA 2000 is modern.

*Bears do not recognise provincial or national borders.* © Wild Wonders of Europe/Staffan Widstrand/WWF



### Distribution of NATURA 2000 sites across the EU-27

Currently, the network comprises about 25,000 sites, covering around 18% of the total area of the EU. The individual NATURA 2000 sites range in size from less than 1 ha to over 5,000 km<sup>2</sup>, depending on the species or habitats they aim to conserve. Therefore habitats and species within approximately 700,000 km<sup>2</sup> of terrestrial areas and 100,000 km<sup>2</sup> of marine areas will be protected.

In addition, the Birds Directive requires all 27 Member States to protect migratory birds and 195 particularly threatened species. The Habitats Directive requires that 413 animal species, around 613 plant species and 231 habitat types are protected by the Member States.

NATURA 2000 is an EU wide network of nature conservation areas. It ensures the survival of Europe's most valuable species and habitats. It is based on the broad principles



of conservation and sustainable use, ensuring that people and wildlife can live together in harmony.

*Biogeographic regions according to the EU*

### National transposition of European legislation



In keeping with the principle of subsidiarity, many Member States (Austria, Romania, Germany, Sweden and Italy) formulated one national law from the two directives.

## Equal rules of the game

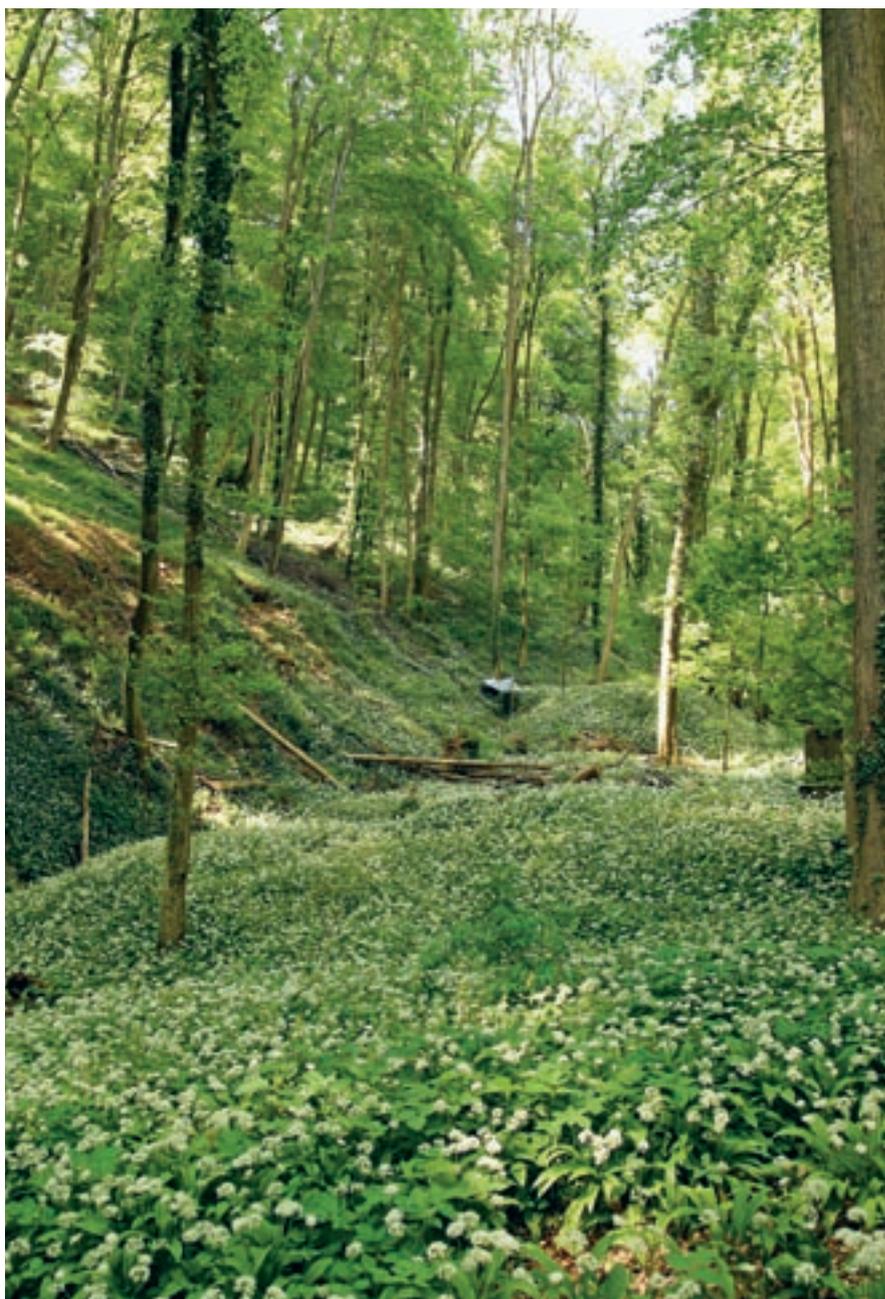
To be unified, Europe needs common rules. Differences in social and environmental protection standards can act as obstacles to fair economic competition.

The percentage of land covered by nature reserves influences the availability of land for other uses. The percentage of nationally protected areas (designated as IUCN category I-IV) in the EU, ranges from 1.1% to 28.3%<sup>18</sup>.

Likewise, before NATURA 2000 was established, national regulations and practices for managing nature reserves and undertaking impact assessments differed widely.

### Same criteria for each Member State

For nature to be protected properly, a fair coverage of protected areas across all EU Member States is required. All EU Member States have now designated NATURA 2000 sites according to the same criteria. Some national protected areas which fit the European criteria have become NATURA 2000 sites, whereas other protected areas have been newly created. The percentage of NATURA 2000 sites is more balanced across the Member States than that of national protected areas, but as a rule, Member States with a small percentage of national protected areas have designated a higher percentage of NATURA 2000 sites. In fact, the Annexes of the Birds and Habitats Directives which list the species and habitats of Community interest, take differences between EU countries into account, which are (especially for habitat types) specified in national manuals.



*Same criteria for each Member State: certain habitat types – e.g. the forest habitat “Tilio-Acerion” (Habitat Nr. 9180) – receive equal protection across the EU.*

© Axel Ssymank

### Continuing assessment of success

EU nature protection legislation has thus led to a more even allocation of responsibility and costs for protecting Europe’s natural heritage. Every Member State must determine adequate measures to ensure their protected areas are in a good state. The effectiveness of Member State actions is checked

by the Commission through periodic reports. In these reports, the conservation status of all species and habitats of Community interest are assessed against a given set of criteria. Any need for action is documented transparently. This ensures a level playing field across all Member States through equal implementation of the Directives and a common approach to nature protection.

**Joint evaluation of proposed NATURA 2000 sites**

Evaluation of NATURA 2000 sites proposed by Member States is carried out in special transnational seminars (the so called “biogeographical seminars”). The geographical reference areas used in these semi-

nars are the biogeographic regions. The nine European biogeographic regions differ in climatic and ecological characteristics.

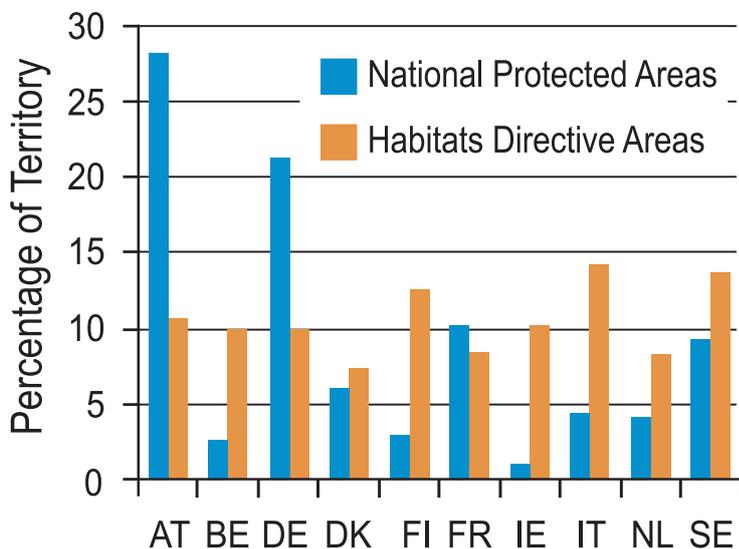
Representatives from Member State government departments from the relevant biogeographic regions, as well as experts from the European

Commission, landowner representatives and NGOs participate in the seminars. It is thereby ensured, that, for example, the ecological evaluation of a NATURA 2000 site along a river that passes through different countries is conducted by experts from all relevant countries. This framework makes NATURA 2000 a very useful conservation system for species that do not respect national borders. This common approach also ensures that the same criteria are applied when selecting conservation sites.



*Biogeographical seminar in Sibiu, Romania © Ctibor Kocman*

**Natura 2000 Sites compared to national Areas**



The territory covered by NATURA 2000 (Habitats Directive) sites when compared in a number of Member States is much more balanced than the percentage covered by national protected areas<sup>19</sup>. “National Protected Areas” includes all areas which meet the IUCN criteria of protected areas (Category I to VI).

## Clear legal basis

The Nature Directives commit Member States to adapt their administration systems to comply with new nature protection laws and thereby address biodiversity loss. NATURA 2000 sites have been designated, case law has been tested and project planning requirements improved.

When the Nature Directives were transposed into national laws, the intense scrutiny of nature protection objectives led to some criticism,

### Barometer “judgements”

Judgements and assessments by the European Court of Justice provide an interesting “barometer” for analysing the effectiveness of existing legal frameworks. The Commission receives several hundred complaints each year relating to the nature directives which underlines how essential the public’s role as “watch-dog” is. Nevertheless over 80% of these complaints are closed following informal contact with

### Successful implementation of NATURA 2000

Only 105 of all judgements by the European Court of Justice are connected to environmental issues. Judgements related to nature conservation, including NATURA 2000, are only a small part of all decisions, less than 5% of all judgements.



*Judgments related to nature conservation only form less than 5% of all judgments.* © Vario Images/picturedesk.com

uncertainties and additional costs at the Member State level, as would any significant legal change. The EU institutions and Member States successfully adjusted their administrative systems to these new legal requirements, facilitated by the production of EU wide and national guidelines, transnational training programmes, seminars and courses. In EU funded “Twinning Projects” “old” Member State authorities supported “new” Member State authorities in implementing NATURA 2000 legislation and administration.

the Member State and only a small percentage lead to infringement proceedings. Therefore constructive cooperation between Member States and the European Commission is working. The vast majority of cases are resolved through simple procedures and do not go to the Court of Justice. In 2001, DG Environment for example received 345 complaints relating to the directives of which 131 have already been closed and only 9 led to infringement cases<sup>20</sup>.

The nature of such infringements varies. They include cases relating to deficiencies in national transposition of legislation, incomplete designations, and a lack of implementation reports. There have also been cases concerning the unsatisfactory application of the protection regime of the Habitats and Birds Directives in relation to planned development. This overall picture shows that implementation, training and public awareness mechanisms are generally working well.



Croatian experts are trained to deal with the requirements of the Nature Directives © State Institute for Nature in Croatia

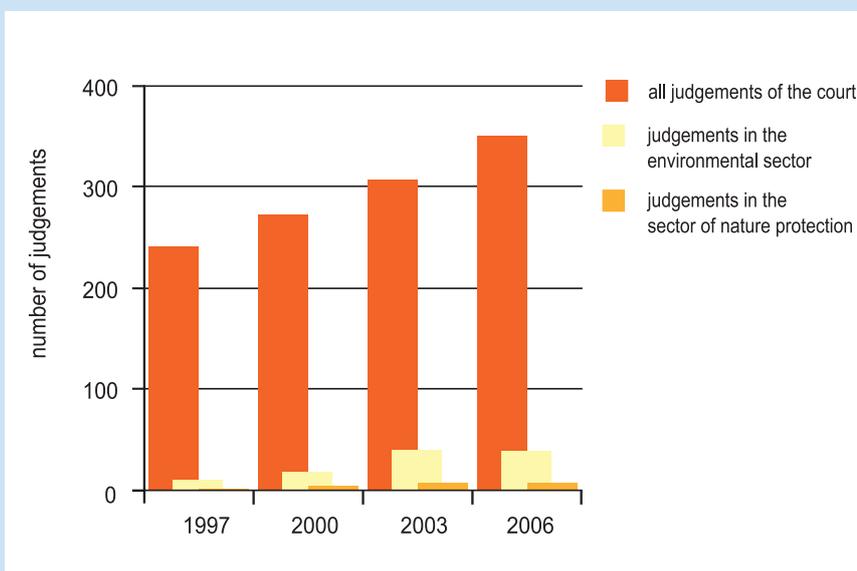
### Early training in Croatia

Several years before their actual accession to the EU, Croatia's nature conservation authorities have already begun preparing for the new environmental assessment regulations. Croatian experts who will evaluate projects and plans, are being trained to meet the standards of

the Birds and Habitats Directives by colleagues from the Czech Republic and United Kingdom as part of a PHARE project. Case studies are being discussed and jointly evaluated. During study tours to the Czech Republic and United Kingdom, Croatian experts have had the chance to learn from the experiences of the other country.

This early training ensures that projects and plans can be adjusted to EU standards as early as possible. This saves money and time for project applicants as well as for the authorities and avoids unnecessary complaints<sup>22</sup>.

### Judgements in the nature conservation sector compared to all court judgements



The low number of cases relating to nature protection<sup>21</sup> shows that implementation has largely been successful.

# Flexible management

Nature is not static. Scientists have documented the regression of glaciers and the changing distribution of vegetation in the Alps, as well as the shift of arrival dates of migratory birds throughout Europe. Flexibility is an integral component of the nature directives.

## Easily adapted management

Under the directives it is possible to set priorities according to the importance of a specific site for conserving different habitat types and species. These priorities may well change over time. In areas where long-term trends such as climate change are causing fundamental changes, and species are shifting alongside habitats to new climatic zones, Member States can easily adapt their regulations and management plans.

*Glaciers on the Dachstein in Austria are going to change.* © Marco Barnebeck

## Flexibility – an integral component of the directives

Furthermore, the contribution of Natura 2000 towards achievement of these objectives is reviewed periodically. If a site has lost its importance due to climate change, it can be reclassified where this is warranted by natural developments. Therefore flexibility is an integral component of the nature directives, allowing for important adjustments and future developments. The Birds and the Habitats Directives were flexible enough to allow for EU enlargement, resulting in the application of the directives to new biogeographical regions, just without adjusting the list of species and habitat types of Community interest. Likewise, if species populations increase due to successful conservation measures, the Annexes of protected species can be amended to reflect this.

*The appearance of the Mountain Hare is endangered in the Alps.* © Jarmo Holopainen

A prerequisite for species and habitats to adapt to climate change, is the coherence of the NATURA 2000 network. Flexibility is possible because coordination by the European Commission ensures that Natura 2000 will form a coherent network beyond national borders for decades.



### The cormorant in the EU

The increase in the number of Cormorants (*Phalacrocorax carbo*) demonstrates the success of conservation measures of recent decades. Today, the number of European cormorants is estimated to be around 2 million<sup>26</sup>. The Cormorant tends to hunt fish that are easy to capture, for example, fish that occur frequently or that are ill or weak, giving them a special role as “health police”<sup>27</sup>.

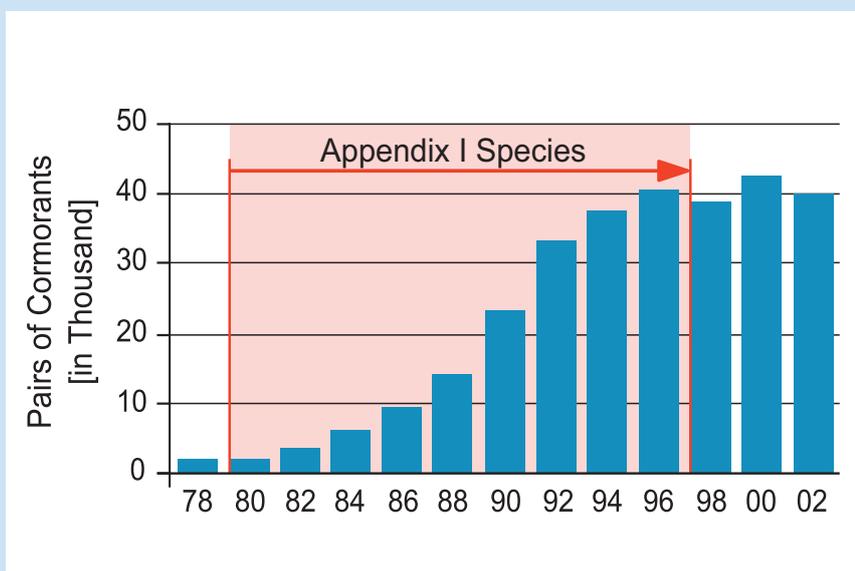
The Cormorant is a typical migratory bird, it breeds in the North and Baltic Sea area but winters in the proximity of the Mediterranean<sup>28</sup>. Under the Birds Directive, it was forbidden to hunt the Cormorant between 1979 and 1997. In 1997 it was deleted from the annex of the Birds Directive, as its population had recovered. This means that no NATURA 2000 sites have been designated for Cormorants since 1997.



The Cormorant – a bird acting as a “health police”. © H. Klöser



### Cormorant Population in Denmark between 1978 – 2002



The Cormorant was deleted from “Annex I” of the Birds Directive in 1997 after its European population was restored<sup>25</sup>. With immediate effect, no further protected areas were designated for the Cormorant.

# Modern impact assessment



*Latest scientific findings are used in the management of NATURA 2000 sites.*  
© Florian Lienbacher

Many plants and animals react rapidly and sensitively to certain interventions. Harvesting in forests during the breeding season could cause a pair of White-tailed Sea Eagles to leave a nesting site whilst the same activity at another time of year would be completely unproblematic. It is not the size or category of a project that triggers a deterioration in biodiversity, but its specific impacts.

## Flexible and efficient approach

The nature directives ensure that interventions are carefully checked for their potential impacts on biodiversity. Any plan or project with

a probability that it will have significant effects on a site concerned has to be assessed on a case by case basis. This contrasts with the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) processes that categorise projects in terms of size. While the SEA and EIA determine the process of assessment for defined project criteria, assessment under the Habitats Directive determines the approval of projects that significantly affect habitats or species – independent of how large or small the projects are. Appropriate assessment is therefore a more flexible instrument. A derogation mechanism even means that it is possi-

ble to approve plans or projects of overriding public interest if they will have significant impacts. In such cases compensation measures must be employed to ensure that the overall coherence of the NATURA 2000 network is protected.

## Cost-efficient implementation

Billund airport in Southern Denmark receives more than 2 million passengers a year and the frequent take off and landings of aircraft were a nightmare for local residents. To address this, the airport authorities decided to apply for planning permission to construct a new runway on the north side of the airport. However, the new landing strip would significantly affect a valuable old-growth forest<sup>29</sup>.

The assessment revealed that a similar noise reduction could just as well be achieved by changing the take off procedure. The assessors discovered that if aeroplanes left as quickly as possible and turned 30 degrees right, away from Billund, at 150m above ground, the number of homes exposed to noise would be reduced by 75%. The assessment ended up saving the airport authorities € 40 million as well as protecting the old growth forest<sup>30</sup>. Member States have developed innovative ways of incorporating the implementation of appropriate assessment into their administrative structures. Advisory systems help applicants plan their projects to avoid any conflict with nature conservation objectives. Preliminary examination procedures enable the swift and cost-efficient implementation of appropriate assessments. Screening systems help in making fast and relatively inexpensive decisions and therefore avoid unnecessary procedures.

### Modern expert system in the Czech Republic

For workable appropriate assessments it is necessary for experts to understand interactions between a project and the habitats and species in a site. Therefore the Czech Republic developed a progressive new system for authority experts,

with dozens of freelance experts on NATURA 2000 available to give advice to project applicants as well as authorities. Experts must be qualified ecologists and have to pass an exam to gain a certificate which can, should problems arise, be revoked by the authorities at any point. This system has been enshrined in national law and is there-

fore obligatory. These experts work independently in to prepare documentation about the impacts on NATURA 2000 sites as well as during assessments of Environmental Impact Assessment documentation. The first is hired by the project applicant and the second, who must not be the same person, is hired by the authority. The interesting part of this solution is that experts learn to work on “both relevant sides” of an assessment. The experts meet regularly to exchange experience and, if necessary, undertake further training<sup>31</sup>.



Freelance experts give advice regarding NATURA 2000. © Wolfgang Suske

### Specific assessments lead to specific solutions



The construction of a single parking space in a NATURA 2000 site could destroy the breeding habitat of a toad and thereby extinguish an entire local population, whilst a parking area of 100 spaces in a different area of the same site may have very little impact.

# Achievements in nature conservation



*The number of Great Bustards is currently increasing.* © Rainer Raab

Conserving our common natural heritage depends on international policy interventions. The Birds and Habitats Directives aim to positively impact the conservation status at EU level, of the species and habitats listed in the Annexes.

Only the US Endangered Species Act makes a comparable claim: to halt the decline of the populations of endangered species at an almost continental level. Remarkably, the EU is able to show measurable achievements in fulfilment of these far-reaching nature protection aims: a study shows that the implementation of the Birds Directive has already led to a turnaround in the negative population trends of many formerly endangered bird species, which now show a stable or positive trend throughout the EU<sup>32</sup>.

## The first increasing populations

The number of Great Bustards, for example, a globally threatened bird species, is currently increasing in some Member States due to positive conservation measures. From the purchase, restoration and management of steppe habitats in Hungary to the conversion of overhead powerlines (the main mortality factor) to underground cables in Austria; from agri-environment measures for low-intensity farming in Spain to a reintroduction project in England, several Member States have taken action according to the specific needs of the species in the respective parts of its European range.

Other population success stories include the Dalmatian Pelican, the Imperial Eagle and Zino's Petrel, whose populations have increased by at least 20%<sup>33</sup>.

## Stopping population decreases

Maintaining populations can also be successful: the Carpathians are most famous for harbouring Europe's biggest populations of large carnivores. Roughly 8,000 Bears, 4,000 Wolves and 3,000 Lynx still roam the EU Carpathians mountains, representing more than 40% of the total EU population of each species<sup>34</sup> and are completely protected by the Habitats Directive.

The definition of common conservation aims combined with an approach based on the subsidiarity principal to decide on the actions needed, form a successful European model. The achievements of the Birds and Habitats Directives are an encouraging demonstration of how supranational policy can bring measurable conservation benefits. The EU is now well on its way to complying with the Convention on Biological Diversity.

## Farmers protect the Great Bustard

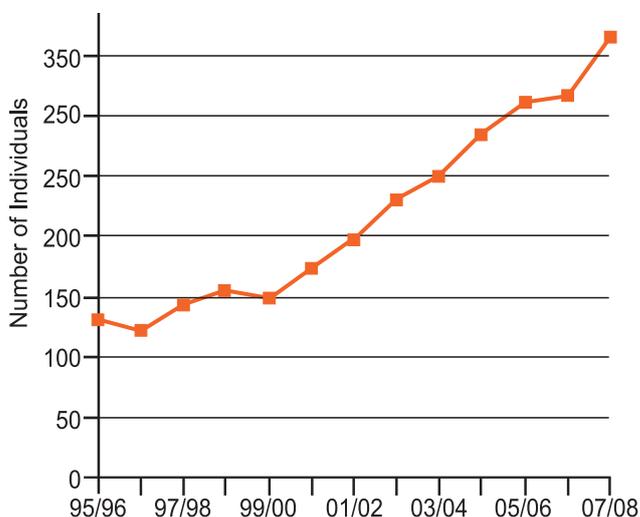
In Lower Austria more than 350 farmers are working together with local and regional experts to protect the Great Bustard which is breeding and living on their arable land. Any adaptations they make to their land-use methods to protect the Great Bustard are compensated by individual farmer payments from Austria's agri-environmental scheme. The farmers have worked with the authorities to develop their "own" Great-Bustard friendly crop rotation, with specific green cover in winter and management activities undertaken with hunters. Information events have been organised, leaflets handed out and educational activities started, all supported and financed by Rural Development funds. This has raised awareness of different stakeholders and increased acceptance of the necessary measures for protecting the Great Bustard. The result of these activities is an increase in the Great Bustard population, which the farmers are especially proud of<sup>36</sup>.



Experts and farmers protect the Great Bustard © Rainer Raab



## West-Pannonian population of the great bustard



The protection concept is already working. Some species populations, such as the Great Bustard, are on the increase<sup>35</sup>.

# The economy and nature conservation

88% of Europeans would like nature conservation to have the same influence on political decision-making as economic issues<sup>37</sup>. The Nature Directives provide the EU with a tool to represent the interests of nature conservation in a replicable and reliable way.

## Fair balance of public interest

In order to avoid one-sided consideration of the facts, nature conservation objectives are weighed up during the appropriate assessment alongside other important public interests. Any significant negative impacts on species or habitats must then be adequately compensated for.

If overriding public interests prevail, large-scale infrastructure projects cannot be stopped by NATURA 2000: for example, following a decision by the European Commission, the Rotterdam harbour ex-

pansion went ahead. The harbour is an important cornerstone of the Dutch economy and the expansion was therefore considered necessary in order to compete with other international harbours<sup>38</sup>. In France, an unfinished tract of the TGV connection to Paris leading through valuable salt meadows was built, as in this case the Commission again decided that other public interests prevailed over the interests of nature conservation<sup>39</sup>.

The conservation of natural resources is vital to the economic sectors of tourism and agriculture. NATURA 2000 can support a re-orientation of cultivation methods or new tourism opportunities.

## New standards for developing projects

NATURA 2000 does not, therefore, inhibit economic development. Planned infrastructure projects

are also possible in NATURA 2000 sites. But it must be clarified whether a project endangers the NATURA 2000 site and if so, what solutions can be found to avoid this. If, for example, an existing pond is affected by a project, negative impacts may be compensated for by creating a new pond.

The nature directives set new standards for developing projects, and require better advance planning and assessment. Those who follow the law and act professionally can find solutions to conflicts. Those who ignore them, can be caught out through the Nature Directives' transparent system.

Assessments already undertaken in NATURA 2000 sites, show that many projects – large and small – are compatible with NATURA 2000 objectives, demonstrating that economic development and nature protection can exist side by side.

*NATURA 2000 seeks to conserve biodiversity while allowing for economic growth © Duro Huber*



### Appropriate Assessment in Ravensburg

The administrative district of Ravensburg, in Baden-Württemberg, with a size of 1,632 km<sup>2</sup>, is one of the biggest districts in Germany. It is characterised by a large portion of wetland, bogs and fens, lakes and rivers due to high precipitation rates. As a result of the dispersed settlement structure, the district has to deal with a high number of construction projects in the outer area.

With the help of a 6 page form created by the local authorities, together with the competent ministry for nature conservation, most simple cases can be processed and checked for their compatibility with the NATURA 2000 site according to EU legislation, quickly and cost effectively. Professional screening clarifies for the applicant within a short period of time, whether their project is likely to result in any significant impacts.

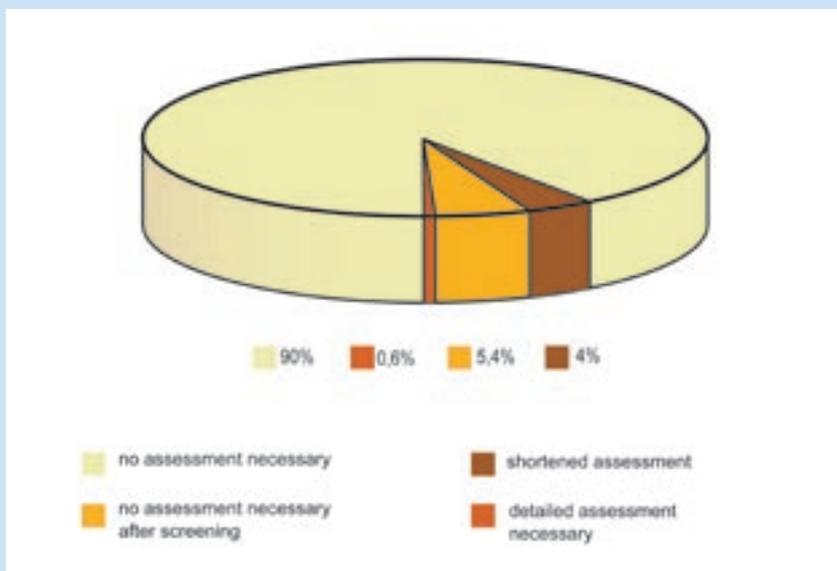
Of 1,000 projects and plans submitted in the Ravensburg district in 2006, only 6 required a comprehensive appropriate assessment to be undertaken according to the Habitats Directive. Only one project was rejected, because even after the detailed assessment it could not be ruled out that the project would not have a significant impact on a NATURA 2000 site<sup>41</sup>.



Cases can be dealt with quickly and cost effectively. © Landratsamt Ravensburg



### Need for assessments of plans and projects



Of 1,000 plans and projects in Baden-Württemberg (Ravensburg, 2007), 90% had no impact on NATURA 2000, 10% referred to NATURA 2000, 6% needed an appropriate assessment and only 0.6% needed an intensive assessment<sup>40</sup>.

# Nature conservation: a socio-economic necessity

NATURA 2000 sites have a positive effect on the functioning of ecosystems and contribute to people's health and wellbeing. They play an important role in lessening the impact of natural disasters.

According to calculations by Munich Re, one of the world's two biggest reinsurance companies, the world's Gross Domestic Product in 2060 will no longer be able to cover the damages if natural disasters continue to increase at the current rate<sup>42</sup>.

## Damaged ecosystems result in high costs to society

Forest ecosystems contribute in various ways to people's health and security. The high economic value of forests is often only recognised after disasters strike. The establishment and maintenance of protection forest (to protect against erosion and avalanches) costs € 14,000 ha,

whilst technical construction measures cost about € 150,000 ha<sup>43</sup>. The conservation of intact, diverse protection forests is thus not only desirable from a nature conservation perspective, but is also a cost-effective security measure for mountain areas<sup>44</sup>. In Vorarlberg (Austria) more than two thirds of the territory would not be habitable without the protection provided by forests<sup>45</sup>. Alluvial forests play an essential role in controlling floodwaters as they act as natural flood control basins. The economic value of wetlands is estimated to be around € 2,070 ha/year, with a third of this value being attributable to floodwater protection<sup>46</sup>. However, only 15 – 25% of original floodplains remain<sup>47</sup>.

Between 1998 and 2002, Europe suffered over 100 major damaging floods which caused some 700 fatalities, the displacement of around half a million people, and at least € 25 billion of insurance losses.

Today over 10 million people still live in areas at risk of extreme floods along the Rhine, and the potential damage to material goods is valued at around € 165 billion<sup>48</sup>.

Recognising the high social and financial costs of floods and the importance of working with nature and not against it, the German authorities are now investing millions in restoring natural floodplains and recreating the natural functions of the Rhine.

Intact forests, wetlands and grasslands are also important recreational areas, beneficial to human health. A study said, that people spend time in the woods once a week<sup>49</sup>, which helps to reduce the most important risk factor for heart disease and obesity that can be influenced directly – namely lack of exercise.

*Protection forests prevent avalanche damage. © BMLFUW*



### Saving instead of repairing

The objective of the Nature Directives is to protect existing valuable landscapes effectively, in order to avoid expensive natural restoration and/or recreation costs. China now invests more than € 75 billion annually in addressing desertification, water and air pollution only<sup>51</sup>.

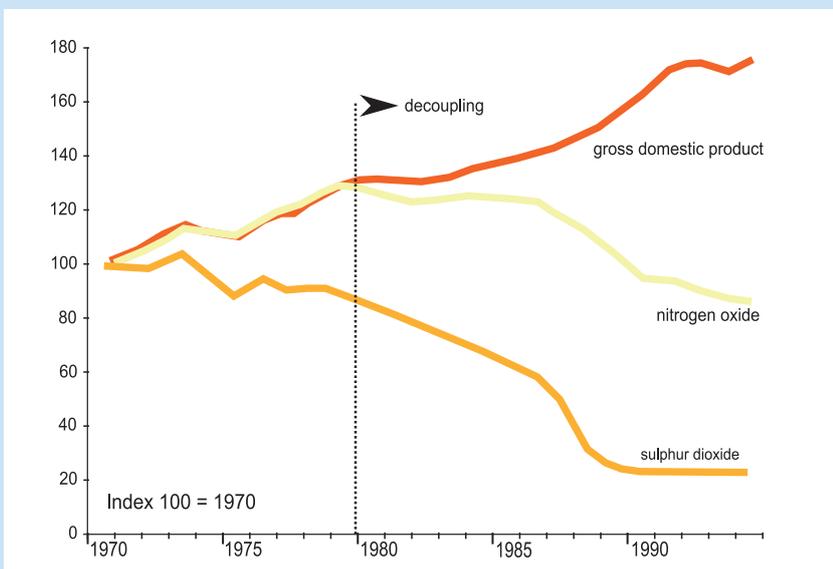
Consistent environmental policies have halted forest decline and water pollution in Europe whilst at the same time achieving economic growth. The decoupling of air and water pollution from economic growth is therefore possible. Europe has already demonstrated, with its environmental policy of the last 35 years, that economic growth and

nature conservation are not contradictory, but can be achieved together through technical and structural change. Nature conservation does not conflict with a healthy economic situation. Today, China is also interested in the EU model for conserving and improving natural habitats<sup>52</sup>.



*Valuable landscapes must be protected.*  
© Wolfgang Suske

### Decoupling pollution from economic growth in East Germany



In the 1980s, Europe took steps to decouple air and water pollution from economic growth<sup>50</sup>. The next step in decoupling: NATURA 2000.

# Nature conservation supports tourism and employment

Many of the 25,000 NATURA 2000 sites are a significant factor behind the success of tourism, which is one of the fastest growing economic sectors in Europe. There is an increasing appetite for more specialised forms of tourism such as ecotourism. These alternative forms of tourism are growing almost three times faster than classic tourism markets.

## Fresh air and clean water

Important reasons for a holiday are nature walks (82%) and visiting natural attractions (60%)<sup>53</sup>. German conservation areas are visited by over 290 million people every year<sup>54</sup>. The increasing demand for peacefulness, silence, fresh air and clean water are not short-lived trends, but result from long-term changes in values<sup>55</sup>.

In Logarska Dolina, a Natura 2000 valley in Slovenia, the local community founded a non-profit-organisation with the support of a professional planner to promote economic development, in particular ecotourism. Since then, the possibilities for raising income from sustainable tourism have increased. Steps have been taken to counteract urban sprawl and increased traffic from tourist visits<sup>56</sup>.

In Croatia and Romania, conservation areas are important vacation destinations. In Croatia, for example, the proposed Plitvitzer lakes Natura 2000 site is visited by 10,000 tourists daily between May and September<sup>57</sup>. Between 2000 and 2006, overnight stays in the Romanian Danube delta increased by 40%, 140,000 overnight stays were registered in 2006<sup>58</sup>. Tourism in the Danube delta is contributing to sustainable regional development in this economically weak area.



*Long term trends: People are looking for peacefulness, silence, fresh air and clean water. © Hemma Tomek*

## New jobs

Infrastructure and the management of conservation sites create new jobs. A recent study of the economic value of protected areas in Wales concluded that the parks support nearly 12,000 jobs, produce a total income of approximately € 250 million and generate € 300 million in Gross Domestic Product<sup>59</sup>.

In the EU-15 in 2001, more than 125,000 jobs could be directly linked to nature conservation activities<sup>60</sup>. These included positions at all levels, from temporary employees to academic personnel.

In 2001, the proportion of employment in the tourism sector was almost twice as high in municipalities with national parks compared to municipalities without and almost three times more tourists spent a night in those municipalities compared to the Austrian average<sup>61</sup>. Large conservation areas play an important role in attracting day tourists and increasing the added value to the region. On average each tourist spends between € 25 and € 46 during a day visit to a conservation site<sup>62</sup>. The “Hohe Tauern” NATURA 2000 site, directly adds around € 4.8 million to the regional gross domestic product value<sup>63</sup>.

## Living Rhine

Two decades ago people all over Europe would have considered the Rhine to be an industrialised, dead area. Nowadays people choose the Rhine area for their recreational activities, for weekends out of town and even for extended holidays. In the 1980s, various physical measures were undertaken to restore the

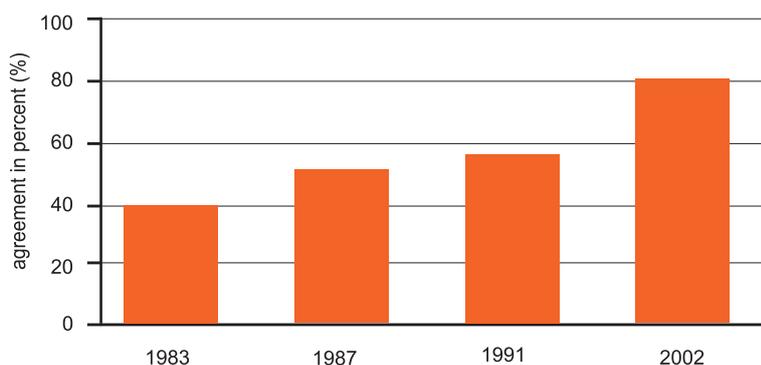
polluted habitat to its natural state. The restoration was very successful and migratory species, which are sensitive to pollution, are now surviving in the Rhine. It was vital to show the public these achievements and inform local communities of all ongoing activities. As the situation along the Rhine improved, they began to use the area for dog walking and biking. Later, an action plan to

promote sustainable tourism along the Rhine was developed. Today the Rhine is a clean river, supporting unique and dense forests and sheltering surprising species of animals and plants, which can be discovered by visitors. After convincing the local community of the Rhine's new beauty, it was also possible to initiate new sustainable tourism activities<sup>65</sup>.



A local site of the 'living Rhine'. © Helene Hasle

## „Experiencing nature“ as a central motive for travelling



In 2002, 80% of German tourists agreed that “experiencing nature” and “beautiful countryside” were their main reasons for travelling<sup>64</sup>.

# Nature conservation supports economically weak regions



*Rural migration can be decreased through NATURA 2000.* © State Institute for Nature in Croatia

Many NATURA 2000 sites are situated in rural, peripheral regions, which have been classified as economically weak due to an unequal distribution of economic activities, production and population density<sup>66</sup>. The reduction of regional disparities within the framework of European integration is an important aim of the EU<sup>67</sup>.

## “Engines” of development strategies

Through targeted funding for conservation areas, it is possible to preserve diverse landscapes even if they are economically less profitable. This can help to halt decreases in agricultural activities, migration from rural areas as well, as increases in commuters<sup>68</sup>.

NATURA 2000 sites in economically weak regions can act as the “engines” for development strategies<sup>69</sup>. Not only ecological, but also social

and economic aspects should be considered when evaluating NATURA 2000 funding options. An important cornerstone of agricultural development is financial compensation for ecosystem services, which has significantly increased over the last few years and is now an important part of overall farmer income. In Schleswig-Holstein, funds available for nature conservation tripled between 2003 and 2005<sup>70</sup>, and in Lower Austria funds for nature conservation services rendered by farmers have increased sixtyfold since 1994<sup>71</sup>.

Additionally, by fulfilling the need of urban populations for relaxation in the countryside, farmers can benefit from a second income generation opportunity. Through a combination of agriculture and tourism, many mountain pastures can be conserved and protected from reforestation<sup>72</sup>. The survival of small-scale agriculture as a habitat for an-

imals and plants is favoured by the general public, people are willing to spend up to € 248 year/person to conserve biodiverse landscapes<sup>73</sup>.

## Win-win cultivation

In addition, the increasing demand for products produced in healthy landscapes can be met by alternative cultivation methods instead of through conventional large-scale agricultural activities.

In the Danish Varde Valley 250 farmers failed with intensive farming when demand for their products declined. They decided to switch to sustainable cultivation methods based on managing valuable NATURA 2000 habitat “salt meadows”. This resulted in preservation of the valuable salt meadows of the region, as well as the farmers’ economic survival.<sup>74</sup>.

### Extensively managed orchards' apple juice

Extensive grassland-orchard systems are one of the most valuable and diverse habitats for rare animals like the Syrian Woodpecker (*Dendrocopos syriacus*), which is protected by the Birds Directive. If orchards are no longer cultivated, these habitats will disappear from our cultural landscapes. In Baden Württemberg 260 farmers joined forces to establish an orchard-apple juice project, to make the cultivation of orchards profitable<sup>77</sup>.

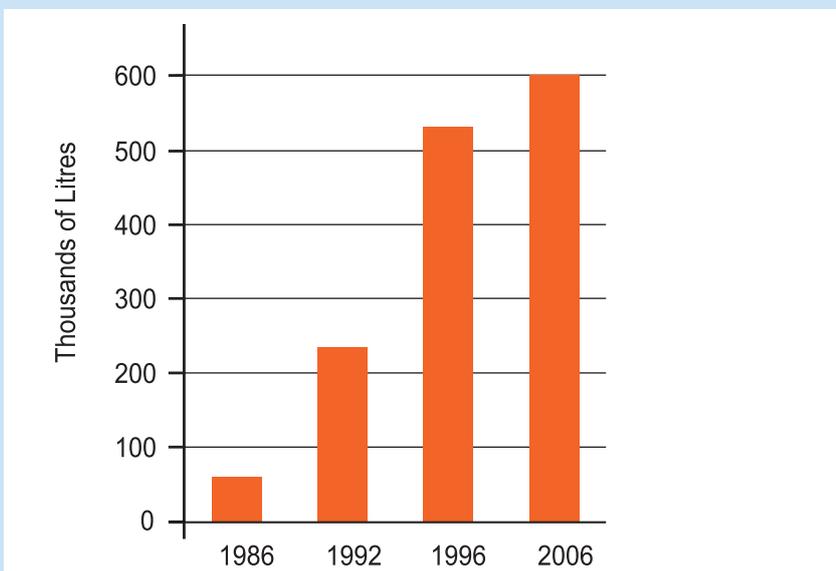
The farmers committed to abandoning pesticides and regularly cultivating the meadows. The additional effort is compensated for by marketing the fruit at a higher price, the consumer pays more for this juice than for juice produced from fruit concentrate. The farmers receive three times the market price for conventionally produced fruit from the regional juice producers, which continue to process the fruit<sup>78</sup>.



Farmers are proud of their products and their contribution to nature protection. © Rita Newman/BMLFUW

The demand for high quality apple juice is constantly rising and the current market share is around 5-10 %<sup>79</sup>. Orchard cultivation thus secures jobs in the agriculture, production and commercial sectors<sup>80</sup>.

### Sale of extensively managed orchards' apple juice



Activities which enhance nature protection in rural regions can also change global trends. In Germany, nearly half of the extensively managed orchard apple juice is produced in Baden Württemberg<sup>75</sup>. One very successful cooperation is led by the "Centre for Nature Protection", which sells 5 times more apple juice than 20 years ago<sup>76</sup>.

## Summary

NATURA 2000 provides us with the best achievement of Europe in protecting biodiversity. Since its creation, nearly 20 percent of Europe's territory has been included in the network of NATURA 2000. Including now about 25.000 sites in all 27 Member States, NATURA 2000 is seen as the cornerstone of the EU's biodiversity work and represents one of the world's most modern and ambitious approaches to halt the loss of biodiversity.

NATURA 2000 sites maintain and provide a number of ecosystem services crucial for human well-being. Some sites preserve habitat types that provide important services: wetlands cru-

cial for water purification and retention, peat bogs important for carbon storage and forested mountain areas that help prevent erosion and landslide. The sites can also function as 'refuges' and breeding places for local biodiversity like pollinating insects, game animals and fish.

### First successes:

NATURA 2000 is the cornerstone of EU's biodiversity work. Although the overall trend in halting the loss of biodiversity is continuing, there are positive trends for some species. The recovery of some of the large carnivores is also an encouraging indicator.

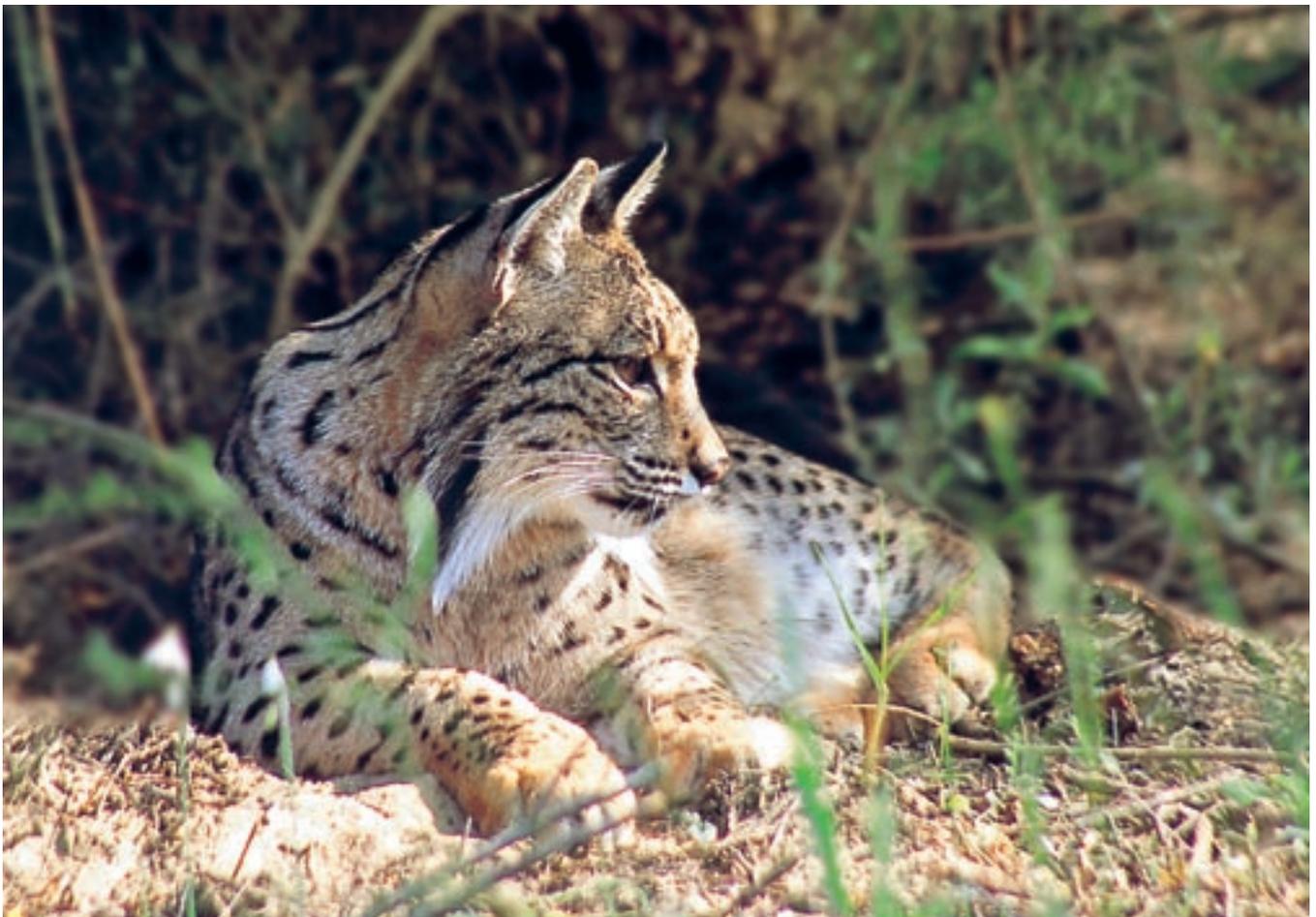
### Flexible management:

NATURA 2000 allows adjustments in conservation objectives and management plans which is needed to address – for example – the future impact of climate change.

### Modern assessment of impacts:

NATURA 2000 does not look at the type of a project, but only its actual impact on the site in need of protection. It guarantees ecological sustainability while allowing for economic development.

*The critically endangered Iberian Lynx (*Lynx pardinus*) is protected by Natura 2000 © WWF-Spain/Luis Suárez*



NATURA 2000 encourages people to work with nature and **supports the development of sustainable forms of land and sea use** which are so characteristic of Europe. NATURA 2000 is a successful, flexible and modern conservation tool!

#### **For the future of NATURA 2000:**

- NATURA 2000 site designation must be finalised by 2010 particularly in our coasts and oceans. This will allow all EU Member States to concentrate on managing the NATURA 2000 network effectively.
- NATURA 2000 is a key tool to help halt biodiversity loss and must be supported by all relevant policies at the EU, national and local level, in order to achieve the EU 2010 Biodiversity Target.
- Financing NATURA 2000 helps nature and people. In their future budgets, EU and Member States must commit to stronger economic support for nature conservation.

*Tourists on a nature trail in France. Seagrass (*Posidonia oceanica*) is a critical habitat protected by NATURA 2000* © Michel GUNTHER / WWF-Canon



# Bibliography

## Endnotes

- 1 Millenium Ecosystem Assessment (2005): Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute, Washington, DC
- 2 Millenium Ecosystem Assessment (2005): Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute, Washington, DC
- 3 Duke, Guy (ed.) (2005): Biodiversity and the EU – Sustaining Life, Sustaining Livelihoods. Conference Report. Stakeholder Conference held under the Irish Presidency of The European Union in partnership with the European Commission, 25th - 27th May 2004, Grand Hotel, Malahide, Ireland.
- 4 <http://www.nabu-barmstedt.de/nabuinfo/02infofalter.htm>
- 5 Duke, Guy (ed.) (2005): Biodiversity and the EU – Sustaining Life, Sustaining Livelihoods. Conference Report. Stakeholder Conference held under the Irish Presidency of The European Union in partnership with the European Commission, 25th - 27th May 2004, Grand Hotel, Malahide, Ireland
- 6 European Communities (2008): The European Union's Biodiversity Action Plan "Halting the loss of biodiversity by 2010 and beyond", Office for Official Publications of the European Communities, Luxembourg
- 7 Millenium Ecosystem Assessment, (2005): Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute, Washington, DC
- 8 European Communities (2005): Natura 2000 - European Nature For You, Office for Official Publications of the European Communities, Luxembourg
- 9 European Communities (2008): The European Union's Biodiversity Action Plan Halting the loss of biodiversity by 2010 and beyond", Office for Official Publications of the European Communities, Luxembourg
- 10 Hails, C. (Ed.) (2008): Living Planet Report 2008. WWF, Switzerland
- 11 Tucker G.M & Heath M.F. (1994): Birds in Europe: Their conservation status. BirdLife Conservation Series no. 3. Cambridge
- 12 Tucker G.M & Heath M.F. (1994): Birds in Europe: Their conservation status. BirdLife Conservation Series no. 3., Cambridge
- 13 BirdLife International (2004): Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series no. 12, Cambridge
- 14 Tucker G.M & Heath M.F. (1994): Birds in Europe: Their conservation status. BirdLife Conservation Series no. 3., Cambridge
- 15 Compare: Paul F. Donald, Fiona J. Sanderson, Ian J. Burfield, Stijn M. Bierman, Richard D. Gregory, Zoltan Waliczky (2007): International Conservation Policy Delivers Benefits for Birds in Europe. Science, Vol. 317, no. 5839
- 16 Natura 2000 Area Calculation: [http://ec.europa.eu/environment/nature/natura2000/db\\_gjs/index\\_en.htm](http://ec.europa.eu/environment/nature/natura2000/db_gjs/index_en.htm)
- 17 European Environmental Agency: Number of Habitats and Species per Annexes: [http://biodiversity.eionet.europa.eu/activities/Natura\\_2000/documentation](http://biodiversity.eionet.europa.eu/activities/Natura_2000/documentation)
- 18 Own calculation on basis of ) National Protected Areas: United Nations Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC). 2006. World Database on Protected Areas (WDPA) listed on <http://earthtrends.wri.org/text/biodiversity-protected/variable-918.html>
- 19 Own calculation on basis of:  
1.) Flora Fauna Habitat Areas [http://ec.europa.eu/environment/nature/natura2000/barometer/docs/barometer\\_sci\\_dec07.pdf](http://ec.europa.eu/environment/nature/natura2000/barometer/docs/barometer_sci_dec07.pdf)  
2.) National Protected Areas: United Nations Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC). 2006. World Database on Protected Areas (WDPA) listed on <http://earthtrends.wri.org/text/biodiversity-protected/variable-918.html>
- 20 Oral notice European Commission (2004)
- 21 Own calculation on basis of EUR-LEX: [http://eur-lex.europa.eu/RECH\\_menu.do](http://eur-lex.europa.eu/RECH_menu.do)
- 22 [www.natura2000.hr](http://www.natura2000.hr)
- 23 Brian Huntley, Rhys E. Green, Yvonne C. Collingham & Stephen G. Willis (2007): Climatic Atlas of European Breeding Birds. Durham University & RSPB/BirdLife International. Lynx Editions, Barcelona.
- 24 Gottfried, M., Pauli H., Reiter K., Grabherr G. (2001): A fine-scaled predictive model for changes in species distribution patterns of high mountain plants induced by climate warming. In: Diversity and Distributions Nr. 5 journal of biological invasions and biodiversity, Oxford; Berlin; Vienna: Blackwell Scientific Publications.
- 25 Number of European Population of cormorants:  
1.) Data between 1978-2003: Van Eerden M.R. & Gregersen J. (1995): Long-term changes in the north-west European population of cormorants *Phalacrocorax carbo sinenseis*. Ardea 83  
2.) Data between 2004-2002: Bregnballe T., Engström H., Knief W., Van Erden M.R., Van Rijn S. Kieckbusch J.J & Eskildsen J. (2003): Development of the breeding population of Great Cormorants *Phalacrocorax carbo sinensis* in The Netherlands, Germany, Denmark, and Sweden during the 1990s. Vogelwelt 124, Suppl.: 15-26.
- 26 Regulus (Ed: Lëtzebuurger Natur- a Vulleschutzliga) - Die Zeitschrift für Naturschutz und Naturkunde in Luxemburg 10/03, Sondernummer Kormoran
- 27 Hessische Gesellschaft für Ornithologie und Naturschutz e.V.: Hintergrundinformation zum Kormoran ([www.hgon.de](http://www.hgon.de))
- 28 Helmholtz Centre for Environmental Research, UFZ (2008): Press release from June 4th 2008: The Cormorant - the "black plague" or an example of successful species conservation?
- 29 European Communities (2008): The European Union's Biodiversity Action Plan „Halting the loss of biodiversity by 2010 – and beyond“, Office for Official Publications of the European Communities, Luxembourg

- 30 European Communities (2008): The European Union's Biodiversity Action Plan „Halting the loss of biodiversity by 2010 – and beyond“, Office for Official Publications of the European Communities, Luxembourg
- 31 Newsletter 4 of the Trainings programme implementation and administration of Natura 2000 (Number 04/2005); [www.umweltbundesamt.at/fileadmin/site/umwelthemen/naturschutz/Newsletter\\_Training/Newsletter4\\_july\\_060714.pdf](http://www.umweltbundesamt.at/fileadmin/site/umwelthemen/naturschutz/Newsletter_Training/Newsletter4_july_060714.pdf)
- 32 Paul F. Donald, Fiona J. Sanderson, Ian J. Burfield, Stijn M. Bierman, Richard D. Gregory, Zoltan Waliczky (2007): International Conservation Policy Delivers Benefits for Birds in Europe. *Science*, Vol. 317, no. 5839
- 33 European Communities (2008): The European Union's Biodiversity Action Plan „Halting the loss of biodiversity by 2010 – and beyond“, Office for Official Publications of the European Communities, Luxembourg
- 34 European Commission (2005): Natura 2000 in the Alpine region, Office for Official Publications of the European Communities, Luxembourg
- 35 Data by courtesy of Rainer Raab (2008) Technical Office for Biology, Austria
- 36 [www.großtrappe.at](http://www.großtrappe.at)
- 37 European Commission (2005): Attitudes of European citizen towards the environment, Special Eurobarometer 217, Brussels
- 38 Commission of the European Communities (2003): [http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/rotterdam\\_en.pdf](http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/rotterdam_en.pdf)
- 39 Commission of the European Communities (2004): [http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/tgv\\_est\\_en.pdf](http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/tgv_est_en.pdf)
- 40 Ssymank, A.; Balzer, S., Dieterich, M., Beinlich, B., Hill, B. (2008): NATURA 2000 in Germany - Nature Jewels.- BfN/BMU, Bonn-Berlin
- 41 Ssymank, A.; Balzer, S., Dieterich, M., Beinlich, B., Hill, B. (2008): NATURA 2000 in Germany - Nature Jewels.- BfN/BMU, Bonn-Berlin YES; the reference should be double in
- 42 [www.sonnenseite.com](http://www.sonnenseite.com) in Neidlein H.C.,Walser, M.(2005): Natur ist Mehr-Wert; Ökonomische Argumente zum Schutz der Natur, BfN Skripten 154
- 43 [http://www.landforstbetriebe.at/pressemitteilungen.php?press\\_id=66](http://www.landforstbetriebe.at/pressemitteilungen.php?press_id=66)
- 44 Bayerische Landesanstalt für Land und Forstwirtschaft (2004): Tätigkeitsbericht 2004, Sachgebiet III-Waldbau und Forstplanung
- 45 Vorarlberger Naturschutzrat (2003): Natur und Umwelt in Vorarlberg
- 46 Hofmeister, F. (2006): Die Rückgewinnung von Feuchtgebieten als Lösungsmöglichkeit für aktuelle Umweltprobleme, Dissertation, Heidelberg
- 47 [http://www.nabu.de/m06/m06\\_03/07706.html](http://www.nabu.de/m06/m06_03/07706.html) and Poppe, M et al (2003): The Present State of the Austrian River Landscape: Survey and Analysis of Anthropogenic Impacts and Uses in Österreichische Wasser- und Abfallwirtschaft, Heft 7-8, Juli/August 2003, 55. Jahrgang
- 48 European Communities (2008): The European Union's Biodiversity Action Plan „Halting the loss of biodiversity by 2010 – and beyond“, Office for Official Publications of the European Communities, Luxembourg
- 49 Elsasser, Peter (1996): Struktur, Besuchermotive und Erwartungen von Waldbesuchern- eine empirische Studie in der Region Hamburg, Institut für Ökonomie
- 50 <http://www.umweltbundesamt.de/umweltoekonomie/usub/bruecken.htm>
- 51 Stavros Dimas (2006): Stopping the loss of biodiversity by 2010: Why nature matters. Why we are losing it. And what we in Europe can do about it., Green Week Conference, Brussels
- 52 Stavros Dimas (2006): Stopping the loss of biodiversity by 2010: Why nature matters. Why we are losing it. And what we in Europe can do about it., Green Week Conference, Brussels yes, I would leave it twice
- 53 Österreich Werbung, (2006): T-Mona. Urlauber in Österreich. Sommer 2006
- 54 Neidlein H.C.,Walser, M. (2005): Natur ist Mehr-Wert; Ökonomische Argumente zum Schutz der Natur, BfN Skripten 154
- 55 <http://www.staff.uni-marburg.de/~braemer/Stille.htm>
- 56 <http://www.cipra.org/de/alpmedia/news/2548/> and NaturLandSalzburg, 2007, Heft 2 and <http://www.logarska-dolina.si/>
- 57 Vidakovic Petar (2003): National Parks and Protected Areas in Croatia, Environmental Protection and Tourism Scholarship Fund, Zagreb
- 58 National Statistics Institute, Rumania (2006) by courtesy of Diana Bota, Donaudelta National-Institut, Tulcea
- 59 National Trust (2006): Valuing our Environment – Economic Impact of the National Parks of Wales, Great Britain
- 60 Ecotec (2001): Analysis of the EU Eco-Industries, their Employment and Export Potential, a final report to DG Environment / ECOTEC, Research & Consulting Ltd.
- 61 Bundesministerium für Wirtschaft und Arbeit (2001): Nationalparks und Tourismus in Österreich, Wien
- 62 Neidlein H.C.,Walser, M. (2005): Natur ist Mehr-Wert; Ökonomische Argumente zum Schutz der Natur, BfN Skripten 154
- 63 Lehar, G. (2004): Besucherzählung, Motiv- und Wertschöpfungserhebungen im Nationalpark Hohe Tauern, Institut für Verkehr und Tourismus, Innsbruck
- 64 <http://www.staff.uni-marburg.de/~braemer/RechtaufNatur.htm>
- 65 [www.rhinivivant.com](http://www.rhinivivant.com)
- 66 Kanatschnig D., Weber G. (1998): Nachhaltige Raumentwicklung in Österreich, ÖIN, Wien
- 67 Kanatschnig D., Weber G. (1998): Nachhaltige Raumentwicklung in Österreich, ÖIN, Wien
- 68 Küpfer I., Scheurer, D. (1997): Was können Schutzgebiete im Alpenraum zur regionalwirtschaftlichen Entwicklung beitragen? In: *Revue de Géographie Alpine*; 85, 2

- 69 Arbeitsgruppe für regionale Struktur- und Umweltforschung, Oldenburg, Gemeinde Südbrookmeerland, (2002): Meer erleben - Mehr verstehen, Oldenburg
- 70 Ministerium für Umwelt, Naturschutz und Landwirtschaft des Landes Schleswig-Holstein (Hrsg) (2004): Klartext- Märchen, Mythen und Fakten zu NATURA 2000
- 71 Suske W.(2008): Die Entwicklung des Vertragsnaturschutz in den letzten 20 Jahren; in Land & Raum, 1/2008, Österreichisches Kuratorium für Landtechnik
- 72 Arnberger, A., Muhar, A., Sterl, P. (2006): Beziehungsgefüge Almwirtschaft und Tourismus - Ergebnisse aus dem Projekt Alp Austria. Natura 2000 im Alpenraum. Final Conference AlpNaTour, 19.10.-20.10.2006, Bozen
- 73 Ott, W. (2002): Plausibilisierung Nutzenschätzung Landschaft für den Tourismus. Econcept AG im Auftrag des seco, Zürich
- 74 European Commission (2005): NATURA 2000 – Europe's nature for you, Office for Official Publications of the European Communities, Luxembourg
- 75 Stiftung Naturschutzfonds (1997): Ideen-Konzept-Aktionen zum Erhalt der Streuobstwiesen in Baden-Württemberg
- 76 Bund Ravensburg: Streuobstvortrag 16.10.2007, Europomme Luxemburg
- 77 Bund Ravensburg: Streuobstvortrag 16.10.2007, Europomme Luxemburg
- 78 <http://vorort.bund.net/ravensburg/projekte>
- 79 <http://www.streuobst-bodensee.de/>
- 80 [http://vorort.bund.net/ravensburg/projekte/projekte\\_3/projekte\\_3.htm](http://vorort.bund.net/ravensburg/projekte/projekte_3/projekte_3.htm)

## List of figures

- Living Planet Index: author's image, Source: Hails, C. (Ed.) (2006): Living Planet Report 2008. WWF
- Formulating one law from two existing directives: author's image
- Biogeographic regions according to the EU: <http://www.eionet.europa.eu/>
- Natura 2000 sites compared to National Protected Areas: author's image, datasource: Flora Fauna Habitat Areas [http://ec.europa.eu/environment/nature/natura2000/barometer/docs/barometer\\_sci\\_dec07.pdf](http://ec.europa.eu/environment/nature/natura2000/barometer/docs/barometer_sci_dec07.pdf)
- 2.)National Protected Areas: United Nations Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC). 2006. World Database on Protected Areas (WDPA) listed on <http://earthtrends.wri.org/text/biodiversity-protected/variable-918.html>
- Judgments in the sector of Nature Conservation compared to all judgments of the Court: author's image, datasource: on basis of EUR-LEX: [http://eur-lex.europa.eu/RECH\\_menu.do](http://eur-lex.europa.eu/RECH_menu.do)
- Stock of Cormorants in Denmark between 1978- 2002: author's image, datasource: Number of European Population of cormorant:
- 1.)Data between 1978-2003: Van Eerden M.R. & Gregersen J.,1995: Long-term changes in the northwest European population of cormorants *Phalacrocorax carbo sinensis*. *Ardea* 83: 61-79.
- 2.)Data between 2004-2002: Bregnballe T., Engström H., Knief W., Van Erden M.R., Van Rijn S. Kieckbusch J.J & Eskildsen J. ,2003: Development of the breeding population of Great Cormorants *Phalacrocorax carbo sinensis* in The Netherlands, Germany, Denmark, and Sweden during the 1990s. *Vogelwelt* 124, Suppl.: 15-26.
- Natura 2000 and Parking: author's image
- Number of West Pannonian Population of Great Bustard: author's image on basis of a graphic compiled by Rainer Raab, Technical Office for Biology, Austria, 2008
- Need of Appropriate Assessment: author's image on basis of Ssymank, A.; Balzer, S., Dieterich, M., Beinlich, B., Hill, B. (2008): NATURA 2000 in Germany - Nature Jewels. - BfN/BMU, Bonn-Berlin
- Decoupling from Economic Growth and Pollution in East Germany: author's image on basis of <http://www.umweltbundesamt.de/umweltoekonomie/usub/bruecken.htm>
- „Nature experience“ as a Central Travelling Motive: author's image on basis of <http://www.staff.uni-marburg.de/~braemer/RechtaufNatur.htm>- and Becker Ch., Job H., Witzel A.(1996): Tourismus und nachhaltige Entwicklung, Darmstadt
- Sale of extensively managed orchards apple juice: author's image on basis of a graphic compiled by Bund Ravensburg: Streuobstvortrag 16.10.2007, Europomme Luxemburg





*Healthy nature supports biodiversity and high-end tourism* © State Institut for Nature in Croatia

WWF is one of the world's largest and most experienced independent conservation organizations, with almost 5 million supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.

International WWF Centre  
for Marine Conservation  
Hongkongstraße 7  
20457 Hamburg  
tel: +49 40 530200-0  
fax: +49 40 530200-112  
hamburg@wwf.de



*for a living planet*®