Restoration of boreal forests and forest-covered mires

(LIFE03 NAT/FIN/000034)

Mr. Stig Johansson

Duration: 01/12/2002 - 31/12/2007
Budget: 3.680.467 € (EC co-financing 50 %)
Beneficiary: Natural Heritage Services of Metsähallitus, Southern Finland
Contact: Dr. Stig Johansson stig.johansson@metsa.fi

Background and aims

The boreal natural forests and mires with forest cover are habitats prioritised by the European Union. They are also classified as nationally threatened habitats in 2008. However, only a small proportion has been protected in southern Finland and few are in their natural state. These habitats are essential nesting environments for one third of the Finnish Bird Directive species. They are important also for many species in the Habitats Directive and for nationally identified rare or threatened species, especially insects and fungi.

The aim of the project was to safeguard the favourable conservation status in 33 Natura 2000 areas in southern and western Finland by ecological restoration of priority habitats.

Results

The project implemented restoration measures in boreal forests and drained forest-covered mires, where the structure and functioning of the natural habitats have been changed by human activities; in eskers with a closing canopy, and in deteriorated habitats of the endangered white-backed woodpecker. A total of 5,939 ha of boreal forests were restored in 33 sites. Prescribed burning was used in 356 ha, increasing the amount of dead wood in 2,702 ha and creating small forest gaps in 2,881 ha. In addition, 410 ha of forest-covered mires, 561 ha of esker forests, and 196 ha of forests harbouring the white-backed woodpecker were restored during the project.

Based on preliminary monitoring (1) the number of dead wood dependent and red-listed species increased in restored forests; (2) hydrological recovery was initiated in restored mires; (3) restoration strengthened the population of the white-backed woodpecker; and (4) the number of xerothermic species increased on restored eskers.

Conclusions

The project was extensively featured in Finnish media, which made restoration a common and widely accepted tool in the management of Natura 2000 areas. It also improved restoration planning and developed best practices in management of protected areas as well as initiated systematic monitoring of planning and implementation costs. During implementation hundreds of employees and partners were trained. The project provided direction for the high-priority Forest Biodiversity Programme for Southern Finland (METSO) running up to 2016. Implementation was based on partnership between main actors such as Metsähallitus, the private sector and universities, and a national monitoring network was established. The partnerships and monitoring network are important elements of the on-going METSO-programme.

Restoration of deciduous forest in Söderåsen national park (LIFE02 NAT/S/008483)

Mr. Oddvar Fiskesjo

Duration: 01/06/2002 - 31/12/2006
Budget: 1.739.811 € (EC co-financing 43%)
Beneficiary: Länsstyrelsen i Skåne län / County administrative board of Skåne
Contact: Oddvar Fiskesjö, National Park manager oddvar.fiskesjo@m.lst.se

Background and aims

Söderåsen national park is one of the largest continuous protected areas of species-rich broadleaved forest and other deciduous forest in northern Europe. *Picea abies*, a foreign tree-species in this region, has together with other foreign tree-species been planted here since the beginning of the last century. When the national park was founded, much spruce had also been felled and left behind wide open clearcut areas with wavy hair grass *Deschampsia flexuosa* or dense brushwood of *Betula pendula.*
The overall objective was to take initial measures to rehabilitate former and present stands of Norway spruce to semi-natural deciduous forest, mainly broadleaved.

Results

Over 258ha were planted with over 510 000 plants of *Fagus sylvatica*, *Quercus robur*, *Q. petraea*, *Fraxinus excelsior*, *Carpinus betulus*, *Acer platanoides*, *Tilia cordata* and *Prunus avium*. All planted areas were fenced against browsing game with approximately 50 km of fencing. Natural regeneration was an important method for several tree-species. Soil scarification was used in 80ha to enhance planting result in very grassy areas. After four years, overall plant survival was over 80% and after six years most oak plants had reached over 4 meters high. Spruce stands were reduced from 126 ha to 80 ha, the remaining to be successively cut over 20 years, in order to facilitate natural regeneration within stands. In 700 ha, seed-dispersed spruce was cut down. Information and experience exchange was an important part of the project, in order to broadly disseminate project achievements.
It is estimated that in about 75 % of the project area (805 ha), it is likely that 9110 *Luzulo-Fagetum* beech forests, 9130 *Asperulo-Fagetum* beech forests and 9170 *Galio-Carpinetum* oak-hornbeam will establish. In about 1% of the area (9ha), it is likely that 9180 **Tilio-acerion* forests of slopes, screes and ravines will establish. In about 11% of the area (116 ha), it is likely that 91E0 *Residual alluvial forests, and 9080 *Fennoscandian deciduous swamp wood will establish.

Conclusions

The project must be seen as a great success within most actions and subactions, both practical achievements in the forest, project management and dissemination of results. The high interest from other parties and the monitoring results are regarded as some indicators of this success. The key factor was the adaptive management conducted in reaching goals and objectives. Managing nature and forests is connected with uncertainty which must be dealt with and you have to change plans according to changing conditions in reality.
Project success depends also on its good members of the staff, and an important factor for success is to recruit skilled people with wide, but also different competence, both practical and theoretical forest knowledge as well as administrative.

The forest with *Pinus nigra banatica* part of Natura 2000 (LIFE04 NAT/ RO/000225)

Mr. Ilie Chincea

Duration: 01/07/2004 - 01/07/2007
Budget: 814.770 € (EC co-financing 75 %)
Beneficiary: Environment Protection Agency Caras Severin
Contact: Mr. Ilie CHINCEA ilie.chincea@apmcs.ro

Background and aims

- Long-term conservation of sub-Mediterranean forests with *Pinus Nigra Banatica* and its designation as Site of Community Importance under Directive 92/43/EEC.
- Establishing the scientific background.
- Assessing the impact of human activities.
- Development the site's integrated monitoring system and management plan.
- Preparing the document qualifying the site to Natura 2000 Network.
- Working out the model for the future site administration.
- Ecological reconstruction of heavily damaged by fire area.
- Rising public awareness.

Results

- Report on the assessment of the natural habitats conservation status, of the wild flora and fauna species conservation status, of the anthropogenic and natural impact on the site
- Ecological reconstruction of 25 ha forest ruined by fire
- Database according to the Natura 2000 Network procedure.
- Site management plan
- Site integrated monitoring network
- Fire prevention and intervention system
- The Festival „Banat Black Pine"
- Visitors and Tourist Information Centre
- Web site: www.pinusnigrabanatica.ro
- Set of informational/educational materials
- Site warding and protection system
- Waste management system
- New and rehabilitated structures and facilities for tourism development
- Set of maps on habitats, wildlife species and tourism paths

Conclusions

By declaring as Site of Community Importance the forests with *Pinus Nigra Banatica* are given the opportunity for long tem conservation. Life Nature Programme provided vital support to reach this goal. A lot of promotional activities roused public awareness and support to the concept of Natura 2000 Network. The interdisciplinary assessment of the site enriched the scientific knowledge of the area. The ecological reconstruction approach provided us an integrated model affordable to reply to other sites. The partnerships developed during the implementing period proved as lasting ones and generated networking cooperation of the entities involved into the project.

Conservation and management of Danube floodplain forests (LIFE03 NAT/SK/000097)

Mr. Tomáš Kušík

Duration: 01/09/2003 - 31/03/2007
Budget: 570.000 € (EC co-financing 65 %)
Beneficiary: Regional Association for Nature Conservation and Sustainable Development - BROZ
Contact: Tomáš Kušík kusik@broz.sk
www.dunaj.broz.sk

Background and aims

System of river branches, oxbows and forests along the Slovak section of the Danube River represents the largest inland delta in Europe – formerly jungle full of life of fishes, amphibians, insects and paradise for birds. Human impacts, such as river regulations and intensive forestry caused direct clearance of thousands hectares of floodplain forests and in a few decades rapidly changed the Danubian landscape. Unique and diverse natural forests have been destroyed and replaced by monocultures of only one species – non-native hybrid poplar, planted for maximal wood production. Last refuges of the rare species of fauna and flora were endangered.

Project objective was to preserve last remaining natural floodplain forests in Slovak part of the Danube floodplain, to halt loss of natural forests habitats by forestry and to introduce sound, sustainable forest management in the area by number of project actions.

Results

Some of the main project actions and their achievements:

- **New Forests management plans** have been elaborated and approved, covering the whole project site. Most of the principal nature conservation requirements have been accepted in these binding plans. Plans include also softer forest management methods, slight increase of the size of natural forest habitats or leaving most valuable forests stands with "no management". Leaving of individual standing trees on the clearcut plots is no more rarity, as it used to be in the recent past.
- Two new nature reserves have been designated and one existing nature reserve has been significantly enlarged with total size of 2086ha.
- Thank to successful **purchase and long term lease of land** BROZ has under total control 330 ha of the land in Danube floodplains (30 ha in ownership, 300 ha leased for 25- 30 years). Ownership and management of the land by nature conservation organisation gives the best possibility and guarantee to apply conservation measures, including "no management" without conflicts with landowners and continuous compensations.
- **Elimination** by selective cutting **of invasive tree species** especially A*cer negundo, Ailanthus altissima, Fraxinus americana Fraxinus pensylvanica* have been performed on the total area of 430 ha.

Conclusions

Due to successful project implementation, it is not legally possible to decrease the area of natural floodplain forests by forestry activities anymore. Forestry in Danube floodplains should no more cause loss of natural habitats. Project has established partner dialogue and cooperation between foresters and nature conservationists, continuing also after the end of this project.

Rehabilitation of coppice Quercus frainetto woods (9280) and Quercus ilex woods (9340) to high forests (LIFE03 NAT/GR/000093)

Mr. Christos Georgiadis

Duration: 01/10/2003 - 31/12/2007
Budget: 1.942.100 € (EC co-financing 50 %)
Beneficiary: Holly Community of Mount Athos
Contact: Mr Grigorios Grigoriatis, Mr Christos Georgiadis cg@baconsult.gr

Background and aims

In 2003, the EC has approved the pilot application of thinning inventions in high forests of Hungarian Oak (Quercus frainetto) and Holm Oak (Quercus ilex). The project's budget was 1.942.100 € (50% EC co-funding), the final beneficiary was the Holy Mount Community of Agion Oros and project partner the Hellenic Biotope - Wetland Centre.
During last century due to inappropriate management of the forests in the Mount Athos the two habitats were downgraded and are in need of rehabilitation to high forests. However, the forests of Athos peninsula are of the best conservated forests of the Mediterranean Basin, and their flora is as downgraded as other Mediterranean forests.
The aim of this project is the rehabilitation of ecotopes of coppice Quercus frainetto (Hungarian Oak) (9280) and Quercus ilex (Holm Oak) (9340) to high forest. The rehabilitation to high forest will increase the biodiversity with the aid of the diversity of the understorey and with the increase of structural diversity of the forest. The re-establishment will decrease also the danger of fire in these ecotopes in the Mount Athos.

Results

Rehabilitation of these habitats to their natural condition prior to the end of the 19th century.
Creation of conditions for the long-term ecological but also economic assessment of the application.
Contribution to the achievement of an almost perfect state that can serve as a benchmark for this type of forest all around the Mediterranean basin.
Improvement of the structure of the forests and increasing of biodiversity.
During the implementation of the project the experts have realized that only a part of the Athos peninsula had been included in the NATURA 2000 network. Based on this conclusion there has been an effort for the incorporation of the whole peninsula in the network.

Conclusions

The project has focused attention on the high cost of thinning operations, which cannot be recovered from the sale of forest products as is the case with other forestry operations. So, in order to implement the specific rehabilitation methodology in similar downgraded Mediterranean ecosystems, authorities have to pay for this extra cost.

Conservation and Restoration of Aiako Harria SCI (LIFE05 NAT/E/000067)

Mr. Ibai Portu

Duration: 01/10/2005 - 30/09/2009
Budget: 2.260.318 € (EC co-financing 50 %)
Beneficiary: General Directorate for Woodlands and the Natural Environment
Gipuzkoa Provincial Council (Basque Country, Spain)
Contact: Inma Lizaso (ilizaso@gipuzkoa.net); Ibai Portu (iportu@ikt.es)

Background and aims

The "Aiako Harria" SCI (ES2120016), occupying a total area of 70 km², is located in the north-eastern of the Basque Country (Gipuzkoa Province). Public ownership is predominant and accounts for 83.2% of the surface area. The Aiako Harria LIFE project includes 41 actions, most of them distributed all around the SCI, which makes management and coordination laborious. The two main aims of the LIFE project are the conservation and restoration of three targeted forest habitat types **(**Atlantic acidophilus beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer *(9120),* Galicio-Portuguese oak woods with *Quercus robur* and *Quercus pyrenaica* (9230) and Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* (*91EO) with the related coleopterous targeted species *Rosalia alpina*, *Lucanus cervus*, *Osmoderma eremita* and *Cerambyx cerdo*) and the improvement of the fluvial habitats of Añarbe river to increase the population of aquatic rare mammals *Mustela lutreola* and *Galemys pyrenaicus*, of the bracken *Trichomanes speciosum* and of the endangered plant *Soldanella villosa*.

Results

In pollarded beech forest, after the fencing of the area because of grazing, and the adding of dead wood (logs and snags) or the ringing of some trees, the monitoring surveys are showing that an increase of biodiversity is happening, specially in which refers to invertebrates. On the other hand, fencing allowed a great natural beech regeneration in 2006.
In the fluvial habitats, the adding of large wood in different conditions, simulating hydraulic structures solved important problems (the decline of endangered aquatic species, the large inputs of sediments and leaf litter accumulated in the mouth of the rivers, just in the back end of the reservoir, which deteriorates the quality of water).

Conclusions

In the beech forests, the results have been spectaculars and we have seen that such an old forest is able to produce natural regeneration.
In the fluvial habitats, changes in invertebrate communities, in fish numbers, in fish size structure and in fish productivity happened, however, it may be too early to assure that positive effects in targeted species have occurred. About the wood addition in the fluvial habitats, the conclusions could be resumed as follows: Wood addition increases channel complexity, there have been immediate responses in retention and habitat characteristics, structures remain stable in small streams, but have been rearranged in large streams; adding wood is not the solution to reservoir colmatation, but points in the right direction.

Mr. Tor-Björn Larsson

Mr. Tor-Björn Larsson, forester is Project manager of the programme "Forest and Biodiversity" at the European Environment Agency, Biodiversity and Ecosystems Unit. His duties are the assessments of European forest biodiversity, including indicator development, the development of indicators and early warning related to invasive alien species, the support to forest and other issues in relation to the Convention on Biological Diversity and the 2010 biodiversity target, the support to European forest processes e.g. the Ministerial Process on Protection of Forest in Europe, Forest Focus/ICP Forest, to maintain contacts to the forest and biodiversity related research community (incl. EC DG Research and EC DG JRC) and to contribute with respect to forest and biodiversity & invasive alien species issues to EEA specific comprehensive assessments.

Mr. Gianluca Piovesan

Mr Gianluca Piovesan, forester, is associate professor of Dendrology and Ecological Forest-Landscape Management at the Università della Tuscia, Viterbo (Italy); he is also director of the Ph.D. School in "Sciences and technologies for forest and environment management" and of the DendrologyLab. He specializes in the application of tree-ring science to the study of bioclimate and forest dynamics, and has additional experience and interests in old-growth forests and nature conservation. He discovered and has been studying for several years some of the oldest hardwood deciduous forest in the Northern Hemisphere (old-growth beech stands with 400-500 year-old trees). He has approximately 80 publications and conference presentations describing results from his research projects.

Mr. Daniel Vallauri

Mr. Daniel Vallauri, forester, worked in Switzerland (9 months), Malaysia (CIRAD/Yayasan Sabah, 16 months), Madagascar and South Africa. At the present he is project manager of two programmes of WWF-France «Forêt vivantes» and «Restauration des forêts». His duties include the analysis of the knowledge gaps and proposal of a national network of protected forested areas in France, with special attention to the Mediterranean Ecoregion; the development of the WWF pan European forest programme; the strengthening of key indicators for a "close to nature" management of the productive forests; the organization of international meetings; the development of the international strategy on the ecological restoration of the degraded forests (URL http://www.wwf.fr/s_informer/nos_missions/forets/restaurer_des_forets_degradees); the technical support to the European project "REACTION" (for details, see the project Web site http://www.gva.es/ceam/reaction/).

Important Bird Areas for seabirds (marine IBAs) in Spain (LIFE04 NAT/ES/000049)

Mr. José Manuel Arcos

Duration: 01/10/2004 - 28/02/2009
Budget: 1.091.911 € (EC co-financing 71.4%)
Beneficiary: SEO/BirdLife
Contact: José Manuel Arcos jmarcos@seo.org

Background and aims

The Important Bird Areas (IBA) Programme of BirdLife International seeks to identify a network of key sites for the conservation of birds worldwide. In Europe, around 4000 IBAs have been identified and used as a reference for the designation of Special Protection Areas (SPAs) within the Natura 2000 network. However, efforts have been focused mainly on terrestrial habitats, and the marine environment has been largely disregarded. Taking advantage of the increasing number of opportunities to conduct surveys at sea, together with recent improvements in tracking technologies and analytical tools, this LIFE project aims to create a comprehensive marine IBAs inventory in Spain, including open sea areas. Together with similar work in Portugal (supported by a sister LIFE Project run by SPEA), this will be the first complete national inventory of marine IBAs in the world. The ultimate aim of the project is to contribute to the designation of the Natura 2000 network regarding seabirds.

Results

The results of the project can be discussed in the context of the three main steps in the marine IBA identification process:

(1) Data collection. Fieldwork has focused on two main actions: surveys at sea and remote tracking. Surveys have covered the whole of the Spanish EEZ waters, totalling over 30,000 km of effective census. Remote tracking (satellite transmitters and GPS-loggers) has been directed at Cory's shearwater (130 birds) and Audouin's gull (23 birds), in both cases using novel approaches for these medium-sized seabirds.
(2) Data analysis, integration and delineation of candidate areas. The main innovation in this phase has been the development of habitat models to refine the identification of key areas and to understand why these areas are significant for seabirds.
(3) Application of IBA criteria. The existing IBA criteria for terrestrial habitats (basically species-specific numerical thresholds) have been adapted to the marine environment, and then applied to the candidate marine IBAs to validate (or disregard) them.

Conclusions

Results of the project are promising, and go beyond the expected outcomes. Indeed, in addition to the preparation of a thorough inventory of marine IBAs for Spain, the project has contributed to the development of methodological guidelines that will allow the identification of marine IBAs worldwide (also applicable to marine SPAs within the European context), with the support of BirdLife International. The success of this experience has already prompted other countries to follow it, both in Europe (enjoying LIFE+ funds) and elsewhere. In Spain, the next step will be to achieve the integration of the marine IBAs into the Natura 2000 network. To that end, SEO/BirdLife will participate in the LIFE+ Project *Inventory and designation of marine Natura 2000 areas in the Spanish sea* (2009-2013), with the particular aim of developing management plans for the future SPAs.

Small Cetaceans in the European Atlantic and North Sea (LIFE04 NAT/GB/000245)

Dr. Kelly Macleod

Duration: 01/04/2004 - 31/12/2006
Budget: 3.11M € (EC co-financing 49.39 %)
Beneficiary: University of St Andrews
Contact: Prof. Philip Hammond psh2@st-andrews.ac.uk

Background and aims

Cetacean bycatch in fisheries is a worldwide problem. The species most affected in European Atlantic waters are the harbour porpoise, Phocoena phocoena, in bottom set gillnets and the common dolphin, Delphinus delphis, in pelagic trawls. There are three major constraints to assessing the current impact of bycatch on small cetaceans: the lack of recent abundance estimates; a management framework for setting safe bycatch limits; and well-developed, cost-effective methods for monitoring populations. The SCANS-II project aimed to provide this information by generating:

- Robust estimates of abundance for small cetaceans in the North Sea and European Atlantic;
- Recommendations for methods for monitoring abundance between major decadal surveys; and
- A management framework to determine safe limits to bycatch.

Results

A major ship and aerial survey for small cetaceans in the North Sea and European Atlantic continental shelf waters was carried out in July 2005. Visual and acoustic survey data were collected during encounters with 13 cetacean species. Unbiased estimates of abundance for harbour porpoise, bottlenose (Tursiops truncatus), common and white-beaked (Lagenorhynchus albirostris) dolphin and minke whale (Balaenoptera acutorostrata) were calculated and compared with previous estimates from a SCANS project in 1994. Total abundance of harbour porpoise in the North Sea and adjacent waters had not changed in 2005 but the distribution had, with densities lower in the north and higher in the south.

Monitoring methods were reviewed, tested, further developed and finally compared using power analysis and cost-benefit analysis. Recommendations for best monitoring methods were produced together with a protocol to make this evaluation in specific circumstances.

A robust framework to determine safe limits to small cetacean bycatch was developed. Simulation models were used to test candidate management procedures under various scenarios on a population model approximating the dynamics and status of the harbour porpoise. Example safe bycatch limits for harbour porpoise were generated for SCANS-II survey blocks.

Conclusions

The results of the SCANS-II project enable Member States to report on Favourable Conservation Status for cetaceans. Some key policy decisions are needed in order to move forward with respect to setting and implementing safe bycatch limits for harbour porpoise. Effective monitoring of cetaceans also requires a coordinated approach between Member States. A meeting of key Ministerial representatives should be convened to initiate this.

Limitation to the negative interactions between dolphins and human activities (LIFE03 NAT/F/000104)

Mr. Denis Ody

Duration: 01/11/2003 - 31/05/2007
Budget: 1.399.166 € (EC co-financing 50%)
Beneficiary: WWF France
Contact: Denis Ody dody@wwf.fr

Background and aims

The Life LINDA programme, which ran from 2003 to 2007 and aimed to develop sustainable fishing and yachting practices, brought together environmental protection actors, socio-economic representatives, tourists and pleasure boaters as well as local populations.

Results

Bottlenose dolphin populations were monitored on three survey sites (Saint-Florent, Porto-Galeria, Bouches de Bonifacio) which contributed to improved knowledge on species ecology: 225 Bottlenose dolphins were observed of which 117 were pictured and recognizable. The survey showed in particular that Bottlenose dolphins may move across wide-ranging spaces, without any particular relation between preferred habitats and fishing grounds.

Fishing activity monitoring confirmed that Bottlenose dolphins attack one fishing line out of ten on average, depending on area and time of year. Moreover, Bottlenose dolphin predation on fishing lines does not modify production significantly. It does, however, have a significant impact on fishing line wear: a score of attacks causes such damage that that fishing line effectiveness drops by a third and necessitates its replacement. Losses over a season are estimated to amount to two sets of lines. Bench tests have shown that switching from twenty-four-hour to twelve-hour hauls and using not only larger meshes but also bottom lines constitute sustainable and financially viable alternatives.

Yachting traffic reaches critical levels at times during the summer season, with more than one boat a minute in the Bouches de Bonifacio sector at midday. Yachting and the out-of-bounds whale watching often linked to it have a significant impact on Bottlenose dolphin population. It is important to follow up the development of such activities in order to draw up, if need be, appropriate regulation. Significant awareness-raising campaigns were launched within the Life LINDA framework. A specifically designed educational kit helped to stage numerous activities with school children, whether in the classroom or during outings. Thus more than 10 000 people were informed, of which a great majority were children. During the three summers through which the programme ran, eco-volunteers talked to as many as 14 000 pleasure boaters about what to do when faced with marine mammals. The making and broadcasting of a 26-minute-long film, the holding of a score of conferences and the setting up of the Internet site www.lifelinda.org added to the communication of the programme.

Conclusions

While the Life LINDA programme may not have led to finding the conclusive stratagem to prevent fishing line predation by dolphins, it has certainly contributed to calming down the situation and laid down the basis for a sustainable cohabitation between men and Bottlenose dolphins.

MOFI: Monk seal and fisheries: Mitigating the conflict in greek seas (LIFE05 NAT/GR/000083)

Ms. Stella Adamandopoulou

Duration: 01/07/2005 - 30/06/2009
Budget: 1.564.735 € (EC co-financing 60 %)
Beneficiary: MOm /Hellenic Society for the Study and Protection of the Monk Seal
Contact: Dr Spyros Kotomatas info@mom.gr

Background and aims

The Mediterranean monk seal Monachus monachus is the rarest seal species. In historical records the species was considered to be abundant, however, its current distribution is patchy and only fragmentary populations still remain. Based on available data, the largest population of the species in the world lives and breeds within the Greek waters. The Greek seal population represents approximately 90% of the total number of individuals of the species living in European coasts.
The main threats that the species faces nowadays include habitat deterioration and loss, deliberate killing by fishermen, who consider the animal a pest that damages their nets and steals their fish, accidental entanglement in fishing gear, decreased food availability due to over-fishing pressures and disease outbreaks.

Results

In 1996, a National Strategy for the conservation of the species in Greece was developed. Based on this strategy, key means, "tools" of highest priority, for the effective conservation of the species, were the establishment and effective management of special areas of conservation and the reduction of human-caused mortality, always accompanied by public awareness campaigns. Mom, in collaboration with other local non-governmental organizations, local stakeholders and policy makers and with the contribution of the LIFE Programme has for more than a decade been implementing the National Strategy for the Conservation of the Mediterranean monk seal in Greece.
Through a variety of activities and conservation projects (including three projects funded by LIFE-Nature), MOm has managed to implement a range of conversation measures aimed at protecting the Mediterranean monk seal, including the identification of new important conservation areas and the provision of support for the designation of these area, the acquisition of new scientific data ion the species, the rescue and rehabilitation of stranded animals, and the raising of public and stakeholder awareness, particularly within the fishing community..

Conclusions

Through the implementation of these projects many lessons have been learnt and much best practice developed that will be shared at the conference. These include the necessity of local field teams, the requirement for political will at all levels, the need for long-term planning of conservation activities, the importance of targeting a wide-range of stakeholders, particularly children, and most of all the need for conservationists to operate with transparency, patience and devotion to the principles and ethics of conservation.

Marine Protected Areas in the Eastern Baltic Sea (LIFE05 NAT/LV/000100)

Ms. Heidrun Fammler

Duration: 01/08/2005 - 31/07/2009
Budget: 3.111.316 € (EC co-financing 50 %)
Beneficiary: Baltic Environmental Forum Latvia
Contact: Ms. Heidrun Fammler heidrun.fammler@bef.lv

Background and aims

The project contributes to the overall objective of protection and sustainable use of marine biodiversity in the Eastern Baltic Sea. The establishment of Natura 2000 sites in the waters of Estonia, Latvia and Lithuania is a key instrument to reach the objective and therefore the main goal of the LIFE project.
Due to the very limited availability of information on distribution and abundance of different marine species and habitats, there is a lack of effective protection of marine areas. Consequently there is also a lack of methodological expertise concerning selection, protection, management and monitoring of marine protected areas in the Eastern Baltic Sea – these aspects were the main motivation for the design the LIFE project and its actions.
The project has defined 13 sites along the coast of EE, LV and LT as its "project areas" – these being either extensions of nominated sites (aimed at revision of boundaries), larger complexes of small nominated sites or sites potentially to be nominated (Latvia).

Results

The project will result in Natura 2000 site designation for the project areas if found suitable. Detailed knowledge on species/habitats and an understanding of the threats to marine Natura 2000 sites in the Baltic States will lead to a series of well-prepared management plans for selected sites.
Alternative measures to reduce fishery by-catch of protected species will have been tested, promoted and a large number of fishermen will have started to implement them – consequently acceptance of nature conservation targets will have grown among them.
At the end of the project increased capacity and awareness of a large number of experts, stakeholders and the general public on all aspects of conservation of marine Natura 2000 sites will have been achieved in the three Baltic States and an added value for Natura 2000 implementation in marine areas in the whole EU will have been gained.

Conclusions

The overall project implementation process is going very well, the team is highly motivated and all partners contribute to the success. So far no actions have had to be revised – most of assumptions or defined action needs have proved to be true and first results from implementation show that a lot of efforts are needed to establish a well-managed system of Marine protected areas, which without LIFE funds could not have started in such a comprehensive way.
In its last year of implementation the project concludes that time is short, but the results will be reached.

Conservation of cetaceans and sea turtles in Murcia and Andalusia (LIFE02 NAT/E/008610)

Mr. Ricardo Sagarminaga van Buiten

Duration: 01/07/2002 - 31/07/2006
Budget: 2.897.515 € (EC co-financing 50 %)
Beneficiary: Sociedad Española de Cetáceos (SEC)
Contact: Ricardo Sagarminaga van Buiten ricardo@alnitak.info

Background and aims

In 2002, monitoring of cetaceans, sea birds and sea turtles since 1990 had highlighted the special relevance of the Alboran Sea as a hot spot for biodiversity. In order to provide a follow up to this work, a LIFE Nature project was designed by SEC to focus on:

- The optimisation of Alboran's representation in Natura 2000 and the development of management plans and conservation plan proposals for the sites and species (*Tursiops truncatus*, *Phocoena phocoena* and *Caretta caretta*).
- The development of innovative cost efficient monitoring tools for N2K at sea.
- The involvement of stakeholders in Natura 2000 in Alboran.

Results

For the core action of the project, dealing with the development of management and conservation plans, the LIFE team counted on the support of an international external scientific committee. During the management process all relevant stakeholders were actively involved in order to find consensus. Stakeholder involvement varied from relatively simple negotiations based on a top down approach for actions dealing with maritime traffic and the mitigation of acoustic pollution, to a more complicated and time consuming process focusing on coastal fisheries with regards to actions dealing with problems of bycatch and depredation.
For the latter, a fleet of three classic fishing vessels was used as an itinerant meeting place, conference and classroom. Over 1600 meetings were held during the project, including official meetings with relevant authorities, one-to-one meetings with fishermen, sectoral meetings, interviews in ports and experimental fishing campaigns, talks in coastal community schools, volunteering projects and technical workshops.
Deriving from the management process, a variety of monitoring tools were designed and tested in order to tackle the economic and logistic challenge of monitoring marine pelagic species. The main outcome of this part of the project was the development of a spatial modelling tool for completing the scientific baseline for management.

Conclusions

Since the end of the project the innovative spatial modelling tools have been improved and exported at a regional level for designing marine protected areas and developing risk zoning maps for the fisheries, defence and transport sectors.
The stakeholder involvement process was used as a model for a guidance document created in the framework of OSPAR. Positive momentum created by the Life project was provided with the regards to the fisheries, transport and defence sectors. Unfortunately despite the interest from many teachers and teachers unions, the continuity of the SEC education project has not yet been possible. Despite the lack of official implementation of the management and conservation plans, the positive momentum of stakeholder involvement has enabled several of the top priority actions of these plans to be developed.

Euan Dunn

Dr Euan Dunn is Head of Marine Policy at the RSPB which is Europe's largest wildlife conservation charity and UK Partner of BirdLife International. He is also on the Executive Committee of the North Sea RAC. His main focus is environmental reform of the CFP.

Ilona Jepsena

Ilona Jepsena is currently working at DG MARE, leading the unit for Research and scientific data collection. Between 2004 and 2007 she was working for the DG ENV Nature and biodiversity unit. Mrs Jepsena has worked for nature conservation in Latvia as scientist at the institute of Biology and from 1993 to 2004 for national nature protection administration. She was directly involved in the designation of Natura 2000 network sites and in the implementation of the first LIFE Nature projects in Latvia. She has been the national focal points for CBD, Bern, Ramsar, Bonn conventions, member of CBDs bureau and president of the Bern conventions Standing Committee.

Mark Tasker

Mark Tasker is Head of Marine Advice at the Joint Nature Conservation Committee, based in Aberdeen, Scotland. He also works for ICES, is the immediate past chair of ASCOBANS and advises widely on the interaction of human activities within the marine ecosystem.

Restoration and management of the alluvial flood plain of the River Danube (LIFE98 NAT/A/005422)

Duration: 01/07/1998 - 30/06/2002
Budget: 2.852.834 € (EC co-financing 50 %)

Restoration of Danube river banks (LIFE02 NAT/A/008518)

Mr. Carl Manzano

Duration: 01/07/2002 - 30/06/2006
Budget: 1.777.750 € (EC co-financing 50 %)

Beneficiary: Nationalpark Donau-Auen GmbH
Contact: Carl Manzano nationalpark@donauauen.at

Background and aims

Donau-Auen National Park covers the last big alluvial floodplain along a not dammed stretch of the Austrian Danube. Yet river regulation in the late 19h century has substantially reduced hydromorphological dynamics with a severe impact on the ecosystem, aggravating over time. To secure and restore riverine habitats and to improve the lateral river-floodplain connectivity a set of measures had been conceived by biologists and river engineers. The implementation of pilot projects should prove that such measures are effective and compatible with the requirements of navigation and the existing flood protection scheme.

Results

In the first Life-Project two larger side arm systems where reconnected to the main river by removing all dams and barriers dating from the regulation. In the second Life project 2,9 km of "hard" river bank enforcement was removed to allow full lateral bank erosion, a measure never before realised on a large European navigation route. Changes in river morphology were impressive and endangered species – e.g. Charadrius dubius (Flussregenpfeifer) & Actitis hyploeucos - reacted promptly to habitat change. The projects fostered a successful partnership between National Park Administration and Danube Waterway Authority who commonly planned, implemented and monitored the works. The experience gained by the pilot project was essential for the design of a new general engineering project for the whole National park area combining improvements of navigation with large scale reconnection of side arms and 36 km removal of river bank enforcement.

Conclusions

1. Even on a major international navigation route like the Austrian Danube there is a surprisingly high potential for river revitalisation.
2. The actual physical implementation of pilot projects in a step-to-step approach is the best key to change sceptical attitudes of experts, authorities, stakeholders and the general public.
3. Life Funding allowed the National Park to act on an eye-to-eye-level with Waterway Authority and thus establish a lasting partnership.

Optimisation of the Lippe flood plain between Hangfort and Hamm (LIFE05 NAT/D/000057)

Mr. Oliver Schmidt

Duration: 08/01/2005 - 28/02/2010
Budget: 5.514.594 €
Beneficiary: Stadt Hamm, Umweltamt
Contact: Dipl.-Landschaftsökologe Oliver Schmidt-Formann schmidtformann@stadt.hamm.de

Background and aims

Commercial demands on the Lippe meadows continuously increased during the last century. The river Lippe was straightened in sections and most of the banks were reinforced with rock beddings. This resulted in a deepening of the riverbed, a lowering of the surrounding water levels and in connection with man-made embankments an associated isolation of river and flood plain. In addition, melioration measures and the construction of drainage ditches in the meadows resulted in widespread changes to the water balance.

Results

In order to optimise the project area, the following measures have started:

- Purchase of areas which are presently agricultural used
- Opening of embankments on the river Lippe
- Removing of bank reinforcements
- Closing of drainage ditches
- Building of standing water bodies
- Founding of new forests by initial planting and self propagation
- Building of a free passage bypass for migrating organisms
- Management of visitors and public relations

As a result of these measures 110 ha of floodplain will be subject of regular flooding. This will lead to an increase in natural euthropic lakes (+72%) and alluvial forests (+98%), lowland hay meadows (+37%) hydrophilous tall herb fringe communities of plains (+25%) and water courses of plain levels (+3%).

Conclusions

First it was very important to involve the relevant stakeholders at a very early stage, such as landowners, tenants, fisher etc. through consultations on a face-to-face basis, even prior to the submission of the application. By this way all the main affected groups in the region and the representatives of public concerns are supporters of the project, which is the main preconditions that the planned measures will be realised fully, effectively, punctual and – moreover – socially acceptable.

The project implementation is based on the "principle of partial floodplain". The project area consists of 5 sections of the floodplain which are hydrologically defined. During smaller flooding events, the water is flowing through the floodplain sections without other areas being affected by the flooding due to the morphology of the floodplain section. This means that the reactivating of one floodplain section can be achieved without affecting the property of third persons on neighbouring sections.

The principle to concentrate the restoration activities to specific sections of the floodplain in order to create habitats of high ecological value is a crucial strategy of this project. This approach could be also an instrument to achieve a good qualitative and quantitative status of all water bodies in terms of the EU Water Framework Directive.

Conservation of the habitats created by the dynamics of the river Ain (LIFE02 NAT/F/008482)

Ms. Céline Thicoïpé

Duration: 01/07/2002 - 31/12/2006
Budget: 1.700.000 € (EC co-financing 50 %)
Beneficiary: Syndicat de la Basse Vallée de l'Ain
Contact: Céline Thicoïpé sbva-cthicoipe@orange.fr

Background and aims

Fluvial dynamics have created habitats of Community interest in the Lower Ain Valley, such as aquatic and forest habitats, wetlands and dry alluvial grasslands, which cover half of the surface of River Ain's floodplain. The main objectives of the project were to allow the river to continue creating and sustaining wetlands and to convince local inhabitants to commit themselves to preserving the relict habitats (dry grasslands, forest).

Results

The River Ain LIFE Nature project proved and consolidated the community interest for the site and enabled the beneficiary to better share knowledge among the stakeholders of the territory. They attended all organized events in numbers. The main threat that was identified was the propagation of the bed river incision (500 m/year), which consequently reoriented the priorities of restoration, pioneering habitats, old branches and alluvial forest management, not only in the course of project implementation, but during the following years. After testing different restoration techniques, dry grasslands were placed at local breeders' disposal in order to contribute to their restoration and to their maintenance. Additionally, this gave an economical value to the site. Local stakeholders benefited from a partnership between water managers and natural land managers; all of them had the opportunity to exchange views during experimental actions carried out concurrently with the definition of the site's management plan. Some proved to be innovative, such as sediment recharge operations; others were the result of original approaches to stakeholders participation and of drawing up documents which led to the development of technical guides. Convinced of the heritage value and of the interest of the Natura 2000 site management, stakeholders decided to extend it to over a third of the site's surface, and this they successfully carried out.

Conclusions

Overall, the River Ain LIFE Nature project achieved and indeed exceeded its objectives, according to its schedule and to the initial technical and financial specifications. It fully played its role as a catalyst to enable local stakeholders to undertake site management. Two years after the end of the project, water management and natural land management tools are still very much in use: this includes working together on implementing the management plan, restoring old branches of the river, raising awareness of forestry owners, grazing grasslands, watching over the site. Thanks to the project, a regional nature reserve is now up and running.

Conservation of Atlantic Salmon in Scotland (CASS) (LIFE04 NAT/GB/000250)

Mr. Andrew Wallace

Duration: 01/02/2004 - 31/07/2008
Budget: 5.745.798 € (EC co-financing 39.82 %)
Beneficiary: Scottish Natural Heritage
Contact: Andrew Wallace a.r.wallace@btinternet.com

Background and aims

The overall aim of the project was to safeguard and maintain the abundance and diversity of Atlantic salmon (Salmo salar) in Scotland by improving freshwater habitats, developing management guidelines, and demonstrating best practice in the removal of key threats. The project was conducted on 8 major Scottish salmon river SACs and the total project budget approved by the Commission was €5,745,798. The formal beneficiary for the project was Scottish Natural Heritage, the agency responsible for providing advice on nature and habitat matters to Scottish Ministers. The project is the UK's largest and most complex LIFE Nature project.

Results

The following were the key outputs of the project (percentage attainment in brackets).

- Purchase of 7 netting stations on 2 rivers (86%)
- Modification of 25 obstructions to fish passage resulting in 187 km of extra salmon habitat (88%)
- Improvement of 39060 m² of juvenile salmon habitat (180%)
- Restocking on two rivers (100%)
- Grazing control over 52 km of river bank (100%)
- Stabilization of 500 m of eroding river bank. Installation of 60 silt traps (64%)
- Diversification of riparian woodland on 4 rivers (92%)
- Generic guidance on gravel extraction (100%)

Raise awareness of Natura and salmon conservation (ongoing)

Conclusions

The CASS Project has delivered a number of significant salmon conservation objectives and has enabled a wide range of partners to develop greater expertise in several areas. These include gaining a greater understanding of technical issues and developing the necessary expertise – for example fish pass installation, riparian work, in-stream work etc. The capacity for general awareness-raising of issues affecting salmon has increased through being able to disseminate a wide range of information at different levels to different recipients. Partners have developed valuable project management skills and the work to help salmon has a direct positive influence on populations of another Natura listed species - the freshwater pearl mussel - due to the symbiotic relationship between the two species. Benefits to the local economies are likely to accrue in the long term due to improvements of salmon stocks.

Central Posavina – Wading Toward Integrated Basin Management (LIFE05 TCY/CRO/000111)

Mr. Goran Gugić

Duration: 01/01/2006 - 31/12/2008
Budget: 766.925 € (EC co-financing 64,78 %)
Beneficiary: Lonjsko Polje Nature Park Public Service (LPNPPS)
Contact: Goran Gugić manager@pp-lonjsko-polje.hr

Background and aims

The Ramsar-site, IBA and potential SPA/SCI Lonjsko Polje Nature Park (510 km²) represents mainly palustrine-riverine wetlands located within the floodplains of the Middle Sava-river basin (Central Posavina, Croatia). It represents both the largest maintained inundation area of all the Danube-river catchment and the key facility of the flood control system of the entire Sava basin. The high-ranked species and habitat diversity is mainly caused by man-made landscape variety, traditional grazing activities with endangered autochthonous breeds and a natural micro-relief.

Results

LPNPPS has established and improved Ramsar´s wise use and integrated river basin management approach on Park and basin scale (1) by developing consultative processes and appropriate structures which involve the stakeholders by ensuring non-structural flood control methods which take advantage of the natural functions of wetlands to supplement or replace existing flood control infrastructure, (2) by developing a management planning process for the Park taking into account the wider context of Central Posavina, so as to ensure that the needs of the wetland are recognized and fully incorporated in this wider planning and management, (3) by providing support and tools for the effective implementation of the wetland-related traditional wise use activities to improve benefits for local people, (4) by providing the Park and its surroundings with a sustainable visitor management system, and (5) by improving the knowledge and skills of ranger staff on basic ecology, communication, interpretation and monitoring.

Conclusions

A combination of tools provided by EU-directives (NATURA 2000, Water Framework Directive), the Ramsar Convention («Critical path» approach) and the World Heritage Convention (Serial site approach) as well as the establishment of stakeholders committees on both the Park scale and central basin scale enabled LPNPPS to conduct a management planning process that fully incorporate the protected area in the wider context of the Sava basin ensuring the integrity of the floodplain ecosystem. Beside the planning process joint practical work with various stakeholders appears as a crucial management tool.

Life in Upper Drau River (LIFE06 NAT/A/000127)

Mr. Klaus Michor

Duration: 01/09/2006 - 31/08/2011
Budget: 3.828.262 € (EC co-financing 40 %)
Beneficiary: Bundeswasserbauverwaltung – Amt der Kärntner Landesregierung, Abteilung 18 - Wasserwirtschaft
Contact: Klaus Michor k.michor@revital-zt.com

Background and aims

The LIFE project "Life in Upper Drau" is continuing the successful measures in river revitalisation that were begun in the previous LIFE-project "Auenverbund Obere Drau" between 1999 and 2003.The efforts are focused on habitats that are typical of alpine rivers and their adjacent floodplains. The project has the following objectives:

- Extending the revitalisation measures on the Natura 2000 area, which has been enlarged by 470 hectares to a total of 977 hectares along a river section of 68,5 km.
- Defining innovative management solutions to solve the problems, that have been recognised, but not solved yet as part of the first LIFE project

The LIFE project will also propose – as required under the Water Framework Directive as well – cross-boarder strategies to solve water management tasks and ecological problems.

Results

At the end of the LIFE-project the following results will be achieved:

- Stabilised river bed and improved groundwater level as a prerequisite for the conservation of the floodplain forests
- Around 20 hectares of additional alpine river habitats including dynamic gravel banks, Tamarisk- and Willow pioneer communities and floodplain forests; improved spawning reserves for animal and plant species of community interest.
- Approximately 1 hectare of new water bodies in the floodplains as additional elements of the biotope system for amphibians amongst other species
- Exchange of experiences across borders, proposing the Upper Drau as a model for nature-orientated water management in the states bordering the Drau river
- 2 new visitor management zones and extensive information and education

Further improvement of acceptance of the Natura 2000 area through public relations efforts and economical stimulus

Conclusions

Since project start in September 2006 the river widening in Rosenheim and the project video have been completed. The homepage is operating at www.life-drau.at . Also a water adventure area with infopoint, platform and an access to the river was created and inaugurated.
The International Symposium „Drava River Vision" took place in Maribor, Slovenia on the 23rd and 24th of September 2008. It was intended as a meeting of officials, professionals and NGOs working on nature protection, water management, hydropower and land use planning, who work in Drava River riparian states, Italy, Austria, Slovenia, Croatia and Hungary. The final outcome of the symposium was a „Drava River Vision Declaration. This will provide a framework for nature protection, hydropower and water management institutions and individual professionals to effectively implement best practices and activities that will contribute to achieving the sustainability goals.

Bart Fokkens

Bart Fokkens is president of the European Centre for River Restoration (ECRR).
ECRR's mission is to enhance and promote ecological river restoration as an integral part of sustainable river management throughout Europe. This will be achieved by disseminating information on good practices of river restoration, by organizing conferences, study tours, workshops, and training courses to do this and by developing a database of good examples of river restoration projects and a toolkit for river restoration practices.
The ECRR illustrates and demonstrates the need for river and floodplain restoration in connection with the EU 6th Environment Action Programme, the Water Framework Directive, the Bird and HABITAT Directive and Natura2000, in which restoration and conservation of the biodiversity is given high priority.
For this purpose, the ECRR serves a network of about 2000 organisations, institutions and individuals. The Secretariat of the ECRR is at present with the Italian National River Restoration Centre (CIRF).
Bart Fokkens advises the Ministry for Water Management in the Netherlands on wetland restoration and management policies. He is the president of the Dutch National Union of Provincial Nature Conservation Organisations, with about 500 conservation sites covering a total of ca. 1000.000 ha managed by 12 member organisations from all the Dutch provinces and supported by 300.000 individual financial contributors.

Andreas Baumüller

Andreas Baumüller is the biodiversity policy officer of the WWF European Policy Office, based in Brussels. He joined WWF EPO in 2004 and is leading the work on biodiversity with one focus on financing biodiversity. Andreas has experience with LIFE projects when working in Austria for WWF (1995 * 2004).

Farming for Conservation in the Burren (LIFE04 NAT/IE/000125)

Dr. Brendan Dunford

Duration: 01/09/2004 - 31/08/2009
Budget: 2.230.487 € (EC co-financing 75%)
Beneficiary: National Parks and Wildlife Service (NPWS)
Contact: James O'Connell james_o'connell@environ.ie

Background and aims

The BurrenLIFE Project (BLP) is a 'farming for conservation' project based in the Burren region in Ireland's mid-west. The Burren contains a range of priority habitats, including limestone pavements and orchid-rich calcareous grasslands and wetland habitats such as Turloughs and Cladium fens. Its landscape is shaped by 6,000 years of farming, in particular traditional practices such as extensive winter grazing.
Over the past four decades, the Burren has suffered from major changes in farming practices which, though complex in origin and effect, may be summarised as intensification and specialisation on lowland areas, and marginalisation of upland areas, with significant encroachment of scrub. The objective of the BLP is to develop a new model for sustainable agriculture in the Burren in order to maintain priority habitats in a favourable conservation status.

Results

The BLP works very closely with 20 Burren farmers, farming 2,400ha of Natura 2000 land. On these farms, detailed farm management plans were developed with the farmer, and an agreed work programme was implemented and monitored by the 4-person project team in terms of the environmental, agricultural and socio-economic impacts. This information is absorbed into the compilation of a costed blueprint for sustainable agriculture in the Burren which will be relevant to over 500 farm families.
One key strategies of the BLP has been to adopt a practical, ground-up approach to the problems at hand. Most of its initiatives and ideas come from local farmers, who also carry out much of the work and reap most of the rewards, thereby improving levels of engagement.
One of the key successes of has been the development of a tailored 'concentrate' feed ration for outwintering cattle. This encourages increased foraging by cattle, thereby helping to maintain important habitats, while cutting down on the use of silage (by c.65%), which should also help improve water quality. Equally simple but innovative approaches to the provision of access and water have been piloted, while a range of measures for the removal of encroaching scrub over c.75ha have also been investigated with some success. A producers group has been set up to market conservation-grade meat and restore a sense of pride in production.

Conclusions

The BLP enjoys strong local support for its practical, inclusive approach. It has delivered a model of conservation which brought together disparate interest groups and created a new energy and awareness within the region. The challenge now will be to build on the momentum generated by this LIFE-Nature initiative in the Burren.

The Plateau-mountain Kinnekulle – restoration and conservation (LIFE02 NAT/S/008484)

Ms. Maria Thordarson

Duration: 01/11/2001 - 30/09/2007
Budget: 5.727.749 €
Beneficiary: County Administrative Board of Västra Götaland, Sweden
Contact: Maria Thordarson Maria.thordarson@o.lst.se

Background and aims

Kinnekulle is a plateau mountain in the southwest of Sweden. The varied geology, the mild climate and the influence from agriculture for more than a thousand years had created large areas of hay meadows and grasslands containing lots of ancient oaks and a rich plant and animal life. The modernisation of agriculture in the 1900´s resulted in ceased or insufficient management, overgrowth of bushes and trees and spruce plantations. Kinnekulle has seventeen different Natura 2000 habitats, mainly calcareous grasslands and wooded pastures but also forests. About 80 % had insufficient protection when the project started.
The project aimed to restore overgrown pastures and meadows, create the conditions for the long term management and conservation of Kinnekulle's habitats and species and make the countryside of Kinnekulle accessible for visitors - all in collaboration with the land owners and other interested parties.

Results

Measures shows that the numbers of Lanius collurio already have doubled in the restored grasslands. It also shows that several plants like different orchids, sandwort and thyme have re-established in a few years. Favourable conservation status for habitats were also achieved during the project. The immediate reintroduction of grazing after clearing was crucial for the good result. This was made possible by co-financing new stables for more cattle. The landowners found nature reserves a possibility and not a threat which resulted in more area of nature reserves than planned. All nature reserves have management plans which are linked to the conservation of N2000 habitats and species.

Conclusions

As a consequence of the project, nature conservation has got back irreplaceable natural values and the landowners have got new opportunities for production on previously overgrown pastures.
Collaboration and continuous dialogue together with the landowners is one key for success. The holistic view of this project, working with all habitats and working with conservation and restoration at the same time period is another key for success. This method of working however needs flexibility in a way that is difficult to get in LIFE.
The project has achieved big attention from media, visitors and local and Kinnekulle is on its way to be appointed as Biosphere Reserve of UNESCO. This will increase the possibilities for a sustainable local development. At last LIFE funding was essential in reaching the nature conservation target on Kinnekulle.

Restoration of Dry Grasslands in Denmark (RODGID) (LIFE04 NAT/DK/000020)

Mr. Søren Rasmussen

Duration: 01/07/2004 – 31/12/2008
Budget: 4.244.625 € (EC co-financing 50,68 %)
Beneficiary: Ministry of Environment, Danish Forest and Nature Agency
Contact: Mr. Søren Rasmussen sra@sns.dk

Background and aims

The Dry Grasslands of Europe and Denmark are considered to be threatened and vulnerable habitat types. The first evaluation of the conservation status in Denmark of the three priority dry grassland habitat types indicates an unfavorable status. For this project 11 proposed Sites of Community Importance covered a project site surface of more than 4330 ha. The sites were selected both to include some of sites with major areas of the three habitat types and to cover most of their geographical range in Denmark.
Three general threats to these sites are identified as follows:

- Lack of grazing or inappropriate grazing regimes leading to changes in the microclimate and thus a change in the characteristic vegetation and in the structure and function of the habitat type.
- Fragmentation of the areas of dry grassland, leading to the isolation and local extinction of key species.
- Overgrowth with bushes and trees changing the structure and function of the ecosystems.

Results

The project has implemented a variety of adequate management techniques on the basis of site specific actions plans. Its results include:

- The clearing of more that 150 ha of plantations on former dry grasslands.
- The clearing of overgrowth on more than 1.000 ha of dry grasslands.
- The establishment or securing of appropriate grazing on more than 1.500 ha, including the introduction of grazing on more than 500 ha.
- Emergency action to support the survival of annex IV butterfly ***Maculinea arion***.
- Communications: awareness raising among the general public through establishing more that 25 information boards, giving more that 50 guided tours, distributing information leaflets and maintaining a project homepage.

The dissemination of results and knowledge of best practice methods gained in the project.

Conclusions

Completed actions will ensure habitats for the plants and animals of the dry grasslands and will in the long run contribute significantly to the achievement of a favorable conservation status for the three priority dry grassland habitat types present in Denmark as well as for the species of community importance that have dry grassland as their habitat.
Key factors in the success of the project are the detailed action planning procedure in combination with an offensive information strategy. Furthermore, many of the clearing actions have benefited from good luck and favourable weather - Or perhaps from good planning and the flexible attitude of project workers and contractors.

Restoration of pannonic steppes, marshes of Hortobágy National Park (LIFE02 NAT/H/008634)

Mr. Szilvia Gőri

Duration: 15/05/2002 – 15/11/2005
Budget: 780.744 € (EC co-financing 70 %)
Beneficiary: Hortobágy National Park Directorate
Contact: Dr. Szilvia Gőri gori@hnp.hu

Background and aims

Project aim: the restoration and long term *conservation of pannonic salt steppes and marshes*, a priority habitat type (1530) of Annex I. of Directive 92/43/EEC. Project area: Hortobágy, the largest coherent occurrence of this habitat type in Europe. In the 1950s, irrigation systems were constructed on the steppes for high yield grasslands and rice fields. Due to improper technical design, many of them never were used; later on, those within the national park were abandoned. However, these structures continued to fragment the steppes and marshes and to block the natural movement of surface water, causing serious damage to natural habitats, flora and fauna. The project targeted:

- The restoration of pannonic steppes with the elimination of unused dike and canal systems.
- The seeding of the main native grass species (*Festuca pseudovia*) to aid natural recolonisation process, mechanical weed control.

The hydrological restoration of alkaline permanent marshes: keep precipitation waters.

Results

Pannonic steppes and marshes have been restored to a favourable conservation state **on 10,000 ha**. The artificial fragmentation of the steppes has been stopped at the level of the **landscape**. Those natural processes which are basically connected to the surface micro-topography and to overland-flow and maintain the habitat diversity of the alkaline steppes have been initiated and will ensure the its long-term conservation. This allows a low cost follow-up management of the project area (through cattle and sheep grazing) and at the same time ensures that both **management and project results are sustainable** in the long term.

Conclusions

The main learning points are related to habitat management techniques, and to overall project administration/management. **Transferable management methods were developed**, and are already being used on other sites. Grassland reconstruction technology was developed and applied on a landscape scale for the first time and later adopted by other projects too. The project **strengthened local people's and the general public's positive attitude towards nature conservation**. Irrigation systems had hampered the use of pastures, so their elimination helped re-establish traditional extensive grazing. **Pump-priming effect for the project area and other Natura 2000 sites:** The restoration work started under LIFE-Nature was continued with national funds. The Directorate successfully applied for, and implemented two other LIFE-Nature projects. The project thus promoted **networking** and stimulated experience exchange.

Habitat management model for La Serena– Sierra de Tiros SPA (Extremadura, Spain) (LIFE00 NAT/E/007327)

Mr. David Howell

Duration: 01/01/2001 - 31/12/2004
Budget: 736.000 € (EC co-financing 63,45 %)
Beneficiary: Sociedad Española de Ornitología (SEO/BirdLife)
Contact: Asunción Ruiz Guijosa aruiz@seo.org

Background and aims

La Serena (SPA) is the largest grassland area of the Iberian Peninsula and Western Europe. These natural grasslands and local farming practices enable the occurrence of a very diverse and valuable steppic bird population of great international importance. However, changes in arable and livestock farming techniques and the management of hunting generate threats, such as excess livestock and hunting pressure or the intensification of agriculture, with a negative impact on the steppe-like pastureland (a priority habitat) and on the various priority species of birds. To prevent habitat deterioration, SEO/BirdLife implements and evaluates an alternative management model compatible with the natural values of the SPA, involving local farmers and the administration.

Results

Hunting was limited (3 days a month, 5 hunters a day, while bans were placed on all game other than red-legged partridge), and regional government support was enlisted to help raise awareness regarding the new restrictions, which also involved strengthening poaching prosecution.
Farming practices were altered to improve nesting and feeding habitats for kestrels and bustards. Considerably less than half of the normal area was cultivated commercially and this land was split between cereal and legume crop rotations. No pre-treated seeds were used and agrichemicals were discouraged, particularly pesticides to control locust populations. An alternative farming calendar was introduced to respect the biological cycles of important bird species.
New livestock measures were introduced, including controlling sheep densities on uncultivated land. Grazing pressure was set at 1.5-2 sheep/hectare to achieve the desired ground cover result, which was further assisted by fencing certain areas.
Farmers were encouraged to diversify into added value products (e.g. organic cheese) that could bolster farm incomes and brand the area as a destination for eco-tourism and birdwatching.

Conclusions

The alternative model showed its economic and social viability and produced significant biodiversity benefits. Efforts are now underway to convert the LIFE project's approach into new compensation schemes, via the Common Agricultural Policy's agri-environmental measures and rural development funds, which will improve the compatibility of agriculture and nature conservation in La Serena and similar scenarios.

Rewetting of the Ochsenmoor fen (LIFE98 NAT/D/005085)

Duration: 01/02/1998 - 31/12/2000
Budget: 1.000.000 € (EC co-financing 50 %)

Rewetting of the western Lake Dümmer fen area (LIFE02 NAT/D/008456)

Mr Heinrich Belting

Duration: 01/06/2002 - 30/04/2007
Budget: 3.103.000 € (EC co-financing 50 %)

Beneficiary: Federal State of Lower Saxony
Contact: Heinrich Belting Heinrich.Belting@nlwkn-ol.niedersachsen.de

Background and aims

Up to 1953 the river Hunte and Lake Dümmer (north-western Germany) regularly burst their banks every year, which caused extensive flooding of the surrounding fens (5,000 ha). In 1953 dikes were built, the wet grasslands of the fen were drained and agricultural use was intensified. This led to the oxidation, reduction and shrinkage of the fen peat layer. The populations of many breeding and resting birds decreased or disappeared entirely.
Since 1987 a total of 2,500 hectares of private land were purchased. The last 180 hectares were made available through the LIFE projects.
The aim is the regeneration of wet grassland for meadow birds. Another aim is that local farmers work the meadows in a sustainable fashion that is in compliance with Natura 2000 objectives.

Results

50 adjustable weirs were built into the drainage ditches. Water levels can now be adjusted and set to levels that were typical of the area before dikes were built. Flooding in winter and slow step-by-step drainage in the spring recreates suitable habitats for meadow birds. At the same time the local farmers can use the grassland in the summer months.
The areas purchased are let to 140 local farmers. The LIFE project provided various facilities to ensure sustainable grassland management. Thus the aims of Natura 2000 are being achieved and at the same time the farmers remain a part of the project by using and maintaining the grassland for the benefit of nature conservation.
Nature conservation objectives were achieved with success. Species-rich wet meadows continue to develop where many bird species that had disappeared have returned to the wet grasslands. The populations of meadow birds are increasing.

Conclusions

The consolidation of the area by the LIFE project was an important prerequisite for the rewetting. Conserving meadow birds in the future is only possible as long as profitable farming can continue. Local people have been involved in the project. This will keep public awareness alive in the future. A regular international exchange of experiences and networking is fundamental for implementing Natura 2000 objectives into the European context, as well as for evaluating the measures and best practices for conserving the EU's habitats.

Ms. Agata Zdanowicz

Agata Zdanowicz is a Policy Officer in Nature & Biodiversity Unit in DG Environment. Working primarily on the implementation of nature directives in Poland she is also the Unit's contact point for agriculture and on rural development issues. Prior to joining the Commission in 2005 she worked on rural development issues within the Polish national administration, as well as for IEEP. She grew up on a farm and graduated in agronomy and rural business management.

Ms. Regina Lindborg

Regina Lindborg has a PhD in Plant Ecology and currently holds a position as an Assistant Professor in Natural Recourse Management at Stockholm University. Her primary research field is biodiversity conservation in grasslands and effects of management and land use change at large spatial and temporal scales.

Mr. Ariel Brunner

Ariel Brunner is EU Agriculture Policy officer with the environmental NGO BirdLife International Based in Brussels. His main work is in advocating CAP reform and better implementation of the EU Rural development policy and in advocating sustainability on bioenergy policies. Before moving to Brussels he was following the implementation of EU nature conservation legislation in Italy for LIPU, the local BirdLife partner. As part of this work he has been involved in debates around the 2003 mid term reform and national implementation of cross compliance and Rural development as well as in designation of the country's Special Protection Areas (Natura 2000) network. He holds an M.Sc. in Environmental Sciences at Milan University.

Mr Michael Pielke

Mr Michael Pielke holds a degree as PHD in agriculture.
He has worked for the Commission since 1997: from 1997-2003 on agri-environmental programmes under Regulation 2078/1992 and farm investment scheme, and as Coordinator for the German rural development programmes from 2000-2006. Between 2004 - 2007 Mr. Pielke was desk officer in market unit's last unit responsible for the Single Payment Scheme. In 2007 he took up the position of deputy head of the unit Consistency of Rural Development in DG Agriculture and Rural Development.

Saving the endangered Fennoscandian *Alopex lagopus* (LIFE03 NAT/S/000073)

Dr Anders Angerbjörn

Duration: 01/06/2003 - 01/06/2008
Budget: 2.552.997 € (EC co-financing 49,90 %)
Beneficiary: Stockholm University
Contact: Anders Angerbjörn angerbj@zoologi.su.se

Background and aims

During a warming period some species are benefit from more favourable conditions and can thus expand their geographical distribution. This typically applies to temperate species that can take advantage of higher productivity through habitat tracking. However, for arctic species a warming event means unfavourable conditions. It is unclear what processes are involved during such events. Darwin suggested that species should contract their distribution range in a habitat tracking process. We can get some insights into the current warming period by studying another warming event, viz. during Late Pleistocene.

Results

The arctic fox expanded their geographic distribution during the last glaciation to many parts of Central Europe but subsequently decreased it during the Holocene. We used ancient DNA to examine genetic variation in the arctic fox and to test habitat tracking and to verify whether modern arctic fox populations are the ancestors of the late Pleistocene European population. However, the genetic variants in Europe did not track their habitat; they went extinct during the warming period. But the mechanisms for that extinction are unknown. The modern arctic foxes in Fennoscandia immigrated later from Siberia.

Conclusions

Today the Fennoscandian arctic fox population is threatened with extinction due to a shrinking habitat, decreasing food availability and an increase in a temperate competitor, e.g. the red fox. These results provide new insights into how arctic species respond to climate change and the mechanisms behind extinctions. By counteracting the secondary effects of climate warming, such as increasing abundance of red foxes and decreasing food available, we have shown that it is possible to save the arctic fox population within EU.

Managed realignment - Moving towards Water Framework Directive objectives (LIFE06 ENV/UK/000401)

Mr. John Pyggot

Duration: 02/10/2006 - 30/09/2009
Budget: 894.719 € (EC co-financing 50 %)
Beneficiary: Environment Agency
Contact: John Pygott John.pygott@environment-agency.gov.uk

Background and aims

Managed realignment (deliberate setting back of flood defences to allow land to be periodically flooded by river, estuarine or coastal waters) has been implemented by a range of organizations in Europe. Most sites have been developed to improve biodiversity, especially wetland birds, and provide the compensatory habitat required by the Birds and Habitats Directives. Recent sites have been developed to address climate change impacts, such as sea level rise.

The Water Framework Directive (WFD) has brought new objectives for waters to achieve improvements by 2015. Water management agencies across the EU are preparing action plans.

This project is assessing the extent to which managed realignment can address the objectives of the WFD, specifically in transitional waters. Objectives from the Birds and Habitats Directive have been transferred into WFD objectives. However this project is also looking at the extent to which managed re-alignment can address other ecological objectives, such as fisheries improvement as well as chemical and physical objectives.

Results

This project has reviewed all the fifty sites developed in Europe. We have assessed their monitoring programmes and identified thirteen sites where the monitoring is suitable for an assessment of the potential for the sites to contribute to WFD objectives. We have focused on sites which have a long history of continuous monitoring, sites with monitoring which includes a wide range of parameters and sites which are large enough to have potential to affect areas outside of the site.

The Environment Agency has refined monitoring at two sites on the Humber. We have carried out additional monitoring to assess the impact which these sites are having across a wider range of ecological and physical parameters than has been possible on any other site so far. We are linking site based monitoring with work in the wider estuary to assess impacts outside of the immediate site.

Conclusions

The programme of managed realignment is continuing in the UK and other EU countries and this project has identified key criteria for design, management and monitoring which will increase the likelihood of success of future schemes.

Modelling of Air pollution and Climate strategies (LIFE06 PREP/A/000006)

Mr. Jean-Paul Hettelingh

Duration: 01/02/2007 - 31/01/2012
Budget: 8.834.371 € (EC co-financing 50 %)
Beneficiary: International Institute for Applied Systems Analysis (IIASA), Austria – Sci. Coordinator
Contact: Marcus Amann amann@iiasa.ac.at

Background and aims

EC4MACS (www.ec4macs.eu) aims to provide scientific analyses for (i) the revision of the Thematic Strategy on Air Pollution in 2010/2011, and (ii) the European Climate Change Programme on policies for reducing greenhouse gas emissions beyond 2012.
For this, EC4MACS assesses air quality in Europe, taking account of the synergies and trade-offs (including impacts) of country and sector specific reductions of the six Kyoto greenhouse gases and their interactions.
EC4MACS links the RAINS integrated assessment model for air pollution with models for energy, transport, agriculture, atmospheric dispersion, greenhouse gas mitigation (GAINS), health and ecosystem impacts, and economic analysis. All models were successfully applied in earlier policy processes under the EC and Convention on Long-range Transboundary Air Pollution (LRTAP Convention).

Results

A network of "National Focal Centres" from 29 Parties under the LRTAP-Convention and EC-Member States apply methods and provide data on ecosystem impacts. Natura 2000 sites are included as receptors for EC4MACS scenario assessments. In 2020 about 7 % (about 24,466 km2) and 74% (about 258,637 km2) of EU27 Natura 2000 areas are computed to be at risk of acidification and eutrophication respectively under current legislation. Tentative regional applications of dose-response functions enable comparison between air pollution scenarios of species diversity. A recent study by the EEA indicates that 10-50% of plant species in European countries are likely to disappear by 2100 from their current location, i.e. in SE/SW Europe.
Air pollution impact assessment is based on critical loads. A critical load is a quantitative estimate of an exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge. The CCE compiled a database of critical loads for acidification and eutrophication for European ecosystems. These are classified according to EEA's EUropean Nature Information System (EUNIS), but also include Natura 2000 areas.

Conclusions

- Protection policies of Natura2000 sites may benefit from including knowledge from multi-pollutant multi-impact assessments such as EC4MACS,
- EC4MACS would benefit from increased collaboration with LIFE Natura projects and habitat specialists to help identify Natura 2000 endpoints of climate change and air pollution.

Connectivity restoration of peat and wet habitats in Wallonia Region on a biodiversity threats and climate change context LIFE03 NAT/B/000019; LIFE05 NAT/B/000087; LIFE05 NAT/B/000088; LIFE05 NAT/B/000089; LIFE06 NAT/B/000091

Mr. Gérard Jadoul

Duration: projects from 2003 to 2010
Beneficiary: Unité de Gestion Cynégétique du Massif Forestier de Saint-Hubert ASBL
Contact: Gerard Jadoul gerard.jadoul@gmail.com

Background and aims

Some peatbogs remain in the Belgian Ardenne which is the core of very old Devonian mountains that are completely eroded, reaching an altitude of 700 meters in its Eastern part. Ardennes is mainly occupied by spruce plantations, deciduous forests and grassland exploitations. From East to West, there is a succession of high plateaux. The most famous is surely the Hautes-Fagnes plateau (700 m) where there is an important density of peaty soils on a large scale for a country such Belgium. The Tailles plateau, (more than 600 meters) is the second important one going to the West. It's also characterised by peaty, gleyed and alluvial soils but separated in different large depressions giving birth to deep valleys. A similar pattern is observed for Saint-Hubert plateau (lower than 600 meters). On the Western part of Wallonia Region is situated the Croix-Scaille plateau, close to French border.
Historically, we had around 2000 hectares of raised bogs but they were exploited for peat extraction for domestic use and they were also drained for spruce plantations from mid 18th century. Now, we have only less than 200 hectares of peat bogs mainly distributed in Hautes-Fagnes and Tailles high plateau. The conservation state evaluation of wet biotopes is largely unfavorable for many problems of dimension, structure, connectivity and function criterias. As we have only 1% of the territory protected under a nature conservation status we needed a real action plan for peat and wet biotopes.

Results

Since 2002, 7 LIFE projects concerning peats and wet habitats have been obtained (two for species, four for peat restoration and one in a Military camp located in Ardennes). These were undertaken by administrations and/or different NGOs. Main targets are:

- to stop threats on existing sites
- to restore their quality and to extend their superficies.
- to restore new sites to increase connectivity (through the N2000 network that is quite operational for wet biotopes)

The key point to these LIFE projects is to concentrate actions on existing major regional nodes to have locally good population systems (sources for surrounding sinks) instead of dispersed actions.
On a connection point of view, a lot of new possibilities to exchange individuals and genes are now available, even at short distance. There are four times more possibilities for distances below 4 km. This exchange distance is quite realistic, for example, for a majority of invertebrates' species.

Conclusions

When all those LIFE projects will end around 2010, more than 4000 ha will be restored and 1500 ha will obtain a status of natural reserve.
On a climate change context and on a biodiversity conservation plan, connectivity has clearly been increased.

Active Blanket Bog in Wales Project (LIFE06 NAT/UK/000134)

Mr. Jared Wilson

Duration: 01/08/2006 - 31/03/2011
Budget: 3.765.394 € (EC co-financing 75 %)
Beneficiary: The Royal Society for the Protection of Birds
Contact: Jared Wilson Jared.Wilson@RSPB.org.uk

Background and aims

The LIFE Active Blanket Bog in Wales Project aims to bring about a significant and sustained improvement in blanket bog across two Special Areas for Conservation in North Wales. As well as these direct conservation gains, the restoration work may increase the resilience of blanket bog to predicted climate change scenarios and provide greater opportunity for adaptation to these changes. The project site at the RSPBs Lake Vyrnwy reserve is also providing a platform for UKPopNet for research into the impact of ditch blocking work and climate change upon landscape scale greenhouse gas flux from the peat present.

Results

Early results from the LIFE project monitoring indicate that blocking moorland drains significantly raises soil water tables, and it is expected that blanket bog vegetation (particularly *Sphagnum spp*) will soon respond positively to this. Initial indications from the UKPopNet research suggest that greenhouse gas flux varies considerably across seasons and vegetation types, and that derived estimates also vary considerably depending on the methods and scales of measurement used.

Conclusions

LIFE projects can not only deliver landscape scale conservation objectives but can also provide a platform for research into questions of relevance to conservation management and the development of land use policy. At the LIFE project Lake Vyrnwy site, the partnership between the LIFE project partners and UKPopNet should yield results that allow better management of Carbon resources in the fight against climate change.

Agnieszka Janowska

Agnieszka Janowska, Policy Officer, European Commission, DG Environment, Unit C1 – Climate Strategy, International Negotiation and Monitoring of EU Action.
She graduated from Warsaw University with the MA degree in environmental science in 2003. She started her professional career in the Polish Ministry of Environment being involved in climate policy, especially in implementation of European Emission Trading Scheme. In 2007 she moved to private sector and worked as consultant in Energy and Climate Strategies Department of Ecofys Poland. She also gained professional experience during a 6-month traineeship at Oeko-Institut (division - Energy and Climate Protection) in Berlin, Germany. In June 2008 she joined the European Commission, DG Environment.

Rhys Green

Rhys Green is a conservation scientist who works principally on the effects of environmental change and conservation management on birds. He is currently Principal Research Biologist at the RSPB and Honorary Professor of Conservation Science in the Department of Zoology, University of Cambridge. His research includes several strands. He has worked on the effects of human activities, especially farming, forestry and game management, on population trends and demographic rates of bird species. He has undertaken autecological studies of threatened bird species to identify habitat requirements and likely responses to conservation management. He has used simulation models of bird populations to assess the effects of environmental changes and conservation management: examples include modelling the reintroduction of white-tailed eagles to Scotland and the impact of the veterinary drug diclofenac on vultures in India. He works on identifying the consequences of future global agricultural development on biodiversity. Since 1999, he has studied the possible effects of climate change on birds. In collaboration with researchers at Durham University, he recently published a compendium of climate envelope modelling results for European birds and is developing novel methods to test and validate model projections of the effects of climatic change on bird populations and distribution.

Pam Berry

Dr. Pam Berry is a Senior Research Fellow of the Environmental Change Institute, University of Oxford. She is an internationally recognised scientist with 16 years experience on researching the impacts of climate change on communities, habitats and species' distributions and has been involved in projects on species modelling of climate change impacts, landscape dynamics and assessing their implications for conservation and biodiversity policy. She has been involved in a number of UK and European projects including MONARCH, RegIS, ACCELERATES and BRANCH. She also has used the model outputs to examine the adaptation potential and vulnerability of species. More recently she has been researching aspects of the inter-relationships between adaptation and mitigation various sectors and their implications for biodiversity (MACIS).

Conservation of areas with threatened flora on the island of Minorca (LIFE00 NAT/E/007355)

Mr. Pere Fraga

Duration: 01/01/2001 – 31/12/2004
Budget: 653.662 € (EC co-financing 60 %)
Beneficiary: Consell Insular de Menorca
Contact: Pere Fraga i Arguimbau pfa.life@cime.es

Background and aims

The island of Minorca shelters an endemic vascular flora subject to several threats of human origin, among which the presence and expansion of the invasive alien plant *Carpobrotus*. This threat was identified and dealt with in a LIFE project whose main aim was to restore optimal conditions for the long-term conservation of the plant species included in annex II of the Habitats Directive. To achieve these objective several actions were undertaken. Preparatory work included increasing knowledge about the invasive plant and the elaborating management plans for the plant species of the Habitats Directive. Management actions focused on the eradication of *Carpobrotus*. Awarenes raising actions included conferences, publications, web page (www.cime.es/lifeflora), mass media diffusion, a DVD about the development of the project, and especially social participation in the eradication of *Caprobrotus*.

Results

Most of the project's objectives were accomplished. Drafting of management plans finished in 2004 and the Scientific Committee of the project approved them in the last meeting. Now these documents are being legally approved by the Govern Balear. The most outstanding results were those related with the eradication of *Carpobrotus*. Overall, 233.375 m^2 were cleared, which meant removing about 2.523,14 m^3 or 832.148 kg, which meant 252,25 work-days or 9.041 hours. But maybe the results with the highest impact on local people were the two eradication campaigns in which nearly 100 people were directly involved and they got first hand information about the problem of invasive species and management costs. The estimations show that the total cost of the eradication of this plant is about 120.000€.

Conclusions

Among the main conclusions of this project is that the eradication of an invasive plant species is possible providing all the work is well planned and coordinated, from the preparation (cartography, organisation, contracts) to the direct eradication. But it is more important still to raise people's awareness about the threat of invasive species. This objective must not only be achieved through regulatory measures, but also through active communication and information strategies with adequate stakeholders (professional and amateur gardeners, growers, garden centres, etc.), including information on alternatives.
In addition, some of the experiences and methods developed in this project are used also to implement actions to control AIS in the LIFE BASSES project (www.cime.es/lifebasses), as these are also a serious threat to the conservation of Mediterranean temporary ponds.

Mink control to protect important birds in the SPA's in the Western Isles (LIFE00 NAT/UK/007073)

Mr. David Maclennan

Duration: 01/04/2001 - 30/06/2006
Budget: 2.762.834 € (EC co-financing 50 %)
Beneficiary: Scottish Natural Heritage
Contact: David Maclennan david.maclennan@snh.gov.uk

Background and aims

American mink have been present in Lewis and Harris since they escaped from fur farms in the 1950s, and they have caused problems for wildlife, poultry, and fish – both wild and farmed. Ad hoc control work has taken place throughout Lewis and Harris, with limited effects. The Hebridean Mink Project was established in 2001 in response to American mink being discovered in North Uist. The threat of mink populations becoming established in the Uists stimulated co-ordinated action from a wide partnership, supported by EU LIFE Nature, with the aim of preventing the colonisation of the Uists and in turn protecting the internationally important ground nesting bird populations on SPAs.
The project objectives were:
1. To protect vulnerable ground-nesting bird populations on North Uist, Benbecula and South Uist by eradicating mink and to assess the effect of mink removal on populations of these species.
2. To eradicate mink from North Uist, Benbecula and South Uist and reduce mink populations on South Harris in order to minimise recolonisation of these areas, whilst collecting data on effective control methods and strategies.
3. To promote an awareness of bird conservation, invasive species issues and the ecological importance of the Western Isles, locally, nationally and internationally.

Results

The project successfully delivered on its objectives, and the outputs have been used to inform the establishment of a more ambitious second phase of the project – which aims to eradicate American mink from the entire Western Isles archipelago by 2011.
David Maclennan will discuss the approach taken, the results obtained, and the lessons learned.

Conclusions

1. The successful eradication of American mink from large areas is possible through a strategic and adaptive approach.
2. Breeding birds on SPAs in the Uists have been protected from the threat of predation by American mink.
3. The eradication of American mink from the Western Isles by 2011 (phase 2) will eliminate the threat of mink predation on breeding birds in SPAs in the Western Isles. This is a valuable contribution towards ensuring the favourable conservation status of the qualifying species, as required by Article 2 of the Birds Directive.
4. Further work is required to develop suitable indirect techniques that can detect target species at low densities.
5. Techniques developed by the Hebridean Mink Project can be used to help deliver mink control programmes, both elsewhere in the EU and globally.

Restoration of Dune Habitats along the Danish West Coast (LIFE02 NAT/DK/008584)

Mr. Hanne Stadsgaard Jensen

Duration: 01/11/2001 - 31/10/2005
Budget: 4.675.797 € (EC co-financing 60 %)
Beneficiary: Ministry of Environment, Danish Forest and Nature Agency
Contact: Hanne Stadsgaard Jensen hsj@sns.dk

Background and aims

Dune heath habitats are rare in Europe as a whole, but the Danish West coast is rich in this habitat type. They are however generally threatened by overgrowth and overstabilisation, caused by the invasion of non-native conifers and a dramatic decrease in natural dynamics. The conservation status of these habitats is not considered favourable, and in many areas investments are needed in order to regain a favourable conservation status. On particular, the species *Pinus mugo* and *Pinus contorta*, which were introduced in the 19th century to control sand drift, are now causing serious problems in the dune heath habitats. The overall objective of the project was to regain a more favourable conservation status of the Danish dune heath habitats. The project targeted more than 7000ha of dune heath habitats in 11 SCIs for management actions. Furthermore, public awareness and research activities were included.

Results

All activities were completed, and conservation status was improved for more than 8000ha of dune heath. 388ha of non-indigenous conifer forest were cleared, dense overgrowth was removed from 516ha, and 4972ha were cleared of tree encroachment. 2461ha were treated by mosaic burning. A few activities were delayed, but were eventually all completed, although some had to be adjusted. The restoration of natural hydrology on one site and the conclusion of management agreements with private landowners proved more complicated than initially foreseen. The intensive and extensive monitoring activities carried out under the project helped develop a framework for the evaluation of the conservation status of habitat types in general. The overall conclusions from this work were also used for developing practical guidelines for dune heath habitat management.

Conclusions

Important theoretical and practical knowledge was gained from the project. Maintaining dune heath habitats in good conservation status is a time-consuming and expensive task. Non-native species, in particular *Pinus mugo*, are very competitive, and the increased level of air-borne nitrogen deposition only adds to the challenge. The invasive species *Rosa rugosa* poses a new challenge, as it is currently spreading at an alarming pace with no efficient methods to combat it.

Canna Seabird Recovery Project (LIFE05 NAT/UK/000141)

Mr. Richard Luxmoore

Duration: 08/01/2005 - 31/05/2008
Budget: 840.458 € (EC co-financing 50 %)
Beneficiary: National Trust for Scotland
Contact: Richard Luxmoore rluxmoore@nts.org.uk

Background and aims

The project aimed to halt the decline in the seabird colony on the islands of Canna and Sanday SPA and to facilitate its recovery. The colony had declined by 30% since its designation in 1995 and research has demonstrated that this was mainly due to predation by the introduced population of Brown Rats. The species most badly affected were *Puffinus puffinus*, *Alca torda* and *Phalacrocorax aristotelis*, the first of these having become effectively extinct on the islands. A feasibility study showed that the best way to secure the long-term recovery of the colony was to eradicate Brown Rats from the islands and to instigate measures to prevent their re-introduction. This was to be achieved by the use of rodenticide delivered in wax blocks. A major consideration was the need to avoid damaging directly or indirectly the three pairs of eagles (*Haliaeetus albicilla* and *Aquilla chrysaetos*) that breed on the islands and to ensure that the locally distinctive race of *Apodemus sylvaticus* was not reduced to extinction. The expected results included the complete removal of rats, the cessation of predation of eggs and chicks and the recovery of seabird population numbers.

Results

The project was completely successful in eradicating rats, as intensive monitoring over a period of 2 years has revealed no remaining signs of rats or evidence of predation. Populations of P. aristotelis have begun a slow recovery and the first successful breeding of P. puffinus for over 10 years was recorded in 2006. Populations of A. torda have shown fluctuations, along with other auks, that are believed to be related to food supply. There was no adverse impact on the eagles or other non-target species during the project and Apodemus populations have returned to high levels.

Conclusions

The project has demonstrated that the eradication of introduced rats is possible provided that adequate preparatory work has been carried out and that experienced operators are used. It is particularly important to allow adequate time and resources for post-eradication monitoring to ensure that all rats have been removed and to allow for follow-up work if necessary. Use of a first-generation rodenticide, diphacinone, ensured that there were no instances of secondary poisoning. This substance is no longer available within the EU, following the Biocides Directive. It is important to have the co-operation and support of the local inhabitants both in facilitating the eradication and in vigilance to prevent re-invasion.

Preservation of alluvial forest habitats in the Morávka River Basin (LIFE06 NAT/CZ/000121)

Mr. Roman Bartak

Duration: 01/01/2007 – 31/12/2010
Budget: 1.014.720 € (EC co-financing 69,38 %)
Beneficiary: Moravian-Silesian Region
Contact: Tomáš Kotyza tomas.kotyza@kr-moravskoslezsky.cz

Background and aims

The main aim of the project is to preserve alluvial forest habitats in the Morávka river basin, a very valuable area both from the biological and geomorphological point of view presently threatened by invasive Reynoutria spp. The concrete aim of the project is to be achieved via four component goals: 1) creation of an efficient methodology of invasive species suppression and subsequent revitalization of the affected habitats, 2) suppression of invasive Reynoutria spp. in the proposed Sites of Community Importance (pSCI), Niva Morávky and Beskydy, 3) creation of an efficient model of cooperation during the process of problem solving in the field of environmental protection among the interested subjects on the regional level, 4) spreading of the project results and providing further information on Natura 2000 and environmental protection.

Results

The project is finishing its second year and is thus half way through. The chemical and mechanical methods of suppressing Reynoutria spp. are being tested on 48 experimental plots. The results of these experiments and experiences from fieldwork are included in a methodology of invasive plant elimination. Two methods (both chemical methods – herbicide application) are recommended: 1) spraying of a 7 – 10 % solution of Roundup Biaktiv, 2) injection of a 20 – 30 % solution of Roundup Biaktiv – from the end of May untill the beginning of October.

Over the last two years the chemical methods of suppression were implemented on the whole area of occurrence of Reynoutria spp. (350 ha). The spraying was used on 336 ha and injection on 14 ha. The regeneration of Reynoutria spp. after both systems was under 10 % outside forested areas and under 25 % in forested areas (after 1 year's application). No negative impacts on soils, water or biota were detected.

Sowing of grasses was tested on 1 ha area in 2007. In 2008 sowing was carried out on 3 ha area and 5500 shrubs were also planted. Both actions were successful. Sowing looks particularly effective for revitalizing the grassy layer and for preventing the spread of Impatiens glandulifera.

PR activities were also carried out in the first two project years with an information leaflet, preparatory activities for an educational CD-ROM, 24 instructional tours, 3 workshops for local community, 30 information panels, project website and 2 medial campaigns.

Conclusions

The most important conclusion of the project is the fact, that only the chemical methods of suppressions of Reyoutria spp. Have proved effective. The negative impacts on the environment do not represent a threat if the methods are applied carefully. The subsequent sowing of herbs and planting of shrubs supports the revitalisation of ecosystems and protect against the spreading of invasive alien species. PR activities are very important for the friendly acceptance of herbicide use. Cooperation with local community will be used in the course of localizing Reynoutruia spp. for its final suppression in next two project year.

Control of invasive vertebrates in Spanish and Portuguese islands (LIFE02 NAT/CP/E/000014)

Mr. Juan Luis Rodríguez Luengo

Duration: 01/01/2003 - 30/11/2003
Budget: 60.000 € (EC co-financing 100 %)
Beneficiary: Canary Government
Contact: Juan Luis Rodríguez Luengo jrodlue@gobiernodecanarias.org

Background and aims

Exotic invasive species are a threat to biodiversity and they endanger food safety, health and economic development. The expansion of these species is presently considered as one of the greatest threats to the economic and ecological welfare of the planet. This is a global problem that requires international co-operation and the involvement of governments, industry and individuals at a national and local level. Article 8 h) of the Biological Diversity Convention establishes that the Contracting Parties shall prevent the introduction of invasive species and that they shall control or eradicate the exotic species that endanger ecosystems, habitats or species. With a view to the implementation of this article the "*Global Strategy on Invasive Exotic Species*" was adopted at the 6th meeting of the SBSTTA of the Convention on Biological Biodiversity (CBD), held in Montreal 12-16 of March 2001, and Decision VI/23 of the Conference of the Parties established guidelines for preventing, introducing and mitigating the impacts of exotic species that endanger ecosystems, habitats or species.
The island regions of Spain and Portugal are home to a high proportion of the European Union's native biota. The introduction of invasive species is one of the main threat factors for the survival of certain endemic species. The Governments of the Azores, Balearic Islands, Canaries and Madeira, and the Black Vulture Conservation Foundation (BVCF) submitted this initiative to the European Union to be financed through the LIFE financial instrument. The aim of the project is to share experiences obtained in this field which, in most cases, come from carrying out projects that have been co-financed by LIFE, and to establish stable and lasting mechanisms for co-ordination and for the exchange of information, using the Internet and geographic information systems. This will enhance the efficiency of prevention and control measures for invasive species in this area.

Results

Symposium on the Control of Invasive Vertebrates in the islands of Spain and Portugal. The symposium was held between the 12th and the 14th of February 2003 in Santa Cruz de Tenerife, Canary Islands (Spain). Conclusions were reached and a proposed "Canary Island Declaration" was drafted. A CD has been produced, entitled "*Controlling Invasive Vertebrates in the Islands of Spain and Portugal*". **Exchange of information**. The complementary use of existing forums (*Aliens* and *ISSG-Members* of the IUCN, and "*Invasores"* of the Invasive Species Group of the Iberian Peninsula) makes it possible to guarantee a permanent exchange of technical information. The Canary Islands' Government has made a conceptual design for an exotic species data base. **Environmental education**. A practical manual entitled "*Methodologies for programming environmental education activities*" and an educational documentary, "*Invasive vertebrates in islands of Spain and Portugal"* were developed.
Management tools. A manual was produced, entitled: "*Practical Manual of Invasive Vertebrate Management*" The objective was to develop a useful tool directly available to managers to tackle whatever control work may be necessary in each case, with all the available information at their disposal.

Conclusions

All the objectives of the project were reached. A network of experts was created and they have been working together in the elaboration of the project "*100 of the worst aliens species in the Macaronesia*" (Interreg III-B "Bionatura"). The "*Practical Manual of Invasive Vertebrate Management*" and an abstract of "*Methodologies for programming environmental education activities*" have been edited by the Spanish Ministry of Environment. Both were applied in the "*Recovery Plan of the Giant Lizard of La Gomera*" (LIFE02/NAT/E008614).

Karin Zaunberger

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IUCN Invasive Species Specialist Group
IUCN World Commission on Protected Areas
Clare Shine is a barrister who has worked as an independent consultant on biodiversity law and policy for 16 years for intergovernmental, governmental and non-governmental organisations. She is an Associate of the Institute for European Environmental Policy (IEEP). Clare has specialised in invasive species issues for ten years and been closely involved with the Global Invasive Species Programme since its creation, working around the world on regional capacity-building and cooperation. Publications: Clare has co-authored include the IUCN *Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species* (2000), the Council of Europe's *European Strategy on Invasive Alien Species* (2003) and *Scope Options for EU Action on Invasive Alien Species* (2006). She is part of the IEEP team currently providing technical support to the European Commission to develop a future EU Strategy on Invasive Species.

Riccardo Scalera

Naturalist with 13 years experience in conservation biology, wildlife management and vertebrate ecology. He is a member of the IUCN/SSC Invasive Species Specialist Group, with a broad expertise on issues related to alien species and EU environmental policies, particularly those related to nature conservation Directives and Regulations, and related financial programmes. He has been working as independent consultant for a number of public bodies and private companies in Italy, Belgium and Denmark, including the European Commission and the European Environment Agency. In Italy has worked as consultant for the Ministry of Environment, the Ministry of Forestry and Agriculture-National Forestry Corps, WWF Italy, and the University of Rome.

CRETAPLANT - A Pilot Network of Micro-Reserves in Western Crete (LIFE04 NAT/GR/000104)

Mr. Costas Thanos

Duration: 01/09/2004 - 31/12/2007
Budget: 840.458 € (EC co-financing 50 %)
Beneficiary: Department of Botany, Faculty of Biology, National & Kapodistrian University of Athens
Contact: Costas Thanos cthanos@biol.uoa.gr

Background and aims

The aim of the project has been to establish a Pilot Plant Micro-Reserves Network in Western Crete, Greece (Chania Prefecture). The network is comprises 7 reserves situated on public land within 4 NATURA 2000 sites (Gramvousa etc GR4340001, Elafonisos etc GR4340002, Lefka Ori etc GR4340008, Chrysoskalitissa etc GR43400015). Each reserve refers to each one of the 6 plant species of Community priority (Directive 92/43/EEC) growing only in Crete (out of a total of 28 plants of priority for the entire Greece) plus 1 priority habitat (type 9370, *Palm groves of Phoenix).

Results

The Plant Micro-Reserves constitute a relatively recent concept and a novel approach for the conservation and management of plant populations of threatened and rare species. The PMRs (legally defined, conservation areas of a small surface, less than 20 ha) were first developed around 1990, in the Region of Valencia (Spain) and were originally put into practice in 1994 within the framework of an EU-funded LIFE project. Besides their current wide implementation in Valencia, PMRs have been already established in Minorca (Spain) and Slovenia.

An integrated conservation strategy is being applied towards managing, monitoring and publicising the CRETAPLANT Micro-Reserves Network. Management is implemented by wardening, delimitation signs, informative boards, a few enclosures to exclude grazing and additional, on-site mild measures. Long-term monitoring (aiming to elucidate the diverse biological features of the target plants and their population trends in response to various threats) is being implemented at permanent, observation and experimental plots established in each reserve; similarly, digital, meteorological microstations are continuously recording several, important climatic parameters. Conservation is complemented by ex situ management: seed banking and cultivation of target species in local botanical gardens. Last but not least, an information campaign is currently deployed, encompassing a centrally placed Visitors Centre, dissemination and awareness events in the municipalities involved, seminars for target population groups and stakeholders, as well as the production of printed information material (website: http://cretaplant.biol.uoa.gr).

Threats faced by the target plants and their PMRs are: overgrazing, tourist development, land use change, other human activities, wildfires, genetic erosion and climatic change. Fencing of 2 PMRs have yielded spectacular results while other, mild management means have contributed to maintenance and enhancement of the conservation status in the remaining 5 PMRs.

Conclusions

Lessons learned towards a successful, long-term implementation of plant conservation through PMRs: (a) interdisciplinary collaboration of parties involved, (b) cooperation among managers and stakeholders, (c) general public awareness, (d) enhancement of the biological and ecological knowledge and (e) continued after-LIFE efforts towards PMR sustainability and development.

Conservation of habitats of Pearl Mussels in Belgium (LIFE02 NAT/BE/008590)

Mr. Grégory Motte

Duration: 08/01/2005 - 31/05/2008
Budget: 2.322.759 € (EC co-financing 50 %)
Beneficiary: Centre de Recherche de la Nature des Forêts et du Bois
Contact: Grégory Motte G.Motte@mrw.wallonie.be

Background and aims

The project aims at the long-term conservation of the last FreshWater Pearl Mussel (FWPM) *Margaritifera margaritifera* populations and their associated habitats in Belgium (Wallonia). This demanding species is protected under the Habitat Directive, the Bern Convention and it is listed as Endangered (IUCN).
The main threats are the crushing of the mussels, water quality decline, river bed substratum clogging, and host fish population alteration and, as a consequence, the lack of young mussels in the last 50 to 80 years.
The chronological methodology used involved organising a workshop, raising awareness of stakeholders and authorities, the precise mapping of threats and FWPM populations and studying water quality. Next, a GIS treatment of the data allowed the project to determine priorities in defining actions for habitat restoration and ecological studies.
Before the project, the status of FWPM in Belgium was poorly known and no accounts was taken of of FWPM presence in strategic decisions on land use management.

Results

First result was the discovery of a new population that was added to the project. Precise mussel population mapping allowed the project to propose specific measures for Natura 2000 and for Water Frame Work Directive implementation.
Remaining problems were resolved through dialogue, meetings, the drafting of administrative documents presenting mussels as an "umbrella species" with explanations of the scientific arguments, which permitted a more autonomous management of the threats by relevant authorities. This also led them to take into account issues arising both inside and outside Natura 2000 perimeters.
Habitat restoration catalyzed complementary actions not funded by LIFE, such as land acquisition outside Natura 2000 sites, the creation of large nature reserves, the management of private land through contractual agreement, clear cutting spruces and facilitation the free fish circulation of fish, etc.
Using complementary tools such as the Agri-Environmental Scheme, other Life/Interreg projects allowed the beneficiary to complete and connect the area restored.
Exchanges with other LIFE/Interreg projects led to the development of a new strategy to protect the FWPM in Belgium.

Conclusions

The LIFE project was the only solution to start protecting FWPM populations in a very short time and helped catalyse restoration work inside and outside the N2000 network. There is still a lot of work to do to reach the project objectives, but comparisons between the situation before and after the LIFE project showed that it can be done! The implementation of "After-LIFE" actions will be key.

Restoration of the mid Cornwall Moors for *Euphydryas aurinia* (LIFE03 NAT/UK/000042)

Mr. Wesley Smyth

Duration: 01/03/2003 - 31/12/2007
Budget: 1.843.502 € (EC co-financing 50 %)
Beneficiary: Natural England
Contact: Wesley Smyth Wesley.Smyth@naturalengland.org.uk

Background and aims

The Mid Cornwall Moors LIFE Project has secured an internationally significant metapopulation of Euphydryas aurinia. Working at a landscape scale the project aimed to restore habitat condition and connectivity across nine sites, covering a total project site area of 1048 ha. The mid Cornwall metapopulation represents 5% of the UK population and approximately 1% of the European population. The project aimed to: increase the area of E. aurinia breeding habitat in favourable condition from 15 to 150 ha; improve connectivity between breeding patches within the SAC and between the component sites of the SAC; and improve the quality of E. aurinia breeding habitat across all the project sites.

Results

The project has been delivered over 64 months (2003 – 2008) by a partnership of five UK organisations: Natural England (formerly English Nature), Highways Agency, Environment Agency, Cornwall Wildlife Trust and Butterfly Conservation. The total value of the project was €1.8m and project activities included habitat management, livestock management, site management infrastructure, survey/monitoring and the partial removal and downgrading of the A30 trunk road, which previously bisected the Goss Moor component of the SAC.
Following completion of the planned activities the project has delivered an increase in breeding habitat in favourable condition from 15 hectares to 130 hectares. There is also improved connectivity between and within project sites. As a direct result of the project the SAC boundary may be extended.
The project included a significant outcome monitoring component. The data gathered has been used to explore the relationship between population trends, habitat condition and habitat management. The results will be valuable in informing the future management of the project sites as well as other E. aurinia projects and management strategies.
The project has developed future proposals for a significant river restoration project to be taken forward by Natural England.
Establishing appropriate grazing regimes on all the LIFE sites has been a major management activity. The project employed a range of grazing options including establishing two pedigree rare breed cattle herds, negotiating grazing agreements with private graziers and the use of contracted animals. Long term grazing agreements have been or are in the process of being established by Natural England on all project sites, thereby supporting their long term management.

Conclusions

The most significant successes of the project have been: (1) restoring the mid Cornwall moors to a favourable habitat condition where the long term survival of *E. aurinia* is now much more secure; (2) building a public appreciation of the mid Cornwall moors where they are now recognised as a coherent ecological entity of international significance, and thereby providing a solid foundation upon which other initiatives have already begun to build (e.g. amenity access, local wildlife and recreation businesses, marketing of the beef from traditional breeds grazed on the project sites); (3) establishing successful partnerships with local graziers that will allow the appropriate grazing management of the project sites to continue into the longer term; and (4) generating a substantial body of survey data and analysis to inform ongoing management of the project sites and other *E. aurinia* projects. Transferable messages to assist other nature conservation projects include:

1. Use of a landscape scale approach helps deliver favourable condition of metapopulation species.
2. There are benefits in capitalising on large infrastructure projects to deliver nature conservation outcomes.
3. It is important to building flexibility into projects to allow the delivery of outputs to be reviewed and to respond to the results of a monitoring programme as the project develops.
4. It is also important to raise the profile of the project in order to help deliver project outputs and direct the exit strategy.

Conservation of Lesser White-fronted Goose on European migration route (LIFE05 NAT/FIN/000105)

Mr. Petteri Tolvanen

Duration: 01/04/2005 - 31/03/2009
Budget: 1.097.900 € (EC co-financing 68 %)
Beneficiary: WWF Finland
Contact: Petteri Tolvanen petteri.tolvanen@wwf.fi

Background and aims

The Lesser White-fronted Goose (*Anser erythropus*, hereafter LWfG) is the most endangered bird species in Fennoscandia. The short term objective of the project is to stop the decline of the population before it gets too small to survive. The most important threat for the species is hunting and poaching. The LWfG resembles very much the White-fronted Goose (*A. albifrons)* that is an important quarry species in most countries within the range of LWfG. Thus, in practice the only effective way to protect LWfG is to ban hunting of all white-fronted geese for the periods when LWfG are present at the very few key sites. Sites still unidentified along the flyway need to be located before conservation measures can be taken. The main activities of the project are satellite tracking and colour ringing of LWfG to map the key sites; preparing national Action Plans for the species; habitat restoration and management to keep LWfG in safe and favourable sites; and public awareness campaigns, most of all for hunters and farmers in key areas, in order to reduce the risk of LWfG of being shot.

Results

Based on monitoring results, the project seems to have achieved its short term goal: the population has not declined during the project period. The LWfG have started to use sites restored and managed by the project in Hungary and Estonia. Satellite tracking has revealed a whole new migration route and several formerly unknown important sites. National Action Plans for the species are ready for adoption by the national authorities in Norway, Finland and Estonia. In Norway, conservation actions proposed in the national plan have already been started: hunting of geese is banned in the autumn staging area, and control of the Red Fox population in the core breeding area has started. It is too early to assess the effect of the public awareness campaigns, but in Estonia and Hungary co-operation with hunters' associations has been good both at national and regional levels, while in Greece this was the case only at the regional level. The fact that a bird colour-ringed by the project was later found to have been shot dead inside the hunting-free zone of a strictly protected Natura 2000 site in Greece shows that much more needs to be done urgently to protect the LWfG from hunting.

Conclusions

The project has been a timely boost for the conservation work at a critical phase when the Fennoscandian population was on the verge of extinction. The project has shown that the international flyway approach is inevitable for protecting such a critically endangered migratory species. Although the declining trend of the Fennoscandian LWfG population may be stopped, it is still at immediate risk of being wiped out if effective and prompt conservation measures along the whole flyway are not carried out. Within the EU, Greece seems to be the bottleneck in the conservation of the species. The EU plays a central role in pressing its member states to fulfil their nature conservation obligations. A rapid response mechanism should be established for urgent conservation appeals from the LIFE projects via the EC to the relevant national authorities.

Conservation and Management of Wolves in Croatia (LIFE02 TCY/CRO/000014)

Ms. Ana Štrbenac

Duration: 01/12/2002 – 01/12/2005
Budget: 620.703,16 € (EC co-financing 63 %)
Beneficiary: State Institute for Nature Protection, Croatia
Contact: Ana Štrbenac ana.strbenac@dzzp.hr

Background and aims

The Conservation of wolves represents one of the most complex nature conservation issues due to economical, ecological and sociological considerations. In Croatia, the wolf was protected in 1995 as a result of its alarming situation. However, the specie's effective protection was undermined by a number of factors: damage to livestock, impact on game and media coverage contributed to negative attitudes towards the wolf, as did the lack of knowledge about wolves in general. There was also a lack of communication between governmental bodies, local communities in the wolf area and other interest groups related to the wolf. As a result, illegal killings of wolves occurred, threatening the existence of the wolf in Croatia.
The main task of the project was to establish a mechanism to ensure the long-term conservation of wolves and as harmonious a coexistence as possible with humans.

Results

One of the major project achievements was the communication established between all interest groups. This was concretely demonstrated through the development of the Wolf Management Plan that was prepared as a result of the joint efforts of many different interest groups, which were willing to listen to different viewpoints and work together to propose possible solutions. The Plan, which includes a set of measures for the reduction of existing conflicts in a way that all stakeholder groups would find acceptable, was adopted by the competent ministry. Several management activities already started through the project. Accordingly, the project significantly contributed to an increase in public awareness and to more objective media reporting. A monitoring system of the wolf population was established as well and mitigation measures for livestock damage were introduced.

Conclusions

The survival of the wolf, more than any other species, depends on humans. After finalizing the project, the dialogue established earlier on continued, despite occasional attempts to undermine this process. The State continued to support conservation and management activities, accompanied by contributions from regional authorities. New activities started. The action of monitoring wolves based on snow tracks should be particularly emphasized, because it was carried out in cooperation with hunters and foresters. The development of eco-tourism based on large carnivores was initiated. In sum, the support provided through the LIFE project was crucial to introduce a new approach to conservation of species, which was necessary to ensure the future of wolves in a Croatian and in a broader European context.

Conservation and reintroduction of the Iberian Lynx in Andalucia (LIFE06 NAT/E/000209)

Mr. Rafael Canedas

Duration: 01/08/2006-31/07/2011
Budget: 25.971.489 € (EC co-financing 38 %)
Beneficiary: Consejería de Medio Ambiente. Junta de Andalucía.
Contact: Miguel Angel Simón miguelangel.simon.@juntadeandalucia.es

Background and aims

The Iberian Lynx is a "critically endangered" (IUCN, 2004) species that has its only viable populations in two areas of Andalusia, Spain. With only around 200 individuals, the species is threatened by fragmentation of habitat, shortage of prey, non natural mortality, fragmentation and isolation of populations due to stochastic factors and lack of social awareness and sensitization on the status of the lynx in sectors directly involved and in society.

A previous LIFE project (LIFE 02 NAT/E/8069) had already showed that habitat management has successful results in enhancing lynx and rabbit (main prey) populations. The present LIFE project has the objectives of contributing to the maintenance and stabilizing of the existing populations, increasing the number of individuals, promoting the creation of new populations (undertaking the first reintroductions of the species), augmenting the genetic variability of the current populations (undertaking the first re-stockings) and raising the overall awareness of the stakeholders involved. All this translates into a greater viability of the species in the long run and is an important contribution to its survival. During the project the Recovery Plan for the Iberian Lynx in Andalusia will be approved.

Results

-Signing of 95 agreements with private landowners encompassing 136.000 ha. The whole area occupied by the species is under agreement and a suitable management is undertaken in this surface of Mediterranean forest. This is one of the key actions of the project and has long-lasting awareness-raising effects.
-Suitable habitat management. This has added 110 km2 in the area occupied by the species and has increased the adult reproductive population, both in Sierra Morena (from 18 territorial females to 32) and in Doñana (from 9 to 18), in the period from 2002 to 2008. This has also led to an important increase of rabbit populations in Sierra Morena.
-The first population reinforcement in Doñana was a success, with several local females giving birth to kittens and this has a strong relevance for the genetic variability of the scant population existing here.
-Non natural causes of death have been drastically reduced, specially due to the modifications of roads.
-The implementation of the project has helped to control the epidemic episode of leukaemia virus (FeLV) of 2007.
-The Reintroduction Plan has been prepared and work is ongoing with the local communities in new areas foreseen.

Conservation and reintroduction of the Iberian Lynx in Andalucia (LIFE06 NAT/E/000209)

Mr. Rafael Canedas

Results

-A massive awareness raising campaign including numerous activities, edition of materials, exhibitions, volunteer camps, different talks, etc.. have reached the outstanding number of 150.000 people (students, hunter, farmer, land owner and other public). Political and social commitment is also ensured by the '**Pacto andaluz por el Lince Ibérico'**, statement signed by more that 52.841 people.
-Raising awareness of hunters is also an essential strategy of this project. To this end a Guide for the Hunting Management of the Mediterranean ecosystems has been elaborated.
-The experience of these projects (monitoring, evaluation of the populations, improvement of the habitats, land recovering, population's dynamics, etc) has been the base for the making and approval of the National Strategy for the Conservation of the Iberian Lynx (2007).
-The project has always worked in close collaboration with the Captive Breeding Programme helping to create a foundational stock and to prepare the future areas for reintroduction.

Conclusions

-This Project is an example of **"practical and effective conservation**" of an endangered species.
-The monitoring method used for this very elusive carnivorous on big areas and with non-invasive techniques, is a transferable experience for other similar projects. The system used for the recovery of the lynx areas, based on the Recovery Units Territories (RUT) allows recovering of small populations of rabbit that helps the establishment of reproductive females territories. This is also a useful experience for hunters.
-The participation of main stakeholders involved in Lynx conservation (farmers, hunters, land owners, several administrations and NGO's) is a unique experience and makes coordination easier, but requires a very strong effort in terms of personnel and dedication. This has also allowed to obtain additional funding from various sources.
-The strategy of both projects should be translated legally in the form of a comprehensive Recovery Plan that would ensure the continuity of the suitable management for the species.
-Awareness raising activities, specifically for hunters, helps to address and define a teaching strategy which should be transparent, useful and connected to the Recovery Plan. This aspect is key to any conservation strategy.
-Joint efforts with the Spanish Environment Ministry, other Spanish Regions and Portugal should be enhanced to ensure the long term conservation of the species.

Anca Sarbu

Professor in Department of Botany and director of the Botanical Garden of University of Bucharest, Romania. Anca Sarbu is president of PLANTA EUROPA – International Organization of Wild Plants Conservation in Europe. Member of the Steering Committee of Botanic Gardens Conservation International.

Boris Barov

European Conservation Manager of BirdLife International. Boris Barov's responsibilities cover species action plans, the development and implementation of conservation projects and the building of networks of site support groups (IBA Caretakers). He has an MSc in ecology and over 10 years of practical experience in Bulgaria.

Nigel Bourn

Director of Species Conservation at Butterfly Conservation. Leads on all species work, focus on Priority Species in the UK BAP and Regional Action Plans. Overall responsibility for management of species and regional staff in England, provision of species advice and research, reporting on progress, edits Conservation Updates in Butterfly magazine. UK lead on biodiversity and agricultural policy.

Jan Plesník

Born 1960, graduated at the Charles University Prague. Adviser to Director at the Agency for Nature Conservation and Landscape Protection of the Czech Republic Prague. Author and co-author of 20 books, 40 original papers and 1,100 popular articles. Lecturer at the Charles University Prague.

LICENSE: Local Institutional Capacity Development in Environmental Sensitive Areas (LIFE00 TCY/BiH/000041)

Mr. Boris Jandrić

Duration: 06/06/2001 - 31/05/2004
Budget: 506.500 € (EC co-financing 68,43 %)
Beneficiary: Institute for Urbanism of the Republika Srpska (Bosnia-Herzegovina)
Contact: Prof. Čedo Maksimović c.maksimovic@imperial.ac.uk

Background and aims

The Bardača wetland is one of the most important ecosystems in RS, a stopover for migratory birds and a significant economic asset. However, it is under considerable pressure, and requires immediate action, local stakeholders' cooperation, and conflict resolution. The project's aim was to reduce the vulnerability and to increase the resilience of the devastated local eco-system, within a framework for local conflict resolution processes. Conflict existed between commercial fishing – the main economic activity - and the protection of habitats of high ecological value, in particular for wetland birds. The project's aim was reached by assisting the local community to create a local institutional framework, and by providing technical expertise for the development and implementation of a Local Environmental Action Plan (LEAP) for the rehabilitation of the wetland and its sustainable development.

Results

The project was based on high-level IT support, using data bases and GIS- supported analysis and modelling, planning, mapping, information dissemination, capacity building of local stakeholders and support to the LEAP. The approach was based on "learning by doing" for the protection of a wetland eco-system and the creation of economic opportunities and by combining high level expertise with local indigenous "wisdom". The wetland area was divided into several zones with different levels of protection and economic activities; the core area is a nature reserve open for ecological research only. In the other zones, controlled eco-friendly activities are allowed to take place. Project outputs include the LEAP, guidelines, project publications, teaching materials, GIS, a film, WFD compliant catchment's development model and trained personnel.

Conclusions

Awareness-raising was one of the most successful elements of the project, exceeding initial objectives. Key stakeholders were involved in the project from beginning to end. Local TV stations extensively promoted project results and actions with schools and targeted workshops underpinned stakeholders' capacities. For the local professional communities, the concept of the integrated (GIS based) planning was innovative and it initiated several other publications, including one on sustainability in spatial ecological planning. A new EU - funded project for the development of environmentally sensitive economic activities, based on the recommendations of the LICENSE project, was completed successfully. Furthermore, based on the recommendations of the LICENSE project, on the 2nd February 2007 (World Wetland Day), Bardača was officially designated **Ramsar site no. 1658,** and the formal designation ceremony was held on 12/04/2007. Some failures noticed after the end of the project are also presented.

Protection of Biodiversity of the Sava River Basin Floodplains (LIFE06 TCY/INT/000246)

Mr. Boris Erg

Duration: 01/01/2007 - 31/12/2009
Budget: 863.940 € (EC co-financing 69.95 %)
Beneficiary: IUCN
Contact: Boris Erg boris.erg@iucn.org

Background and aims

The Sava River is the second largest tributary to the Danube spaning Slovenia, Croatia, Bosnia and Herzegovina, and Serbia. Hosting the largest complex of alluvial floodplain wetlands in the Danube basin, it is characterized by a mosaic of natural floodplains and cultural landscapes. However, one of the main challenges for its management is to reconcile economic development with sustainable use and protection of resources. To secure this, IUCN and Wageningen International have initiated this project to support the Sava River countries in identifying and managing the ecological and landscape diversity by designating a coherent ecological network along the river. Moreover, the project is aimed at supporting the elaboration of the Integrated Sava River Basin Management Plan.

Results

Through activities of four working groups – biodiversity, land use, GIS and awareness – and by creating a broad partnership of relevant conservation and land use organizations from the Sava countries, the project delivered a range of results that converge in the improved protection of the Sava floodplains. Various communication tools have been set up (website, newsletter), targeting more than 200 stakeholders to be addressed by the project. In parallel, biodiversity and land use experts have commenced a comprehensive work on identifying key species and habitats according to the EU Birds and Habitats Directives. Extensive field work on collecting new and updating existing data has been undertaken. Once analysed, these data are to be processed into a joint database, the Sava GEO-portal, and to result in a set of recommendations to help both experts and practitioners to protect biodiversity and to plan and implement activities along the Sava in a sustainable manner.

Conclusions

LIFE has proved to be a strong impetus for the protection of key biodiversity of the Sava floodplains, namely by supporting transboundary dialogue and cooperation between the key expert organizations in the region. Moreover, it helped in increasing visibility among the stakeholders, also giving momentum to the cooperation with the International Sava River Basin Commission as a key organization that sets out the Sava River Basin management objectives. Such a holistic approach requires a lot of resources – human and financial - but only by bringing all the key stakeholders around the same issues is it possible to develop the effective protection of the Sava floodplains and the long-term sustainability of activities undertaken.

Bringing Regional Protected Areas of the Leningrad Region (Russian Federation) into European Context (LIFE04 TCY/ROS/000050)

Mr. Nikolay Shmatkov

Duration: 01/01/2005 - 31/12/2007
Budget: 619.357 € (EC co-financing 65,20 %)
Beneficiary: IUCN – The World Conservation Union - Office for Russia
Contact: Nikolay Shmatkov Nikolay.Shmatkov@iucn.ru

Background and aims

The Russian Federation has a system of protected areas (PAs) with different status (federal, regional and municipal) which includes over 12,000 sites covering 13% of the country. Many PAs are of international significance for the preservation of unique landscapes, key biotopes and habitats, and endangered species. Some of these have an international status under Ramsar and Helsinki Conventions as Biosphere Reserves and World Heritage sites. However, unlike the federal protected areas, most regional PAs do not have functional on-site management or operational control in line with the declared regimes of nature use, and improved functioning of regional PAs is therefore crucial for preserving biodiversity. The project aimed at testing and adopting European approaches to the development of an integrated PA network in the Leningrad region as part of the Baltic and European PA systems.

Results

1) Improved cooperation among Russian and international NGOs, PAs, regional and municipal authorities, private sector, land users and local communities;
2) Improved legislation on PAs, environmentally friendly socio-economic planning;
3) GIS and databases for PAs, including information on 1,130 species;
4) Raised public awareness and positive attitudes towards PAs through increased knowledge about PAs functioning.

Conclusions

The project contributed to biodiversity conservation on large and crucial parts of the European wildlife preservation network -the Leningrad Region- by providing practical solutions for the conservation of endangered flora and fauna. A key result is the practical toolkit for taking well-informed management decisions by officials of the Leningrad Region on industrial development of the territory. An electronic Red Book and GIS system are now available for decision-makers in the Region, and to help improve the management of natural resources in and near protected areas. At the same time, these systems are used by academics and NGOs to monitor private sector and GO activities on nature use, and to collect and use data on landscape and biodiversity. The operation and development of these tools (Red Book and GIS) are supported by new Regional Government legislation, and several other regions of Russia now plan to follow their example. The IUCN now implements a new project in Yaroslavl and Vladimir Regions to disseminate this experience.

Regeneration of the Baltic coastal lagoon habitat complex (LIFE05 NAT/D/000152)

Mr. Hauke Drews

Duration: 01/05/2005 - 31/12/2011
Budget: 5.685.005 € (EC co-financing 59,84 %)
Beneficiary: Stiftung Naturschutz Schleswig-Holstein
Contact: Mrs. Britta Küper, Mr. Hauke Drews kueper@sn-sh.de, drews@sn-sh.de

Background and aims

Coastal lagoons and adjacent habitats form a typical complex along the Baltic Sea coast. They were grazed for around thousands of years, and harbour several threatened bird, amphibian and plant species, which depend on the right vegetation structure for breeding or feeding. Up to 90% of the habitats have been destroyed before the designation of N2000, and in the remaining sites destruction of natural hydrology, intensification of land use and eutrophication are the main threats. For birds, predation is also a severe problem. The project aims to improve the conservation status in 34 sites, through grazing with hardy livestock races, removal of unwanted vegetation, restoration of natural hydrology, predator control and prevention of eutrophication. Bird-, toad- and grazing-experts advise on the integration of conservation and grazing management.

Results

First lessons learnt are (1) Experts visits help fine-tune grazing management for habitats and species conservation, and motivate local managers; (2) Annual workshops with all project people help spread expert knowledge and managerial experience within the project; (3) A combination of habitat management and population management is successful for toads; (4) Whole year robust cattle grazing is a successful management tool for coastal sites, and a good tool against invasion of alien plants, but farmers have to learn conservation-oriented grazing again;
(5) Sometimes additional mowing is required for Ruff and Dunlin; (6) predator fences seem to be suitable only for peninsulas; artificial islands for terns are successful; (7) reduction of rodent density makes the sites less attractive for predators.

Conclusions

Baltcoast project partners try to solve the most urgent and solvable problems at each site, and are learning how to improve management and adapt national legislation, agricultural policy and subsidies to re-establish the right land management. First positive trends are visible, at least for habitats, toads and for some bird species, but large-scale processes, such as eutrophication and site fragmentation still impact negatively upon the sites. Rising sea water levels increase flooding, reduce breeding success and destroy coastal habitats. For long-term survival of coastal habitats, species and humans, a retreat strategy from future coastal areas is urgently needed. Within this strategy CAP-related payments should be reconsidered, as 'environmental mainstreaming' is not working in favour of nature in coastal areas today.

Black Vulture Conservation in a European Network (LIFE00 NAT/E/007340)

Mr. Juan José Sánchez Artés

Duration: 01/03/2001 – 28/02/2005
Budget: 1.036.378€ (EC co-financing 75 %)
Beneficiary: Black Vulture Conservation Foundation
Contact: Juan José Sánchez Artés jjsanchez@bvcf.org

Background and aims

The Black Vulture Conservation Foundation (BVCF) was created in 1986 with the aim to recover the population of the Black Vulture (Aegypius monachus) to recover across its historical distribution range in Europe, from Portugal to the Balkans. BVCF was founded by experts in different fields and from different European countries, with the aim to develop international cooperation for protection of the black vulture.
Two LIFE projects helped to strengthen such international cooperation. The first one (LIFE97 NAT/NL/004210, 1997-2000) helped to develop activities for the conservation of several colonies in Spain (habitat management, species monitoring, development of private management plans, promotion of a Natura 2000 site). This experience was disseminated to other countries where the Foundation set up projects (without EC-funding), such as the reintroduction of the Black Vulture in France, and the creation of the right conditions for the species in the Balkan region.
In the second Life project, actions aimed specifically at mitigating threats to biodiversity, such as the illegal use of poison. We enhanced the capacity for action not only of BVCF and other NGOs, but also of governmental organisations. Specifically, the project trained environmental rangers, funded the specialized equipment required, spread the information of cases of poisoning to the public, organised seminars involving hunters, lawyers and other stakeholders, and helped take to court those found using poison. By doing so, we created a common action against the illegal use of poison in Spain, called The Antidote Programme.

Results

The experience gained with the Life Projects is now applied to other projects across Europe, primarily in Portugal, France and the Balkan countries. In 2002, The Balkan Vulture Action Plan was formulated, implemented by various organisations, for the recuperation of the 4 European vulture species: the Black Vulture, the Bearded Vulture, the Egyptian Vulture and the Griffon Vulture. BCVF's experience is now being applied to countries including Bulgaria, Greece, Serbia, Albania, Bosnia and Herzegovina, Macedonia and Croatia.

Conclusions

The local and international cooperation in biodiversity conservation allows us to gain from everyone's experiences. This makes us more efficient in our work and helps make more efficient use of time, human and technical resources, and ultimately reduce costs. One of our main goals is to increase the capacity and to raise the standards of the local NGOs that work on the conservation of nature in countries outside the EU and in those countries that have joined recently.

IBAs Marinhas - Identifying marine IBAs for seabirds in Portugal (LIFE04 NAT /P/000 213)

Mr. Iván Ramírez

Duration: 01/10/2004 - 31/10/2008
Budget: 1.515.182 € (EC co-financing 75 %)
Beneficiary: Portuguese Society for Study of Birds (SPEA)
Contact: Iván Ramírez ivan.ramirez@spea.pt

Background and aims

Four years ago, when the Marine IBA LIFE project started in Portugal and Spain, there was little information as to how pelagic seabird species behaved at sea, and how Important Bird Areas at sea could be identified and protected. Fourteen of the Birds Directive Annex I seabird species occur within the Portuguese Economic Exclusive Zone, four of which are globally threatened. Many of these species have very dispersed distributions, and do not form easily identifiable concentrations at sea. Main objective of the project is to identify offshore areas for breeding species, through an analysis of the marine variables and seabird distribution patterns, and the development of a standard methodology.

Results

SPEA, in close collaboration with BirdLife International and SEO/BirdLife (BirdLife partner in Spain), has revised and publicised the methodological steps needed for Marine IBA identification, so other countries can also start the designation process. This protocol can be consulted at the project website http://programamarinho.spea.pt/ and through dissemination materials, such as the Marine IBA brochure or the bilingual CD-ROM "IBAs Marinhas". A major result is that seabirds can now also be studied at sea, and their presence on a particular marine site be proven both through individual tracking and modelling. Moreover, the marine IBAs defined were found to be stable over time and hence ready for the application of conservation measures.

Conclusions

The LIFE IBAs Marinas project has proven that seabirds are traceable, and a full new list of IBAs has been published, which will hopefully form the Portuguese network of marine SPAs. But the success of this initiative goes beyond Portugal's borders, and SPEA is involved in Marine IBA identification projects in Malta, Greece and Italy, through their *BirdLife* partners in these countries. SPEA has also actively collaborated with New Zealand, Australia and Argentina towards their own marine IBA network, and is a member of several international working groups such as those in ICES or the OSPAR treaty. Apart from working internationally, the marine IBA project also contributes to new initiatives, such as the sardine certification process -through MSC in Portugal- and to newly approved LIFE+ Projects in the Azores.

Leon C. Braat

Dr. Leon Braat is Senior Researcher on International Biodiversity Policy at Alterra and Coordinator of the Ecosystem and Landscape Services program. He started his career as a researcher and associate professor in the field of environmental modelling and ecological-economics at the University of Florida, Gainesville, Florida, the Institute for Environmental Studies-Free University, Amsterdam (IES-FUA) and the International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria (1975-1990). In this period he published numerous articles in a great number of journals and co-wrote and edited several books on environmental-economics. He completed a Ph.D. dissertation on the subject of sustainable multiple-use forestry in 1992 and subsequently moved to the Netherlands Environmental Assessment Agency (NEAA/MNP0, where he directed the team that produces the Dutch National State of Nature reports and Nature Outlook studies. At Alterra, since 2007, he has returned to international biodiversity research, ecological – economics interactions and the science – policy interface. In 2007-2008 he was the leader of the DG Environment project "The Cost of Policy Inaction: the case of not meeting the 2010 biodiversity target".

Pierre Galland

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Dr. Pierre Galland has worked for 15 years in the Balkans as consultant for the Swiss Agency for Development and Cooperation (SDC), IUCN and the World Heritage Centre. His duties included preparing management plans for protected areas, establishment of transboundary cooperation as well as planning for UNESCO World Heritage sites and Biosphere reserves, in cooperation with local government agencies and NGOs.

Stefan Leiner

Mr. Stefan Leiner is the Deputy Head of the Nature & Biodiversity Unit in the European Commission's Directorate General of Environment. He deals with the implementation and further development of the EU Biodiversity Policy and Action Plan and the EU Nature legislation (Birds and Habitats Directives). Until June 2008, he was responsible for international biodiversity issues in DG Environment's International Affairs Directorate and was the European Commission's alternate Focal Point to the Convention on Biological Diversity.