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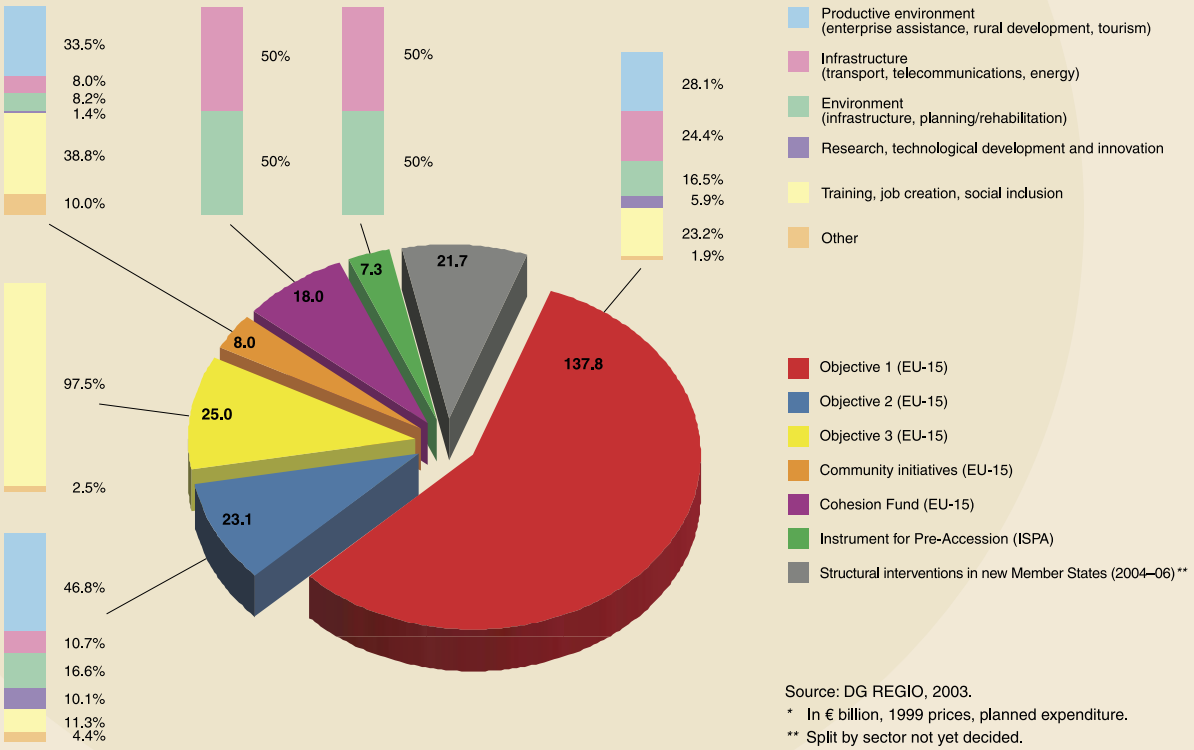
Conflicting EU Funds:

Pitting Conservation Against Unsustainable Development

Lynx pardinus – Iberian lynx, Coto Doñana National Park, Spain | © WWF-Canon / WWF Spain/Jesus COBO

Structural Funds and instruments by sector of expenditure (2000–06)*



Source: DG REGIO, 2003.

* In € billion, 1999 prices, planned expenditure.

** Split by sector not yet decided.

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Foreword

When we talk about “European Nature” or “European Biodiversity”, many people associate this with the major legal instruments within the European Union: The Birds Directive and the Habitats Directive, as well as the related network of protected areas – Natura 2000 and The Water Framework Directive concerning integrated and ecologically-driven river basin management. This approach is one of the most advanced in the world, encompassing long term perspectives and sustainability. However, to implement a sophisticated system, one needs not only political will, but also financial backing. Furthermore, it seems evident it shouldn’t be threatened by competing plans funded by the very same institution – The European Union.

In order to address this issue and to support the protection and improvement of the environment, (as recognised by the structural funds regulation since 1999) as well as to help shape the new round of EU funds for the 2007–2013 period, WWF has published this report.

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Gerald Dick, PhD, MAS
Global Species Programme
Wien, December 2005

Acronyms

CAP	Common Agricultural Policy
CBD	UN Convention on Biological Diversity
CFP	Common Fisheries Policy
COP	Conference of the Parties
DG	Directorate General
EAFRD	European Agriculture Fund for Rural Development
EAGGF	European Agricultural Guidance and Guarantee Fund
EEA	European Environment Agency
EFF	European Fisheries Fund
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIF	European Investment Fund
ERDF	European Regional Development Fund
ESF	European Social Fund
FIFG	Financial Instrument for Fisheries Guidance
FLR	Forest Landscape Restoration approach
GNP	Gross National Product
IBA	Important Bird Area
ICCAT	International Commission for the Conservation of Atlantic Tuna
ICPDR	International Commission for the Protection of the Danube River
IEEP	Institute for European Environmental Policy
LCIE	Large Carnivore Initiative for Europe
LFA	Less Favoured Area
LIFE+	Financial Instrument for the Environment
NOP	National Operational Program
NSP	National Strategic Plan
SAC	Special Area of Conservation, designated under the Habitats Directive (92/43/EEC)
SCRS	Standing Committee on Research and Statistics of ICCAT
SEA	Strategic Environment Assessment
SNHP	Spanish National Hydrological Plan
SPA	Special Protected Area, designated under the Birds Directive (79/409/EEC)
SSB	Spawning Stock Biomass
TENS-T	Trans-European Networks – Transport
VAT	Value-Added Tax
WFD	Water Framework Directive (2000/60/EC)

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European Union at the Crossroads

Introduction to current challenges within the EU

The budgetary delay may slow down but will not stop the work on the development of the new regulations and guidelines that will come into force at the beginning of 2007 and will channel the budgetary amounts that are finally agreed upon. In that sense, WWF's current work on influencing and shaping regulations for Life+ and Natura 2000, rural development, the structural funds, various water and mining directives, fisheries regulations and so on will continue relatively unscathed. In fact, the feeling in Brussels in the immediate aftermath of the 16/17th June European Council is to some extent one of renewed vigour in working on these framework regulations and policy guidance so that normal business can resume as soon as the budget is settled.

As far as agriculture is concerned, Tony Blair's showdown with France and Germany in particular was over the 2002 agreement to keep agricultural spending guaranteed at a 40 billion euro per year level until 2013. This bilateral Franco-German agreement was announced with little pre-warning and was subsequently endorsed by Blair in 2003 – but it is clear that he now wants to retract. The modernisation of the EU agenda in line with the Lisbon agenda – Europe as the most dynamic, knowledge based economy in the world – means that a diversion of agricultural funds into research and development, technological innovation, competitiveness issues makes more sense in the UK view. It is the speed of the reform – rather than whether reform is necessary – which is the real root of the difference between the UK Government (and some important allies) and some other European countries.

One of the casualties of reduced agricultural spending is likely to be rural development. Under a compromise promoted by the Luxembourg Government, the amount of money for rural development was already foreseen to go down from almost 90 billion euro in the 2007–2013 period to 73–75 billion euro. The newly adopted rural development regulation, and the draft rural development strategic programming guidelines, now include WWF priorities for implementation of the Water Framework Directive, the implementation of Natura 2000, the promotion of high nature conservation value farming and forestry systems and renewables for energy production. Any cutbacks in funding for this programme, and any delays in approving the guidelines, could have negative consequences for WWF's thematic and eco-region objectives in Europe.

The rural development fund and the structural funds could in the best of circumstances become the main funding mechanisms for implementing Natura 2000. The much smaller Life+ programme and budget line will also make an important contribution, especially for funding species, habitats and broader nature conservation objectives that would fall outside these two large development programmes. Since the existing Life Nature budget line and regulation is due to expire at the end of 2006, the Natura 2000 programme is especially vulnerable if a budgetary impasse continues too much longer.

Following the Common Fisheries Policy reform agreed at the end of 2002, the new proposals for the European Fisheries Fund include objectives close to the interests of WWF. This includes making funds available for the sustainable development of coastal areas, the adaptation of fishing fleets and fishing effort to the need for improved stock management and recovery plans and pilot projects for conservation. The Fisheries Fund will offer inducements to Member States to turn existing voluntary measures for conservation into programmatic ones supported by EU funding. It is to be hoped that budgetary delays will not disrupt this process longer than is necessary. It will also be necessary to watch member states carefully so that they don't use budget delays to revert to the previous damaging support for fleet modernisation and renewal.

The work of the EPO water team is currently focussed on three directives – Mining Waste, Flood Risk Management and a Priority Substances Directive under the Water Framework Directive. All the signs are that the legislative timetables for these three initiatives are unlikely to be affected by either the constitutional setbacks or the budgetary delays. On the contrary, the European water director's meeting a few days after the June 2005 European Council gave a strong endorsement to the Water Framework Directive principles and made a complete about-turn in asking that the flood directive now be made an integral part of water framework legislation.

Regarding the external dimension of the new Financial Perspectives, there is a growing recognition that global and regional environmental problems will not be tackled alone through the standard country and regional programming approaches that underpin EU development cooperation. A separately-funded Environment and Energy Thematic Strategy is being drawn up in the Commission that would allow the EU to anticipate and intervene in large-scale environmental crises. It would also give direction to all EU policies as they affect the environment and natural resources in third countries, for instance, agriculture, fisheries energy and so on. WWF is pressing for this thematic programme to be adequately funded if the EU wants to give real global environmental leadership and not simply rhetoric.

Tony Long,
Director, WWF European Policy Office
Brussels, December 2005

Cultural landscape of White Carpathians - South Moravia, Czech Republic. | © Michal Stránský

1. **EXECUTIVE SUMMARY**

The European Community has made legal and political commitments to protect its biodiversity, including the commitment by European leaders "to halt biodiversity loss by 2010". Despite such commitments, activities financed by European funds have continued to have a negative impact on nature and biodiversity in the EU, and may be compromising chances of meeting the 2010 objective. The case studies examined in this report provide examples of clashes between nature conservation and the use of European funds.

In particular, EU funds have been used for:

- Overexploitation of natural resources – for example, funds from the Financial Instrument for Fisheries Guidance (FIFG) have been used to increase capacity in the Bluefin Tuna fishery (see case study 4).
- Support to intensive agriculture and forestry – for example, funds from the European Agricultural Guidance and Guarantee Fund (EAGGF) have been used in Spain in a way which has encouraged the growth of intensive irrigation in some areas. Direct payments (EAGGF Guarantee section) that favoured more productive, irrigated crops have led to a reduction in competitiveness of farmers in traditional dryland areas, and subsequent abandonment of such areas with negative impacts for biodiversity (see case study 8). Development of dams to provide water for irrigation has also had impacts on rare species such as the Iberian Lynx (see case studies 2, 7). Poor direction of Rural Development Funds (EAGGF Guidance section) in some areas has also caused problems, for example in Portugal a lack of focus on landscape-scale management has led to the prevalence of damaging practices such as scrub clearance (see case study 1).
- Extension of transport networks that fragment habitats – for example, projects currently underway in several Member States are of concern to NGOs due to poor consideration of environmental concerns. In Poland, the proposed route of the Via Baltica could have negative impacts on Natura 2000 sites (see case study 5); in Greece, the Egnatia Highway could affect the viability of the Brown Bear population (see case study 3); and proposals to clear "bottlenecks" on the Danube river could affect significant Ramsar and Natura 2000 wetland sites (see case study 6).

There is another side of the story. In contrast to those applications of funds with negative impacts on biodiversity, other applications of European funds are being used to support implementation of Natura 2000, fund species management actions, and create win-win situations where socio-economic and environmental objectives are realised together. However, it seems that Member State administrations often still lack awareness of the possibilities to fund these activities with benefits for nature or are motivated to promote damaging alternatives due to negative political, economic and social drivers.

If the EU is to realise its stated goal of halting biodiversity loss by 2010, it is vital that all European funds are applied in a manner that supports this commitment and in full compliance with the requirements of the nature and water protection Directives. The Commission has shown that it can take a strong position on withholding funds where Member States are found to be in breach of their obligations to protect their nature and biodiversity. It is important that this approach to effective enforcement continues.

Poor coordination between Member State authorities or European agencies is not an adequate excuse for failure to protect Europe's nature. It is clear from the case studies in this report that all levels of governance (European, national, regional, local), non-governmental organisations, and individual consumers have a role to play in ensuring wise use of European funds, and in preserving European biodiversity for future generations.

It is critical that these lessons are applied in finalising the legislation and guidelines governing EU funds in the next financing period from 2007–2013, and that expenditure in Member States is monitored so that any impacts on biodiversity are apparent and minimised. Detailed recommendations are included after the individual chapters, whereas the principal ones are as follows:

Key recommendations

1. The use of EU funds that conflict with the Community goal to halt the loss of biodiversity by 2010 must be eliminated (as species and habitats have been threatened in the past).
2. The integration of biodiversity and Natura 2000 as funding priorities into the programmes of major EU funds must become obligatory.
3. The partnership principle must be systematically, correctly and fully applied in the programming implementation and evaluation processes for EU funds. This means that environmental stakeholders (public and non-governmental) should be treated as equal partners, have full voting rights, receive information in a timely fashion, be consulted properly, have a right to transparent feedback and be trained and resourced to play their role efficiently.

Member States should

- Include references to support nature and biodiversity (and halt biodiversity loss by 2010) in their national programmes for use of European funds for 2007–2013.
- Promote good coordination and cooperation between their own national, regional and local authorities and agencies (eg between Ministries of Finance, Economic Affairs and Environment).
- Develop a biodiversity strategy, analysing key threats and potential benefits at national and regional levels. This strategy should make clear links to the management of Natura 2000 sites, implementation of the Water Framework Directive and to the effective use of European funds.
- Shape their national programmes so that they meet the financial requirements for Natura 2000 implementation which were laid down in the Communication from the Commission to the Council and the European Parliament on financing Natura 2000 (COM(2004) 431 final, annexes).
- Inform and involve interest groups and stakeholders especially NGO's in developing plans for use of European funds.
- Make sure that Environmental Impact Assessments are developed and applied correctly, timely and by independent bodies especially for infrastructure investments.
- Support projects for sustainable rural development eg by using LEADER funds.

The European Commission should

- Ensure that nature and biodiversity requirements are addressed in all the programming documents for the 2007–2013 funding period.
- Undertake a mid-term review of the application of the funds to ensure that they are being used in support of halting the loss of biodiversity by 2010.
- Establish compulsory indicators for the ex-ante, mid-term and ex-post evaluation of EU Funds. To date, indicators have mainly concentrated on management and financial control. There should also be indicators to assess the environmental consequences and the impacts on biodiversity of measures funded by EU monies.
- Require DG Environment to establish an audit group comprising all relevant General Directorates in order to monitor (at least biannually) the implementation of the programmes and to ascertain on whether money from EU funds has been used to achieve the goal to halt the loss of biodiversity by 2010.
- Require DG Environment, in close cooperation with DG Fisheries & Maritime Affairs, to ensure the application of the Strategic Environmental Assessment Directive to the National Strategic Plans and National Operational Programmes developed by Member States.

2. EUROPE'S NATURE & PROTECTION REGULATION

2.1 Europe's natural heritage and Community efforts to protect it

2.1.1 What is Europe's natural heritage?

The European Union's 25 Member States stretch from the Arctic Circle to the Mediterranean, and include a vast range of natural terrestrial and marine habitats and a great diversity of flora and fauna. There are several thousand types of habitat, 150 species of mammal, 520 bird species, 180 species of reptiles and amphibians, 150 species of fish, 10,000 plant species and at least 100,000 species of invertebrate (CEC undated).

Human activity has influenced the state of European biodiversity for centuries. In pre-agricultural times most of the lowlands of Europe were covered in closed or semi-closed forest or appeared as a park-like half-open forest (Vera 2000). In the north-west of Europe, in areas with the highest economic development and human population density, natural ecosystems now persist only as small and marginal zones amidst the extensive areas dominated by agriculture and urban development (EASAC 2005). Those sites not influenced by humans represent the last remaining "wilderness-areas" of Europe. However, human management is now essential for many of the sites that are valuable in terms of European biodiversity.

Why does it matter?

In her speech to the Third Pan-European Conference Biodiversity in Europe held in Madrid in January 2004, the then European Commissioner for the Environment, Margot Wallström, stated that the loss of biodiversity matters for Ethical, Emotional, Environmental and Economic reasons.

Compared to many areas of the world, especially the tropics, biological diversity (biodiversity) in Europe is relatively low (EASAC 2005). However, there are many unique and endemic species and ecosystems, such as the Iberian Lynx (Lynx pardinus); the Cyprus Whipsnake (Coluber cypriensis); Zino's Petrel (Pterodroma madeira); and some 3,500 unique plant species (IUCN 2001). The Mediterranean Basin (stretching into North Africa) in particular is one of WWF's Global 200 Ecoregions (a science-based global ranking of the Earth's most biologically outstanding terrestrial, freshwater and marine habitats (WWF 2000) and is also recognised as a global biodiversity hotspot (Conservation International 2005).

Depleting our Natural Resources, many species remain threatened (EEA 2005)

42% of native mammals
15% of birds
45% of butterflies
30% of amphibians
45% of reptiles
52% of freshwater fish

The Danube river basin also represents a significant focus for European biodiversity. It is home to a diverse system of natural habitats including Germany's Black Forest, the Alps, the Carpathian Mountains and the Hungarian puszta plains. Romania, currently an EU accession country, hosts the Danube Delta – a UNESCO World Biosphere Reserve and the largest reed bed in the world. A unique mixture of canals, reed beds, lakes and ponds, allows this Delta to shelter over 280 bird species. 70% of the world's population of White Pelicans (Pelacanus onocrotalus) and 50% of the world's populations of Pygmy Cormorant (Phalacrocorax pygmeus) and Red-breasted Goose (Branta ruficollis) can be found in the Delta[1].

European people obtain many products and services from nature. For example, forests provide timber, water purification and flood control, farmlands provide food, and wetlands provide flood control, water purification and recreation. Almost half of the EU's population lives less than 50 km from the sea (CEC 2005a) and many depend on coastal tourism, shipping and fisheries. Agriculture, including arable land is one of the most important forms of land use in the European Union, covering about 43% (137 million ha) of EU territory (Young et al 2005).

2.1.2

What measures are in place to protect Europe's natural heritage?

The first piece of true nature protection legislation in the EU was the Birds Directive (79/409/EEC), passed in 1979[2]. This Directive was developed largely as a result of public concern about the killing of migratory birds in southern Europe. It protects all wild bird species, and requires the protection of sites that are important breeding and resting places for birds – these sites must be designated as Special Protection Areas (SPAs).

The Birds Directive was followed in 1992 by the Habitats Directive (92/43/EEC). The Habitats Directive takes a broader, more modern approach to conservation, and aims to protect wild species and their habitats. It contains provisions for the development of a network of protected areas (Natura 2000), which includes the SPAs designated under the Birds Directive, along with Special Areas of Conservation (SACs) designated under the Habitats Directive. Establishment of the Natura 2000 network is an ambitious task, and the sites designated to-date already cover a total area larger than Germany. Site designation has not been easy and has been met with resistance from landowners in many countries, especially farmers and foresters (eg Ireland, Finland).

1 See www.panda.org/about_wwf/where_we_work/europe/what_we_do/danube_carpathian/blue_river_green_mtn/danube_river_basin/index.cfm for more information.

2 Together, the Birds and Habitats and Water Framework Directives are referred to as 'the nature and water protection Directives'.

Why does it matter?

The Millennium ecosystem assessment covered many ecosystem services (services that ecosystems provide to people) including: provision of food, fibre, fuel, genetic resources, biochemicals, fresh water, education and inspiration, aesthetic values; support to primary production, nutrient cycling, soil formation and retention, provision of atmospheric oxygen, water cycling; provision of other services such as seed dispersal, pollination, pest and disease regulation, erosion regulation, natural hazard protection, climate regulation. See www.millenniumassessment.org.

The aim of Natura 2000 is to promote the conservation of natural habitats and wild fauna and flora while taking into account the economic, social and cultural requirements and specific regional and local characteristics of the Member States. A "favourable conservation status" must be met for all species and habitats included in the Directive's annexes. The idea of the network is not to create "nature sanctuaries" where human activity is prohibited, as in many areas the presence or resumption of beneficial human activity is essential for maintaining biodiversity. New activities or developments are not necessarily prohibited within Natura 2000 sites; on the contrary economic activities that are compatible with conservation requirements are encouraged. However, these need to be judged on a case-by-case basis. There is a clear procedure in the Habitats Directive for the assessment of development proposals that are likely to have an impact on designated sites (Article 6, Habitats Directive).

3 For more information, see http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/05/294&format=HTML&aged=0&language=EN&guiLanguage=en

The key objectives of the nature and water protection Directives

- **The Birds Directive** (79/409/EEC)
  Seeks to control the hunting and killing of wild birds and protect their eggs and nests. It also requires the provision of a sufficient diversity and area of habitats to maintain populations of all bird species.

- **The Habitats Directive** (92/43/EEC)
  Aims to contribute towards the maintenance of biodiversity within the European territory of the Member States through the conservation of natural habitats and of wild fauna and flora. The Directive aims at establishing a "favourable conservation status" for habitat types and species selected as being of Community interest.

- **The Water Framework Directive** (2000/60/EC)
  Expands the scope of water protection to all waters and sets clear objectives that a "good status" must be achieved for all European waters by 2015 and that water use be sustainable throughout Europe.

Despite significant delays, the terrestrial sites of the Natura 2000 network are now established in all of the EU-15 Member States. The ten Member States that joined the EU in 2004 are in the process of confirming their site lists through biogeographical seminars and consultation with the Commission. The aim is to complete these seminars by the end of 2006[3]. Marine sites are still underrepresented, and designation and management of these will still present a significant future challenge for Member States. In addition, the annexes to the Habitats Directive do not include many species of marine fish. Most marine fish species will therefore only benefit from Natura 2000 indirectly through habitat protection, or where specific site management guidelines prohibit or regulate fishing.

The Habitats Directive contains a provision for EU co-funding of Natura 2000 (Article 8). In 2004, the European Commission estimated the cost for the management of Natura 2000 sites at € 6.1 billion[4] per year for the EU-25 (CEC 2004a). NGOs have subsequently published other figures, and consider the Commission's estimate to be highly conservative. In the future (starting in the 2007–2013 funding period), the majority of the co-funding for Natura 2000 is expected to come from a combination of national funding sources and the EU's major funding instruments, notably the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development, and the European Fisheries Fund. Funding will also be available through the Financial Instrument for the Environment (LIFE+).

The most recent piece of European legislation with significant relevance to nature conservation is the Water Framework Directive (WFD, 2000/60/EC). The WFD obliges Member States to take protective or restorative action in the management of rivers, lakes, wetlands, estuaries, coastal waters and of terrestrial ecosystems dependent on water that are part of the Natura 2000 network. However, the WFD obligation of achieving "good ecological and chemical status" affects all waters across the EU, regardless of whether relevant water bodies (eg rivers, lakes) are protected or not. As with the Habitats Directive, there is a provision for exemptions, but only if a series of strict criteria are met.

Key dates and political commitments:

2001: Gothenburg – European leaders commit to halting the loss of biodiversity by 2010. Goal is included in EU Sustainable Development Strategy
2002: CBD COP 6 – Parties to the CBD commit to achieve a significant reduction in biodiversity loss by 2010
2002: World Summit on Sustainable Development endorsed the CBD goal
2003: Kiev – Fifth Environment for Europe Ministerial Conference: Pan-European environment ministers (from 51 countries) endorsed the goal of halting the loss of biodiversity by 2010
2004: Malahide Conference – stakeholders release the Message from Malahide setting out objectives and targets to meet the 2010 objective
2006: European Commission expected to release its Communication setting out a Road Map to 2010
2007: Start of the new EU funding period

Aside from completion of the Natura 2000 network, and implementation of the nature and water protection Directives, European leaders have made additional commitments to protect European biodiversity. The parties to the UN Convention on Biological Diversity (CBD) made a commitment at the sixth meeting of the Conference of the Parties (2002) "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth". The European Community has ratified the CBD, and all Member States are parties. In 2001, EU Heads of State and Government made an even more ambitious commitment at the EU's Spring Summit in Gothenburg to halt the decline of biodiversity by 2010[5]. This goal was included as part of the EU's Sustainable Development Strategy[6].

4 'Billion' is taken to mean 1,000,000,000 (ie one thousand million) in this document.

5 'The European Council agrees that biodiversity decline should be halted with the aim of reaching this objective by 2010 as set out in the Sixth Environmental Action Programme.' Presidency Conclusions, Goteborg Council, 15 and 16 June 2001. SN/200/1/01 REV1, page 8. http://ue.eu.int/newsroom/newmain.asp?lang=1

6 See http://europa.eu.int/comm/sustainable/docs/Summit%20conclusions%20june%202005%20EN.doc

In May 2004, a stakeholder conference entitled Biodiversity and the EU – Sustaining Life, Sustaining Livelihoods was held under the Irish Presidency in Malahide, Ireland. The conference was organised to finalise a year-long consultative process to review the implementation, effectiveness and appropriateness of the European Community Biodiversity Strategy and Action Plans. The Conference outcome was the Message from Malahide which set out 18 key objectives and 97 targets designed to meet the EU commitment to "halt the decline of biodiversity by 2010"[7].

In its conclusions on 28 June 2004, the Council of the European Union (meeting as the Environment Council, 10997/04) adopted conclusions related to halting the loss of biodiversity by 2010. Amongst these was a conclusion that urged the Commission to submit, as early as possible in 2005, a Report to Council and Parliament on its assessment of the implementation, effectiveness and appropriateness of each of the objectives and targets set in the European Community Biodiversity Strategy and Action Plans taking into account the consultative process now concluded and, notably, the Message from Malahide. The Commission's Communication is now expected to be released in April 2006, and will set out a Road Map to 2010, giving priority actions that will be necessary for EU institutions, Member States and civil society if the goal of halting biodiversity loss is to be met.

2.2 Nature under pressure

Together with Asia, Europe is the most urbanised and densely populated continent in the world. Nature must compete for space with a total population of around 459.5 million people[8], each with his/her own demands for resources. Natural systems in Europe are now under threat due to many factors, including climate change, intensification of agriculture, tourism, dams, urbanisation, invasive alien species, habitat fragmentation, and eutrophication (EEA 2003, 2005).

Within the EU's territory, some 42% of mammals are endangered, together with 15% of birds and 45% of butterflies and reptiles[9]. Ecosystems are also at risk. Natural and semi-natural grasslands have been affected by intensive agriculture, husbandry and urbanisation, and face further threats from land drainage, changes in forest cover, and land abandonment. Mountainous areas are subject to challenges from agricultural and pastoral practices, recreational uses and climate change (EASAC 2005).

The major driver of declining biodiversity at all levels is habitat loss and fragmentation. Loss and fragmentation of natural habitats can be attributed to agriculture, forestry, urbanisation, construction of infrastructure, and tourism (Delbaere 1998). Certain habitat types are particularly vulnerable to loss: for example, the disappearance of wetlands over the last century in Europe has been dramatic, ranging from 60% in Denmark to 90% in Bulgaria (EEA 2003). Europe has lost up to 90% of its floodplains due to river alterations for agriculture, navigation, flood control and other purposes (Tockner & Standford, 2002).

7 Refer to http://europa.eu.int/comm/environment/nature/biodiversity/develop_biodiversity_policy/malahide_conference/pdf/conference_report.pdf

8 Estimate at 1 January 2005 – see Eurostat: http://epp.eurostat.cec.eu.int/portal/page?_pageid=0,1136184,0_45572592&_dad=portal&_schema=PORTAL

9 Figures from http://europa.eu.int/comm/environment/nature/biodiversity/intro_en.htm

Some Trends in European biodiversity

Provisional analysis on trends over the period 1970–2000 for butterflies found in a range of ecosystems show that population size has decreased by 90% over 30 years for most wetland butterflies in mires, bogs and fens. There has also been a 50% reduction in population size of grassland butterflies over this period, also likely as a result of a reduction in the area of grassland and increased pressures from nitrogen deposition etc.

A comparison between IUCN global status in 2000 and the 2003 IUCN red list shows that:

- 902 taxa retain the same status
- 2 taxa have an improved status
- 3 taxa have declined in status (eg Iberian Lynx)
- 69 taxa found in Europe have been added to the IUCN 2003 red list, including 4 that are critically endangered.

Overall 60% of European fish catches exceed safe limits, ie levels above which the biomass removed by fishing is no longer replaced by population growth. Catches of open sea fish account for almost two thirds of all catches; and about half of these catches are outside safe limits. Industrial fishing catches account for another 20% of the total. Fish play an integral role within the wider marine environment, which is experiencing pressure from shipping, pollution, coastal eutrophication and climate change. The continuation of present trends of over-fishing will therefore probably lead to substantial changes across the entire marine ecosystem.

See Malahide conference background paper (by EEA) at
http://europa.eu.int/comm/environment/nature/biodiversity/develop_biodiversity_policy/malahide_conference/pdf/conference_report.pdf

Key Actions: Safeguarding priority sites and species

as defined for the Challenge 1 in draft Communication from the EU Commisssion on Halting the Loss of Biodiversity by 2010 – and Beyond (15 Nov 2005).

- Complete, designate, finance and ensure effective, management of the Natura 2000 network by 2010 (2012 for marine sites).
- Strengthen coherence and connectivity of the network*.
- Expand the network to candidate countries.
- Expand the species action plan approach where appropriate.
- Strengthen support for priority sites and species in those Outermost Regions which are not addressed by the nature directives**.

* Provided for in Habitats Art 10 and Birds Dir. – and for which broad acceptance at Nature Directors meeting Oct05 of necessity for further work on this.

** French Departements Outre-Mers (DOM) – ie. French Guiana, Guadeloupe, Reunion, Martinique.

2.3
Conclusions and recommendations

Europe's population continues to grow, and demands for new infrastructure and other developments continue to increase. If the remaining natural heritage of Europe is to be preserved, it is vital that mechanisms for planning new developments are able to accommodate nature protection. European policy will need to incorporate provisions that:

- Provide protection for the last remaining areas of Europe with the least human influence
- Support positive management of sites
- Prevent negative impacts on biodiversity

One of Europe's threatened species: Common Water-frog, Rana esculenta.

Recommendations

Member States should

- Take action to ensure the nature and water protection Directives are being fully and effectively implemented including:
  - × Providing sufficient funds from Rural Development, Structural and Fisheries Funds and LIFE+.
  - × Achieving and maintaining favourable conservation status for species and habitats of Community interest.
  - × Ensuring reporting and monitoring frameworks are in place.
  - × Protecting, preventing further deterioration and enhancing the status of aquatic ecosystems and terrestrial ecosystems and wetlands directly depending on aquatic ecosystems.
- Make progress in designating marine sites for inclusion in the Natura 2000 network as soon as possible.

The European Community should

- Ensure that Member States are adequately supported (in terms of guidance and finance) to allow full implementation of the existing Directives.
- Ensure that sufficient resources are committed to measures aimed at achieving the 2010 goal of halting biodiversity loss.
- Continue to effectively monitor and enforce European legislation and ensure that infringements are not ignored or accepted.
- Raise awareness for nature protection in all areas.

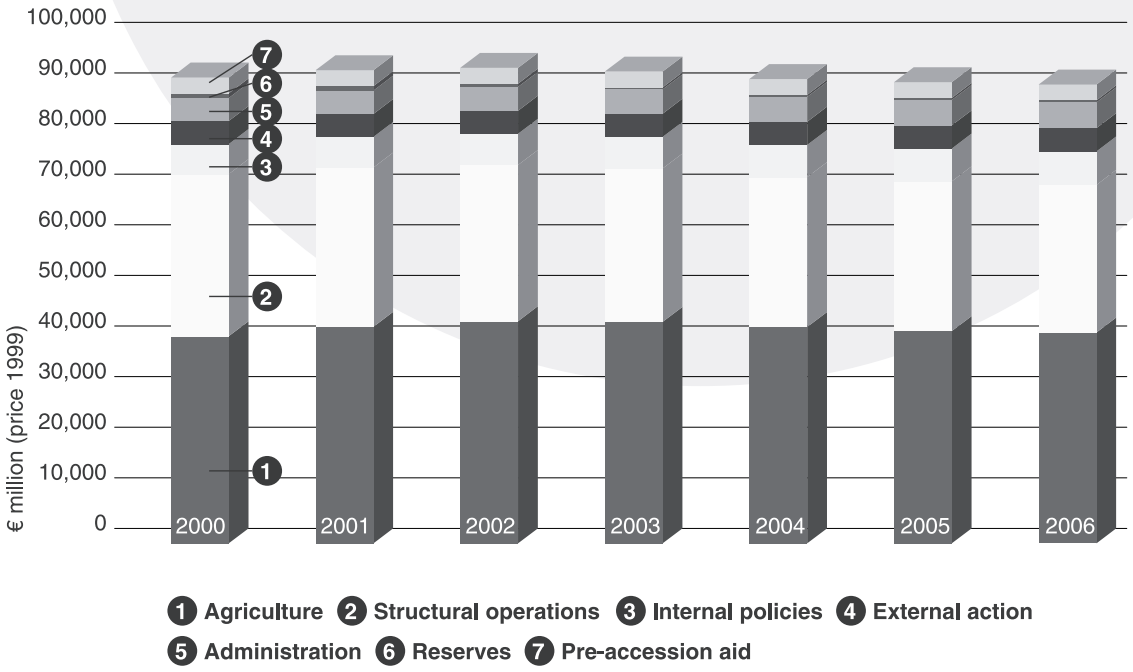
3. EUROPEAN FUNDS

3.1
The main European funding lines and how they operate

The European Community has its own budget to finance its expenditure. The majority of the revenue to fund the EU budget comes from Member State contributions based on Gross National Income. Additional amounts come from agricultural duties, customs duties, and VAT (Value-Added Tax) based resources[10]. Figure 1 shows the proportion of funds spent in different areas for 2000–2006. Agriculture payments supporting the Common Agricultural Policy (CAP) make up the largest part of the budget, and payments for structural operations are also very significant (see discussion below).

Obtaining a clear understanding of the different EU funds and how they operate can be difficult, as eligibility for funding requests is determined by many different criteria, and funding for a single project can come from several different sources. The discussion below aims to set out the key aspects of the major European funding streams, but for more information, readers are advised to refer to the specific websites of the EU institutions: www.europa.eu.int.

Figure 1: **Proportions of EU fund allocations 2000–2006**[11]



10 For more information see http://europa.eu.int/comm/budget/faq/index_en.htm#4

11 Figure from: http://europa.eu.int/comm/budget/library/documents/multiannual_framework/2000_2006/grphperfin20002006_en.pdf

Note that this chapter focuses on the operation of the EU funding instruments that are in place for 2000–2006 as this is the period when the activities described in the case studies took place (see Chapter 5). During the 2007–2013 funding period, the funds will be governed by different regulations. The key differences between the two sets of regulations are outlined below:

- The Fisheries funding instrument will no longer be one of the Structural Funds, but will be an independent funding instrument under the responsibility of DG Fisheries
- The Cohesion Fund will change to a programme approach, integrated with the ERDF programming
- The European Agriculture Fund for Rural Development (EAFRD, formerly called the guidance section of EAGGF), will no longer be one of the Structural Funds, but will be a separate funding instrument under the responsibility of DG Agriculture
- The former funding instrument for Natura 2000 (LIFE Nature) will no longer exist after 2007. Natura 2000 funding will be provided through existing EU funding lines ("integration option"). One single financial instrument for the environment will be established (so called LIFE+) and will replace the large number of different environmental funds that were in existence previously (eg forest focus). Most of the money allocated to LIFE+ will be administered by the Member States themselves – this is a major change from the current approach where the LIFE fund is administered by the European Commission

Even with these administrative changes, EU funding mechanisms and the problems associated with them are expected to be similar in the 2007–2013 period (WWF 2005c).

12 For a map of Objective 1 regions, see http://europa.eu.int/comm/regional_policy/objective1/map_en.htm

3.1.1

Structural and Cohesion funds

Structural operations (funded through the Structural and Cohesion Funds) are intended to address variations in certain socio-economic factors between European regions (eg unemployment rates and gross domestic product). The funds are targeted mainly at Objective 1 areas (less developed regions, Fig 2)[12]. The main European Structural Funds for the 2000-2006 period are (details, see Fig, inside cover):

- The European Regional Development Fund (ERDF), whose principal objective is to promote economic and social cohesion within the European Union through the reduction of imbalances between regions or social groups.
- The European Social Fund (ESF), which is the main financial instrument allowing the Union to realise the strategic objectives of its employment policy.
- The European Agricultural Guidance and Guarantee Fund (EAGGF – Guidance Section), which contributes to the structural reform of the agriculture sector and Common Agricultural Policy (CAP) and to rural development.
- The Financial Instrument for Fisheries Guidance (FIFG), the specific fund for the structural reform of the fisheries sector.

As an illustration of Structural Funds priorities, in the period between 2000 and 2006:

- About € 49.3 billion (22.5% of the overall Structural Fund allocations) was available for transport, energy and telecommunications networks in Member States and acceding and candidate countries.
- € 52.2 billion (23.8% of the allocations) was earmarked to promote the development, modernisation and cooperation of enterprises.
- The European Social Fund received an allocation of some € 62.1 billion, representing 28.3% of the total Structural Funds (CEC 2003a).

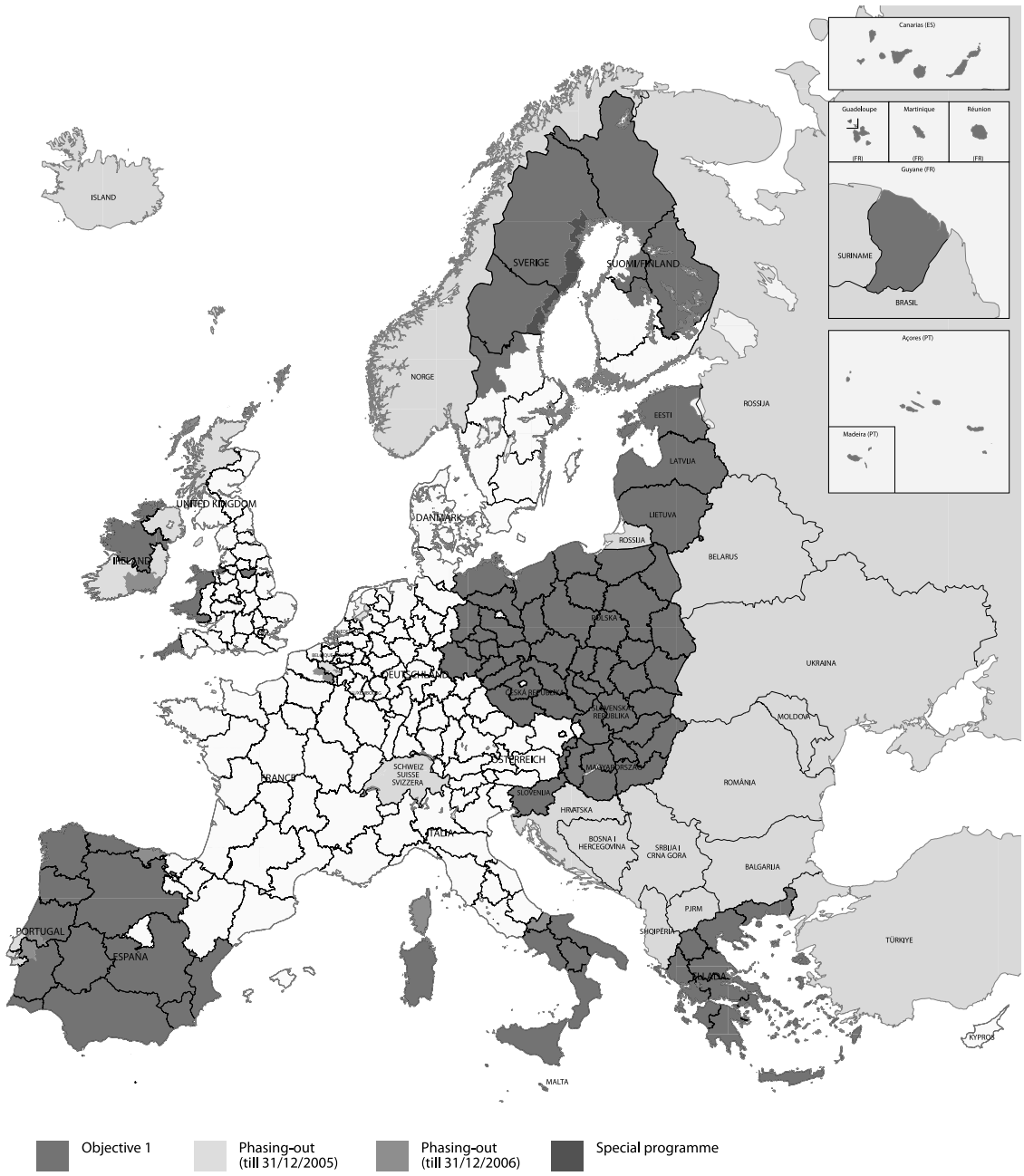


Figure 2:

Map of eligible regions receiving transitional support under the Objective 1 of the Structural Funds.

Grey colour indicates regions that are entitled for full support and light grey indicates regions eligible for transitional support. Source: European Commission DG Regional Policy web pages (23 Nov 2005)

Annual regional policy budgets in the European Community in € millions

	1970	1980	1990	2000
ESF	37.0	700.5	3212.0	7675.0
EAGGF Guarantee section	58.4	314.6	1825.3	3510.4
ERDF	-	793.4	4554.1	14226.4
EFF	-	-	-	498.0
Cohesion fund	-	-	-	2800.0
Total	95.4	1808.5	9591.4	31957.0
Number of member states	6	9	12	15

Source: European Commission, http://europa.eu.int/comm/regional_policy

The Cohesion Fund is an additional structural instrument aimed at assisting Member States to reduce economic and social disparities and to stabilise their economies. It has been in operation since 1994. The Cohesion Fund can finance up to 85% of eligible expenditure for investments into large infrastructure measures for environment and transport. The Member States that were eligible for assistance through the Cohesion Fund are those whose Gross National Product (GNP) per capita is below 90% of the EU-average[13].

The Financial Instrument for Fisheries Guidance (FIFG, Regulation 2792/1999) was established in the early 1990s to improve the competitiveness of the fisheries sector through financially supporting the restructure of industry. Measures included under FIFG were fleet renewal and modernisation of fishing vessels, adjustment of fishing capacity, socio-economic measures, aquaculture, finding new market outlets and innovative actions. In the programming period 2000–2006, a total of € 4,119,340,000 was allocated to Member States under the FIFG. The current FIFG will end in 2006 and will be replaced by the European Fisheries Fund (EFF) for the period 2007–2013.

The EFF, like the FIFG, is to play a dual role: firstly in adding value to resource exploitation by helping to adjust the structures of the production sector and Common Fisheries Policy (CFP) monitoring tools; and secondly in maintaining cohesion of populations and areas dependent on fishing.

13 Refer to http://europa.eu.int/comm/regional_policy/funds/procf/cf_en.htm.

Traditional fishing on the Danube near Vardim island, Bulgaria.

National Strategic Plans (NSPs) are national plans that present an overall strategic vision with regard to the medium term development policy of the fisheries and aquaculture sector in the Member States. They should identify the most relevant elements of the CFP for the Member State's fisheries and aquaculture sectors, and focus on the prioritised interventions. NSPs are broader than the CFP alone however, and should relate equally to other specific aspects not covered by the CFP (eg environment, regional planning, employment), and the interactions between fishing and other aspects of maritime affairs.

National Operational Programs (NOPs) are national plans developed by the Member States, in much the same way as the NSPs. However, they are much more specific and focused, and set out how the Member States will operationalise the EFF funds, therefore setting the framework for implementing the policies and priorities to be co-financed by the EFF. An activity should therefore not be funded under the EFF if it is not in the NOP.

Strategic Environmental Assessment (SEA) is a procedural tool for assessing – ex ante – the impacts of plans and programmes (and in some countries also policies) on the environment. In avoiding the future conflict in EU funds under the EFF it is recommended the SEA Directive be applied for the NSP and NOP that Member States will be required to develop. The application of the SEA Directive should prevent strategic conflicts in spending which have previously occurred, as demonstrated by the tuna farming case study (see case study 4).

3.1.2

Agricultural funding

The Common Agricultural Policy (CAP) is recognised as a major driver of landuse in Europe. The EAGGF provides funding for measures to support implementation of the CAP, including direct payments and funding for rural development including agri-environment schemes. The Guidance section of EAGGF is a Structural Fund and is targeted at Objective 1 areas. The Guarantee section is not a Structural Fund, and funds rural development measures outside Objective 1 areas, along with direct payments across the EU. Both direct payments and rural development measures can have impacts on biodiversity, as both may drive changes in types of agriculture and land use. Agricultural funding is particularly complex, as both the eligibility for payments and the quantity are very variable.

Table 1:

EAGGF Rural development expenditure by main measures 2000–2006[14]

Rural development measures	€ Million	Share
Investments in farms	4682.0	9.5%
Young farmers	1824.0	3.7%
Vocational training	344.0	0.7%
Early retirement	1423.0	2.9%
Less favoured areas and areas with environmental restrictions	6128.0	12.5%
Agri-environment	13480.0	27.5%
Investments in processing/ marketing	3760.0	7.7%
Afforestation of agricultural land and other forestry	4807.0	9.8%
Adaptation and development of rural areas	12649.0	25.8%
Total rural development measures	49097.0	100.0%

NOTE: not all programmed expenditure is included, eg evaluation, technical assistance, and certain commitments relating to the previous programming period. Figures do not include additional funding resulting from the introduction of compulsory modulation.

14 From http://europa.eu.int/comm/agriculture/publi/fact/rurdev2003/en.pdf.

A breakdown of planned rural development expenditure for 2000–2006 is given in Table 1. This shows that expenditure on agri-environment schemes (the rural development measures that most often have significant positive impacts for biodiversity) averages around € 1.926 million per year[15]. Total spending on rural development amounted to around 13% of the CAP budget in 2000–2002 (EEA 2004a), and amounts to approximately 7.2% of the total EU budget.

The reformed regulation for the Rural Development Funds, the EAFRD, will come into force on 1 January 2007. It is based on four axes, each with its own set of measures:

Axis 1: **Improving competitiveness of farming and forestry**

- Improving and developing infrastructure related to the development and adaptation of agriculture and forestry
- Supporting farmers participating in food quality schemes
- Establishing young farmers
- Supporting semi-subsistence farmers in new Member States to become competitive

A minimum of 10% of the national envelope has to be spent on axis 1. The EU co-financing rate is limited to a maximum of 50% (75% in convergence regions).

Axis 2: **Improving environment and the countryside**

- Natural handicap payments to farmers in less favoured areas (LFA's; eg Mountain areas)
- Natura 2000 payments
- Agri-environment measures
- Animal welfare payments
- Several measures related to afforestation and forest management

A minimum of 25% of the national envelope has to be spent on axis 2. The EU co-financing rate is limited to a maximum of 55% (80% in convergence regions).

Axis 3: **Improving quality of life and diversification**

- Diversification to non agricultural activities
- Support for the creation of micro enterprises
- Encouragement of tourism
- Village renewal

A minimum of 10% of the national envelope has to be spent on axis 3. The EU co-financing rate is limited to a maximum of 50% (75% in convergence regions).

Axis 4: **The LEADER-axis**

Each programme must have a LEADER element for the implementation of bottom-up local development strategies by local action groups. A minimum of 5% of national programme funding is reserved for LEADER, thus encouraging the implementation of integrated, high-quality and original strategies for sustainable development, focusing on partnerships and networks of exchange of experience.

The total budget for the EAFRD remains to be decided, but is likely to be approximately € 75 billion for the whole programming period 2007–2013.

15 Refer to http://europa.eu.int/comm/agriculture/publi/fact/rurdev2003/en.pdf for more information on rural development spending.

3.1.3

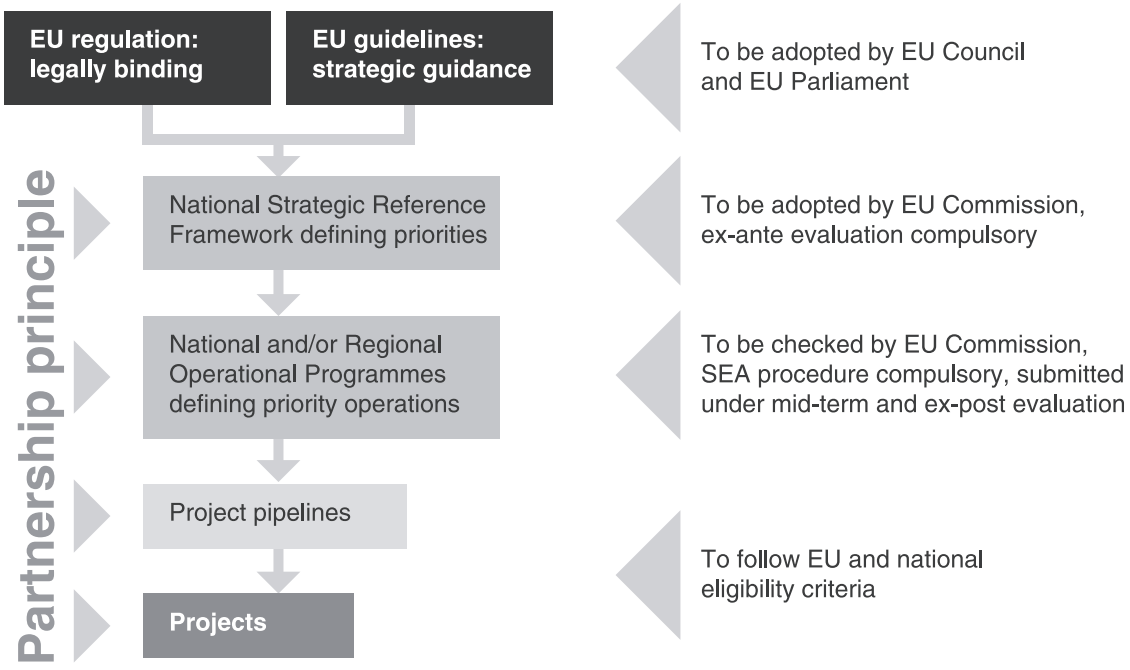
Operation of the funds

The EU Structural Funds (ERDF, ESF, EAGGF (Guidance) and FIFG) operate through a "programming" approach (see Figure 3). This involves the preparation of multi-annual plans by Member States in partnership with the Commission. The programming approach means that the Commission is not involved in the selection of specific projects in the Member States. It is up to the national (or regional) authorities to select the projects that are of the highest priority in each programme.

The Commission does, however, have the chance to examine Member State strategic and operational programming documents and ensure that these contain the necessary measures to address the priorities that are identified in the Strategic Guidelines for each fund. Each Regulation also contains a "partnership clause" which requires designated stakeholders to be involved in preparation, monitoring and evaluation of the programmes.

The LIFE fund and the Cohesion Fund until 2006 do not operate through programmes, though this will change for the 2007–2013 period. Instead, individual projects are proposed by national authorities, and these are then examined and approved by the Commission ("centralised approach"). Due to the limited budget of about € 60 million per year, LIFE has generally been of most use as a "pump priming" fund to get projects running, or to fund projects that have not been eligible under other European funds.

Figure 3:
Programming architecture (generic) for EU Structural Funds (diagram by Stefanie Lang WWF-EPO).



3.2

EU funds and nature: threat or advantage?

While the majority of funds available for allocation to Member States have environment and/or nature as a consideration, these considerations are generally not the driving purpose of European funding. The exception to this has been the LIFE fund (which is generally limited to Natura 2000 pilot projects, eg those that are developing "best practice") and some agri-environment measures. However, by comparison with the amounts available under the Structural and Cohesion Funds, the LIFE-Nature budget is very small – 0.06% of the total budget in 2004 compared with 34% of the total budget allocated to Structural and Cohesion funds. In fact, the combined annual budgets for the CAP and Structural Funds are approximately 1,200 (one thousand and two hundred) times as large as the annual budget for LIFE-Nature during the 2000–2006 period. In Greece for the programming period 2000–2006 only around 3% of the available Community Support Framework (6% if renewable energy is added) are channelled to the environment, while another 4.7% is targeting resource management measures. On the other hand almost 40% of the available money is used to fund projects with anticipated negative impacts on the environment, such as large infrastructure works (Liarikos 2004).

The implication of this imbalance is that unless consideration of biodiversity and nature is included in selection of projects and design of programmes for the other funds, there is a risk of overwhelming negative impacts on biodiveristy.

Therefore the number of projects where Member States, European institutions, and stakeholders have worked together to create positive outcomes for nature[16] need more attention and support in future.

Example of EU budget allocations: 2004

Allocation	% of total	Amount € million
Agricultural aid granted under the EAGGF Guarantee Section (European Agricultural Guidance and Guarantee Fund)	44%	42.889
Structural operations (structural and cohesion expenditure)	34%	33.142
External action	7%	6.823
Internal policies	7%	6.823
Administrative expenditure	6%	5.849
Other	2%	1.950
Total	100%	97.476

Data from http://europa.eu.int/comm/budget/faq/index_en.htm#6

By contrast:

- The total budget for LIFE-Nature is around € 60 million per year, representing 0.06% of the total EU budget.
- Agri-environment spending is around € 1.926 million per year, representing around 2% of the total EU budget.

The European Commission has accepted that Western Europe's population density and level of industrialisation have seriously impaired biodiversity (CEC 2004a). It has also stated that continuing threats to biodiversity include:

1. Overexploitation of natural resources, fishing, collection and trade in species and parts of species, hunting in some instances.
2. Urban sprawl, intensive agriculture and forestry (and associated infrastructure).
3. Extension of road, rail, inland navigation and electricity networks which fragment habitats and displace some species.

16 WWF, Natuur en Milieu and Land Use Policy Group, 2005. Rural Development Environment Programmig Guidelines. Available at www.lupg.org.uk/uploaded_photos/pubs_elcomanualfinal.pdf.

Yet EU funds are being used for some of the exact activities that the Commission has recognised as key threats. In some cases, the provision of such funds may be limiting Europe's ability to meet its commitments to halt biodiversity loss by 2010. Some examples of EU funded projects contributing to these threats to nature are discussed below, and these are set out in more detail in the case studies (see Chapter 5).

The previous operation of the funds may be able to provide lessons that will enable improvements to be implemented in the upcoming 2007–2013 programming period, and some suggestions for such improvements are given in the recommendations of this report. Although an undue focus on negative cases is not always the most constructive approach, it is useful to examine situations where there have been negative impacts and to establish the drivers that have led to these impacts. In this way, practices can be changed and conclusions drawn up to ensure sound use of funds in the future.

3.2.1

The positive side: EU funds supporting biodiversity

There are many situations where the Commission, Member States and regions have worked to develop projects that produce "win-win" situations, ie positive outcomes for biodiversity alongside economic and/or social improvements. In addition to projects supported through LIFE-Nature, other funds (in particular the Structural Funds and EAGGF) have been applied to projects with significant benefits to nature.

Examples of such projects include:

- ERDF contributing to conservation of the Monk Seal in Greece through education, awareness-raising, preparation of information materials and population monitoring (WWF 2005c).
- EAGGF used in Austria for the Nature Protection Plan project that aimed to increase awareness in farmers of the value of the landscapes they manage, and provide guidance in identifying valuable habitats and communicating the benefits of nature conservation to consumers (WWF 2005c).

Ramsar Information Centre "Unterwasserreich" at Schrems, Austria.

- EAGGF used in Italy to develop eco-tourism opportunities linked to the Po Delta. These Funds also facilitated cooperation with another wetland area in Ireland,which enabled the two projects to share information and experiences (WWF 2005c).
- ERDF used in Finland to develop a nature centre in a valuable wetland area. The programme aimed to create employment as well as enhance the conservation of a valuable Natura site (WWF 2005c).
- ERDF used in Austria for the establishment of the first Ramsar information centre in Austria. The centre was aimed towards Ramsar site conservation and wetlands awareness raising and regional tourism development[17].
- ESF used in Germany (Bavaria) to create jobs in the field of nature conservation (WWF 2005c).
- ERDF used in Greece for the conservation and management of the Natura 2000 network, although the overall allocated budget has been minimal (WWF Greece, unpubl.).

Nature conservation projects should not be seen or portrayed as a drain on local economies, but as an asset. In many cases, Member State authorities seem to lack awareness of the possibilities for "win-win" situations where environmental projects also provide socio-economic benefits. IEEP and WWF completed a project in 2002 that highlighted the possible positive impacts from the implementation of Natura 2000 (ten Brink et al 2002). Some of the benefits noted were:

- Increased tourism opportunities
- Developing products and logos associated with Natura 2000
- Amenity/leisure and health value
- Capacity building and educational opportunities
- Creation of new employment

2000–2006 Objectives: Structural Funds allocation in the UK

	% of total	Amount € million
Objective 1	38%	6.019
Objective 2	26%	4.138
Objective 3	29%	4.568
Community initiatives	6%	0.94
Total	100%	15.665

Objective 1: To assist in development and structural adjustment of EU regions.
Objective 2: To support the economic and social conversion of areas facing structural difficulties (particularly in areas of industrial decline, rural areas, urban areas and fishery dependent areas).
Objective 3: To support the adaptation and modernisation of education and training systems and employment policies.

Source: Scottish Executive 2001 (from Scottish Parliament Information Centre publication: subject map Devolved Area 01/03; 4 April 2001), www.scottish.parliament.uk/business/research/pdf_subj_maps/smda01-03.pdf

It is estimated that over 125,000 European jobs are supported by nature-conservation related activities. In the UK, spending on local goods and services at RSPB-Birdlife's protected sites is more than € 28 million each year (Birdlife International 2005).

17 See www.unterwasserreich.at

There are many opportunities to do more. Projects that provide opportunities to contribute to biodiversity alongside other objectives (such as risk reduction) should also be promoted more widely. For example, the Cansino project in Portugal[18] (currently being undertaken by WWF Mediterranean Programme, other partners and the Portuguese Reforestation Commission) involves restoring burnt areas and re-designing forest landscapes in order to make them more resistant to fires. Cork oak trees will play a key role as they are naturally resistant to fire. Patches of natural cork oak trees will be planted in eucalyptus plantations as barriers against fires (see case study 1).

However, there are still several issues of concern relating to the expenditure of funds that benefit biodiversity in Europe, such as:

- The quantity of allocated funds,
- The Member States' administrative capacity to use these funds in an efficient and rational manner
- The relationship between the use of these funds and the management and conservation needs of Natura 2000 (see also Chapter 4.1).

Caught Yellow Fin Tuna (Germa albacora) in a marine farm in the Canary Islands, Spain.

3.2.2

The negative side: EU funds threatening biodiversity

- **EU funds for overexploitation of resources leading to biodiversity loss**

The European Commission has stated that due to overfishing, 80% of the fish stocks in the EU face collapse or are of unknown status. In 2001, 40% of all EU fish catches were taken from stocks considered to be below safe biological limits (CEC 2004a, see also Fig. 4). Although the objective of the Common Fisheries Policy[19] is to "ensure exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions", operations by the European fishing industry have long been criticised by environmental scientists and NGOs for being unsustainable and leading to overexploitation of fish stocks.

The case of the Bluefin Tuna fishery in the Mediterranean illustrates the complexities of applying fisheries funds. European funds from the FIFG have been used to support the modernisation of the French and Spanish purse seine fleets in recent years. This has had the effect of increasing capacity for purse seining of Bluefin Tuna, a species that is being fished unsustainably according to scientific advice (see case study 4).

Tuna farming has been eligible for aquaculture support under FIFG, although it is based on catches of wild tuna that are kept in sea cages before being harvested. EU funds have been used to increase aquaculture capacity, modernise facilities, construct cold stores etc. In 2004, WWF estimated that at least € 19–20 million of European funds had been allocated to tuna farming since 2000.

18 For more information, see www.panda.org/news_facts/newsroom/features/index.cfm?uNewsID=22370

19 Council Regulation (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy.

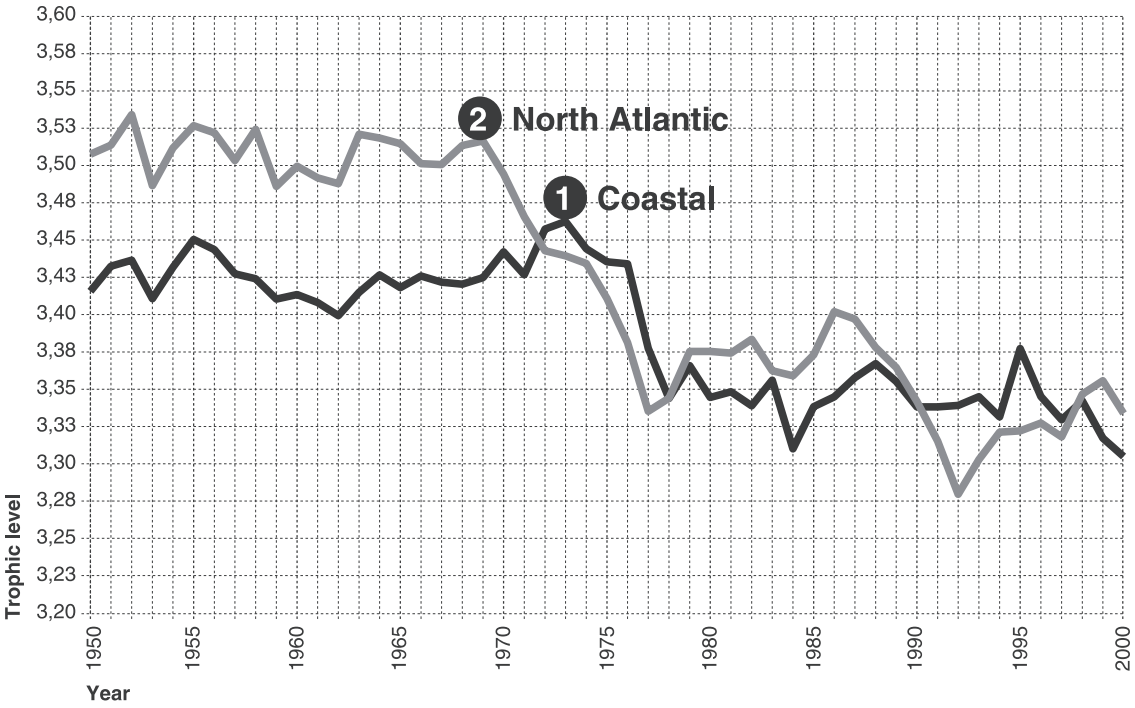


Figure 4:

Trends in mean trophic levels of fisheries landing 1950–2000

The graphs demonstrate that the mean trophic level of fisheries landings, i.e. the mean position of the catch in the food chain, has declined globally at a rate of approximately 0.1 per decade. The decline is particularly visible in the North Atlantic. The graph is based on aggregation of data from over 180,000 half-degree latitude/longitude cells. Data for the North Atlantic is shown in grey and for Coastal waters is shown in black.

Source: Pauly, D. & Watson, R. 2005

The Bluefin Tuna is a top predator that feeds on fish, squid and crustaceans. Removing it from the Mediterranean ecosystem, or even substantially decreasing its numbers could lead to ecosystem perturbations and cascading effects such as those that took place in southern California when sea otters were removed by over hunting. The loss of sea otters led to an increase in sea urchin numbers which eventually resulted in a reduction of the southern Californian kelp forests themselves (Millennium Ecosystem Assessment 2005).

The Bluefin Tuna case study shows how a fish stock has been overexploited as a result of incoherent planning and allocation of funds. There was no foresight in the management of the stock, as juvenile tunas were harvested for tuna farming, whilst the adults were also being fished out. This fishing pressure on both the juveniles and the mature tuna, created an ever decreasing spawning stock biomass (SSB). With reduced reproductive capacity the stock became prone to overexploitation.

This outcome clearly contradicts the sustainability principle of the Common Fisheries Policy, and could lead to irreversible damage to the ecosystem. Although aquaculture and fisheries are treated as two very separate activities, there is a clear negative synergetic effect on the wild stock which is affected by both exploitation activities (aquaculture/tuna ranching and fisheries).

The Commission should require Member States to carry out a SEA when developing their National Strategic Plans under the proposed EFF. Funding should only be provided under this precondition in order to avoid conflict of investment between the management of the fish stocks and biodiversity. This would be the case for the Bluefin Tuna.

The sites that will make up the terrestrial portion of the Natura 2000 network have now largely been designated (or nominated in the case of the new Member States). However, the selection and designation of marine sites has still not been done, despite the fact that the original deadline for this work has expired. Large fish like tuna can be expected to make up an important part of the ecosystems that should be protected at such marine sites.

- **EU funds for intensive agriculture and forestry leading to biodiversity loss**

Arable land, forestry and permanent grassland are key land uses in Europe. In total they cover more than 50% of total EU land area (Young et al 2005, Baldock et al 2005). In many cases, sites that are part of the Natura 2000 network are used for agricultural and forestry activities, and in some situations these activities form an essential part of site-management.

However, in other cases, agricultural and forestry activities have had negative impacts on biodiversity, and in some places these activities have been supported by European funds. For example, in Portugal, the management of forest landscapes is highly conditional on EU policies and funding schemes but there is limited capacity to design ecologically sound and cost-effective measures. Policies are not able to address management on a landscape scale, and an undue focus on local measures such as the clearance of undergrowth for fire prevention using heavy machinery has been damaging for biodiversity. Maintenance of the montado in good condition is important for species such as the Spanish Imperial Eagle (Aquila adalberti), Bonelli's Eagle (Hieraaetus fasciatus), and Black Stork (Ciconia nigra), and also for the Iberian Lynx (Lynx pardinus), the world's most threatened cat species (refer to case study 1 for further details).

Newly created olive plantations on Crete.

Intensive vegetable growing in plastic greenhouses on Crete.

Support for the irrigation of dryland areas has been criticised for being unsustainable, and has also had negative impacts on biodiversity. In Spain, irrigation supported by EU Rural Development Funds has affected species such as Kestrel (Falco tinunculus), Great Bustard (Otis tarda), and Spanish Imperial Eagle (Aquila adaberti) (Dwyer et al 2000, case study 8).

Irrigation not only changes agricultural landscapes, but also drives construction of water-related infrastructure such as dams and channels. Construction of dams can have particularly significant environmental effects, both locally and downstream. In addition to the fragmentation of habitats for species such as the Iberian Lynx, dam construction has been a driver in the clearance of habitats with high biodiversity values (see case study 2).

EU-funded dam building projects in Spain and Portugal have frequently met with high levels of opposition from environmental NGOs and the public. In many cases, the construction of dams has been justified for provision of drinking water for urban areas, but an analysis by WWF and others has indicated that the real reason for construction is to provide water for the irrigation of crops such as sugar beet, maize and cotton (see case study 8).

Investments in irrigation have been justified in some cases (see eg case study 8) on the grounds that they will stabilise rural populations by facilitating continued farming. However, irrigation schemes are often concentrated outside key rural areas that could be subject to abandonment (eg irrigation in coastal areas where human populations tend to be higher). These schemes actually often have a negative impact in neighbouring dryland areas where they may further reduce relative competitiveness of drylands through support of agriculture elsewhere. Subsequently this can eventually lead to land abandonment (and associated negative social and environmental effects) in the very areas whose populations were originally used to justify the funds (see case study 8).

A clear illustration of the complex interrelations between nature and agricultural payments can be seen in the case of olives. While CAP payments remained linked to production levels for olives and olive oil, the high productivity of irrigated plantations meant that they were more profitable. The difference in net income between irrigated and dryland plantations was estimated as being as much as 600% in some cases (Beaufoy 2001). The disparity in income led to abandonment of dryland olive plantations, or conversion to irrigation at the expense of wildlife. Reforms to CAP payment systems have now altered this situation somewhat, but sufficient improvements have not yet been made (see case study 8). In addition to these “direct” effects from irrigation, demand for water to irrigate crops is driving further development of dams (eg La Breña II dam) with the associated effects discussed above.

- **EU funds for transport networks which fragment habitats leading to biodiversity loss**

A specific programme setting out priorities for transport networks (the Trans-European Transport Networks – TENS-T) was established in 1996[20]. In 2003, a revised TENS-T proposal was agreed[21]. Financial support for TENS-T projects comes from the ERDF, the Cohesion Fund, and from the European Investment Bank (EIB) and European Investment Fund (EIF)[22]. The revised proposal identifies 30 priority transport projects throughout Europe.

Impacts of transport networks on nature can occur at several levels. Direct habitat damage from habitat destruction and fragmentation is perhaps the most obvious, but in addition, transport networks may also have secondary effects such as hydrological impacts, increased rates of colonisation by invasive species, secondary urbanisation, and facilitation of increased extractive activities such as forestry.

The direct negative effects of transport networks on nature can currently be observed in several European countries. In Greece, construction of the Egnatia Highway is predicted to lead to fragmentation of the Greek population of brown bears. The project has not yet been completed, and whilst NGOs hope that suggested mitigation measures will reduce impacts on the bear population, the overall impact will undoubtedly be significant. This case clearly illustrates the need for coordination between different parts of the Commission, as funds for the project were approved by one Directorate-General, while another approved funds for a nature protection project to protect the bears which may now be under threat (see case study 3).

Recognising the problem: the 2004 report on Structural Funds

"...particular difficulties were encountered in the new Member States with the application of the Environmental Impact Assessment Directive and the Birds and Habitats Directives (for the Natura 2000 network). Taking a proactive approach, Commissioners Barnier and Wallström jointly wrote to all the new Member States on 1 March 2004 warning them about the difficulties of co-financing without complete Natura 2000 lists."

For more information, see http://europa.eu.int/comm/regional_policy/sources/docoffic/official/reports/pdf/fs2004/annexe.pdf

In Poland, debate continues about the route of the Via Baltica express road to connect the Baltic States to the rest of the EU. This road has the potential to have negative impacts on several very significant sites that have been proposed as part of the Natura 2000 network. The section of the route that is causing most controversy has not been financed by EU funds yet, but EU funds have been used for other parts of the route (see case study 5).

20 Decision 1692/96.

21 See Decision 884/2004 and Regulation 807/2004.

22 For more information, see http://europa.eu.int/comm/ten/transport/financing/figures_en.htm.

On the Danube, the impact of clearing so-called inland navigation "bottlenecks" to enable the river to be used as a freight corridor could have serious implications for wetland ecosystems and associated species. The EU has included several Danube river stretches of high biodiversity value in its priority projects under the TENS-T and intends to allocate substantial funds to completing developments on the river by 2015. NGOs are concerned that the impact of the projects is not being assessed in a cohesive manner, but rather in a piecemeal fashion, which avoids consideration of the overall significance of environmental impacts. The area that may be affected by a full shipping corridor on the Danube includes potential Natura 2000 sites and Ramsar sites (see case study 6) and could prevent the achievement of the EU's Water Framework Directive's "good ecological and chemical status" objectives in this river basin.

In addition to the projects examined in detail in the case studies, some of the other projects identified under TENS-T are also of great concern to environmental groups, including the rail/road bridge over the Strait of Messina[23,24] (between mainland Italy and Sicily) which is considered to be a threat to migrating birds; and the proposal for a motorway in the Kresna Gorge (Bulgaria) rail/road corridor where potential Natura 2000 sites could be threatened[25].

23 See www.rspb.org.uk/international/policy/bridge.asp.

24 The EU Commission is now investigating environmental concerns about the Messina bridge: see www.panda.org/about_wwf/where_we_work/europe/news/news.cfm?uNewsID=24255.

25 See www.rspb.org.uk/international/policy/tetn.asp, and www.birdlife.org/eu/TENS-T.html.

3.2.3
The future of EU funds – steering towards common ground

As discussed in Chapter 2, most of Europe's nature is now linked closely with human activities, and it is under pressure from many different factors. A growing European population has led to intensification of farming practices and increased urbanisation and urban sprawl. Climate change is predicted, by the end of this century, to raise global temperature by between 1.4° and 5.8° Celsius and the sea level by between 9 and 88 cm. Many species will not be able to adapt or to move to other regions (CEC 2004a). The Millennium Ecosystem Assessment (2005) found that over the past few hundred years, humans have increased species extinction rates by as much as 1,000 times the rates that were typical over Earth's history.

Under these circumstances, Europe cannot afford to treat biodiversity as a single issue that is simply considered as part of an Environmental Impact Assessment (EIA). A more positive measure is needed to promote biodiversity concerns alongside safeguards such as EIA. The same threats (eg climate change, natural hazards) that threaten European species and ecosystems may as well threaten economic and social prosperity.

Environmental integration is a requirement under the EC Treaty. Article 6 of the Treaty states that "environmental protection requirements must be integrated into the definition and implementation of the Community policies [...] in particular with a view to promoting sustainable development". However, despite this political commitment, coordination and cooperation between the European agencies dealing with different sectoral issues still appears limited, and this situation is mirrored at the level of Member State and regional administrations.

- **The 2007–2013 funding period: the chance for a bright future?**

The new Regulations that set out the EU funds for the 2007–2013 funding period appear to hold more opportunities for support and consideration of nature and biodiversity than their predecessors. The Commission has indicated that future funds for Natura 2000 will be largely provided through existing Community funding instruments rather than through a designated separate fund. This may give positive results if those authorities that are accustomed to dealing with development and economic issues are encouraged to gain a better understanding of environmental issues.

Most of the Regulations that will govern the revised EU funds are still under discussion at the point of writing this report, and the proposals may still change significantly. However, it is clear that while possibilities for environmental integration may exist in the texts, many key decisions as to whether funding is allocated to projects that will support nature will be left to Member States. Appropriate programmes, project selection and monitoring at the Member State and more local levels are essential.

The European Commission, Member State governments and authorities, regional planners, NGOs, and the general European public all have a role to play in ensuring effective and environmentally friendly use of European funds in the future. Awareness of the drivers that can lead to the use of funds in ways that are destructive to nature is vital (see discussion in Chapter 4). If the EU is to achieve its goal of halting biodiversity loss by 2010, it certainly cannot afford to continue funding the destruction and fragmentation of habitats, the overharvesting of natural resources, and environmentally damaging intensification of agricultural and forestry practices as it has in the past, and as demonstrated in the case studies in this report.

Opportunities to strengthen the 2007–2013 funding proposals in support of biodiversity:

Before Member States can distribute the funds, the following steps will have to be taken for each fund*. Each step provides an opportunity to strengthen the measures in favour of biodiversity. The steps are:

EU strategic guidelines – will be adopted by the Council for each of the funds, covering the entire programming period 2007–2013. These guidelines will set the Community's priorities at a strategic level, with a view to implementing each of the priority headings laid down in the respective Regulation. They will provide a framework for national implementation, and could require that Member States pay particular attention to Natura 2000 funding needs.

National strategic plans or frameworks – are to be prepared by the Member States and negotiated with the Commission before operational programmes are put into place. This is normally to happen within three months of adopting the EU level guidance.

Operational programmes – will be developed by the Member States and adopted by the Commission, highlighting only the most important operations, or in the case of the EFF specific implementing provisions as outlined in the Regulation. In the case of the EAFRD, the funds should be implemented through the rural development programmes. The decision adopting a rural development programme should fix the maximum contribution from the fund for each priority axis. Throughout the process, there should be close consultation with relevant partners.

* Note: LIFE+ has a different procedure

3.3 Conclusions and recommendations

The European funding system is complex, but there are certainly opportunities for EU funds to support nature and biodiversity and these appear to be enhanced in the Regulations that will govern the funds in the 2007–2013 funding period. Many win-win projects have already been realised, and there is potential for more. Effective implementation of the nature and water protection Directives should limit the possibilities for damaging projects. However, increased information is needed on both the opportunities for win-win projects, and the values of nature protection. If the EU is serious about encouraging these kinds of "win-win" projects, its agencies must take a more active role in educating Member State authorities and the European public.

Agriculture and forestry will continue to have a very significant influence on European biodiversity for the foreseeable future. Application of funds in a manner that is consistent with European commitments to maintain biodiversity is essential if the 2010 goal is to be met. The EU must not fund further intensification of agriculture and forestry practices that will threaten European biodiversity.

Given current and future TENS-T plans, it is highly unlikely that construction of European transport infrastructure will slow down over the 2007–2013 period. Local, national and regional politicians often see promises to improve transport networks as a way to gain support in areas with flagging economic prospects. However, such developments must not be permitted if they infringe the requirements of EU Directives or significantly threaten biodiversity values. The European Commission does pursue Member States who have infringed the provisions governing the implementation of the Habitats Directive in the past (see eg C-209/04, a recent case in Austria where authorities were found to have breached the Habitats Directive by failing to adequately consider alternatives to a motorway development[26]). This enforcement is important, but in order to avoid multiple interventions by the Commission, measures should be put in place to ensure that European funds are never applied to projects that are not in line with the nature and water protection Directives.

The structure and content of the national programmes for the different funding lines for the 2007–2013 period will be very important. Member States need to develop good national programmes that will significantly contribute to the goal of halting the loss of biodiversity by 2010. The European Commission will examine the national programmes to ensure that this goal is taken into account.

26 See Case C-209/04. Judgement (in French) available at http://curia.eu.int/jurisp/cgi-bin/form.pl?lang=en&Submit=Submit&alldocs=alldocs&docj=docj&docop=docop&docor=docor&docjo=docjo&numaff=c-209%2F04&datefs=&datefe=&nomusuel=&domaine=&mots=&resmax=100

Recommendations

Member States should

- Include references to support nature and biodiversity (and halt biodiversity loss by 2010) in their national programmes for use of European funds for 2007–2013.
- Ensure that all projects for which they are responsible comply with the provisions of the nature and water protection Directives.
- Promote good coordination between their own national, regional and local authorities and agencies (eg between Ministries of Finance and Environment).

The European Community should

- Ensure that the final Regulations (and Strategic Guidelines) for European funds for the 2007–2013 funding period contain strong references to the nature and water protection Directives, and Natura 2000.
- Ensure that mechanisms are in place to promote coordination between different funding instruments, and to promote coordinated planning at all levels of governance.
- Enforce effectively the requirement that all projects using European funds comply with the requirements of the nature and water protection Directives, and withdraw funding where breaches are detected.
- Monitor the contents of Member State programmes for use of European funds in the 2007–2013 period, and ensure that nature and biodiversity requirements are addressed in all programmes.
- Provide information to the Member States on the opportunities for funding of nature conservation activities, and on the possibilities for win-win projects.

LIFE funded project to support the populations of Iberian Lynx in Andalusia, Spain.

4. **Drivers for use of EU funds**

4.1 What are the drivers and how do they operate?

It is apparent that the provision of European funding can present both risks and opportunities for nature conservation – the funds themselves are not "good" or "bad". The examples set out in the case studies illustrate that there are a number of factors (or "drivers") that can push the use of funds to be "positive" or "negative" for nature. Some of these are described in table 2. In order to illustrate the operation of these drivers, and the complexity of the real world, it is useful to use a hypothetical example (see Box: Farmer Jones, p. 42).

As discussed in Chapter 2, there are already significant European legal and political commitments to protect nature and biodiversity. However, in some situations, Member State authorities may be tempted to ignore these commitments in order to respond to local political pressure. It is the role of the European Community to monitor Member State activities that have implications for the maintenance of European nature and biodiversity.

Through the operation of the European funds, there are certain key opportunities for the European Community and others (eg NGOs) to positively influence Member States to ensure use of funds to support nature and biodiversity. In terms of establishing priorities for the 2007–2013 period, the run up to 2007 will be a critical period of time, as Member States are now preparing their programming documents for use of the major European funds. In addition, the Community Guidance documents for the use of most European funds have not yet been finalised, and their contents will have a significant influence on the content of Member State programmes.

It is possible that there will be a mid-term review of the 2007–2013 funds in 2010. This would give the Member States, the European Community, and other stakeholders the opportunity to examine whether the funds are living up to their potential to support conservation of European nature and biodiversity. It will also be an opportunity to assess whether the 2010 goal of halting biodiversity loss in Europe has been met.

Table 2:

Factors which may drive positive or negative use of EU funds

Positive	Negative
• Coordinated/integrated approach to environmental protection activities with good communication between different agencies and levels of governance • Open and transparent planning process and involvement of all actors • Political acceptance and uptake of opportunities provided by win-wins • Consumer education, consumer demand for products from sustainable systems • Clear guidance on possibilities for funding nature projects • Good monitoring and enforcement of European law (including the nature and water protection Directives, EIA Directive) • Enthusiasm generated by specific local actors • Communication on nature and biodiversity • Broad information about the use of funds	• Poor coordination between national/regional/local planning authorities • Lack of transparency/involvement of interest groups and actors • Political promises (especially for development of infrastructure) which are pursued without regard for environmental commitments • Complexity • Consumer demand driving unsustainable production • Lack of information about possibilities to use funds for nature conservation • Perception that biodiversity and nature are "expensive luxuries" and support for jobs is more important (lack of awareness of possible win-wins) • Inadequate environmental impact assessments – lack of engagement in (or commitment to) the assessment process • Requirements to show short-term economic benefits (limits funding applications for nature projects where a long term strategic approach is needed) • Lack of regard for scientific advice

Although the example of Farmer Jones is a hypothetical one, it builds on many of the real situations that are illustrated in the case studies (see chapter 5). The European environment is very complex, and the potential for conflict between projects is high without good coordination. The case studies illustrate this complexity, for example:

- Case study 8 demonstrates how funding that supported irrigation in some areas reduced competitiveness in other areas that were the target of rural development support – this has led to land abandonment with negative impacts on biodiversity.
- Case study 7 demonstrates how the funding of irrigated crops under the Common Agricultural Policy has led to unsustainable water use practices, and the need to construct new dams, with negative impacts on biodiversity.
- Case study 4 demonstrates how the funding of measures to increase efficiency of fishing vessels can lead to increased effort, and subsequent overharvesting of fish stocks.

Grassland management using traditional agricultural techniques helps to keep landscape quality.

The case studies (Chapter 5) also illustrate the operation of the drivers described in Table 2. For example:

- Case studies 3 and 6 illustrate the problems that can arise when Environmental Impact Assessments are not carried out adequately, and where there is poor coordination between government agencies and European authorities.
- Case studies 5 and 2 illustrate the difficulties that can arise when local political commitments threaten to override commitments to protect nature and biodiversity.
- Almost all of the case studies illustrate the need for more information on the positive opportunities that exist under the funds, better integration of environment in policy-making, and the need for open and transparent decision-making.

Another example of poor coordination leading to an undesirable outcome for nature can be seen in Greece, where administrative barriers have led to poor uptake of funds to support Natura 2000. The Greek ministry with responsibility for infrastructure development and public works, has repeatedly strived to redirect money from a measure related to management of Natura 2000 sites into other areas where it can be used for more politically appealing measures such as urban renewal and infrastructure development (WWF-Greece undated).

4.2
Conclusions and recommendations

The main conclusions from the experiences gained in the case studies included in this report are the following:

1. In principle the EU funding lines for Agriculture, Regional Development and Fisheries have the potential to support the goal of halting biodiversity loss by 2010, although this is not their main target. (For an analysis of the opportunities see WWF 2005c).

2. The level to which these funds have been used to support biodiversity has varied greatly between the Member States over the 2000–2006 period.

3. It became obvious that there exists a complex set of drivers impacting on the use of funds in a positive or negative manner. Greater awareness about the operation of these drivers may help Member States and the European Commission in ensuring better use of funds in the 2007–2013 programming period.

4. The European legislation that is already in place (especially the nature and water protection Directives) provides a strong framework for biodiversity protection if it is adequately implemented and enforced.

Key recommendations

1. The use of EU funds that conflict with the Community goal to halt the loss of biodiversity by 2010 must be eliminated (as species and habitats have been threatened in the past).

2. The integration of biodiversity and Natura 2000 as funding priorities into the programmes of major EU funds must become obligatory.

3. The partnership principle must be systematically, correctly and fully applied in the programming implementation and evaluation processes for EU funds. This means that environmental stakeholders (public and non-governmental) should be treated as equal partners, have full voting rights, receive information in a timely fashion, be consulted properly, have a right to transparent feedback and be trained and resourced to play their role efficiently.

KEY RECOMMENDATIONS

Member States should

- Include references to support nature and biodiversity (and halt biodiversity loss by 2010) in their national programmes for use of European funds for 2007–2013.
- Promote good coordination and cooperation between their own national, regional and local authorities and agencies (eg between Ministries of Finance, Economic Affairs and Environment).
- Develop a biodiversity strategy, analysing key threats and potential benefits at national and regional levels. This strategy should make clear links to the management of Natura 2000 sites, implementation of the Water Framework Directive and to the effective use of European funds.
- Shape their national programmes so that they meet the financial requirements for Natura 2000 implementation which were laid down in the Communication from the Commission to the Council and the European Parliament on financing Natura 2000 (COM(2004) 431 final, annexes).
- Inform and involve interest groups and stakeholders especially NGO's in developing plans for use of European funds.
- Make sure that Environmental Impact Assessments are developed and applied correctly, timely and by independent bodies especially for infrastructure investments.
- Support projects for sustainable rural development eg by using LEADER funds.

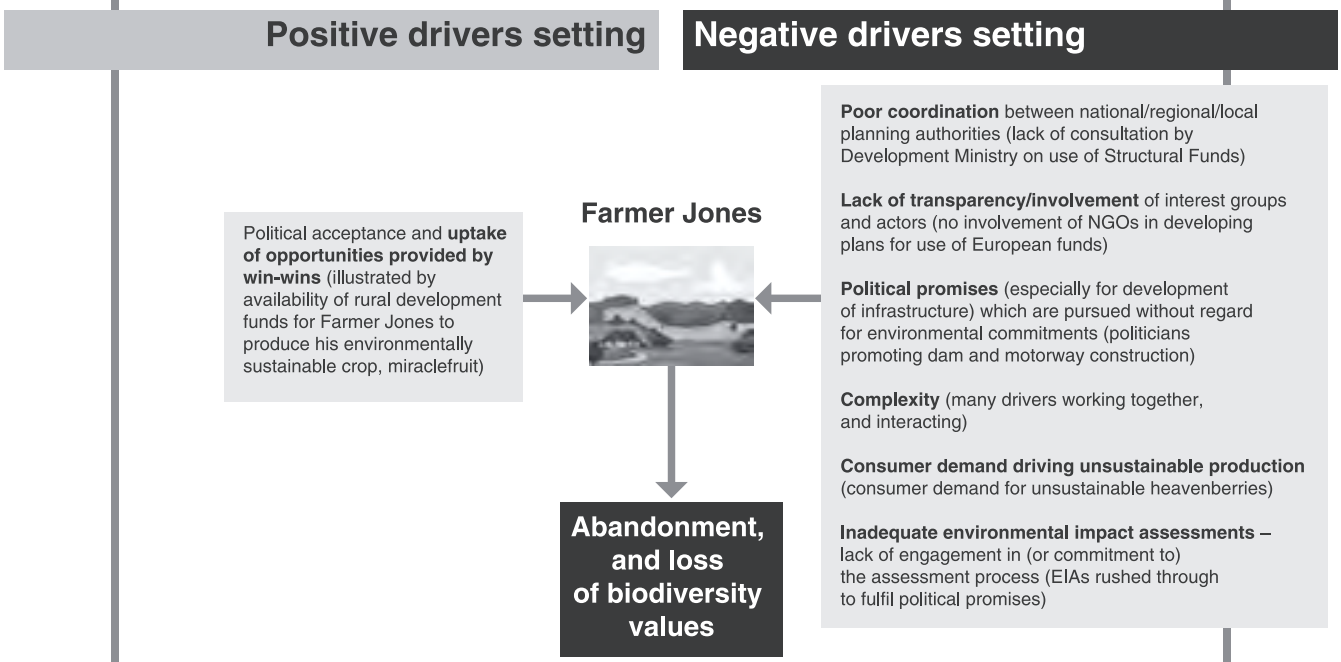
The European Commission should

- Ensure that nature and biodiversity requirements are addressed in all the programming documents for the 2007–2013 funding period.
- Undertake a mid-term review of the application of the funds to ensure that they are being used in support of halting the loss of biodiversity by 2010.
- Establish compulsory indicators for the ex-ante, mid-term and ex-post evaluation of EU Funds. To date, indicators have mainly concentrated on management and financial control. There should also be indicators to assess the environmental consequences and the impacts on biodiversity of measures funded by EU monies.
- Require DG Environment to establish an audit group comprising all relevant General Directorates in order to monitor (at least biannually) the implementation of the programmes and to ascertain whether money from EU funds has been used to achieve the goal to halt the loss of biodiversity by 2010.
- Require DG Environment, in close cooperation with DG Fisheries & Maritime Affairs, to ensure the application of the Strategic Environmental Assessment Directive to the National Strategic Plans and National Operational Programmes developed by Member States.

The case of Farmer Jones – a hypothetical example of drivers in action

Farmer Jones (FJ) has a small landholding in a EU country – 'Utopia'. His land includes a small woodland area and a stream. It is situated in a mountain area with a low human population. However, nearby there are two large cities. On the coast, there is intensive development for tourism. FJ's woodland has populations of rare birds, some of which breed there. FJ uses extensive farming methods which support biodiversity. His crops are eligible for some support from the European Agricultural Funds – both direct payments for his harvests of miraclefruit, and some agri-environment payments. FJ is considering starting some eco-tourism activities which could generate more local and sustainable economic activity.

But, things are changing on the Jones farm. Utopia is a new Member State of the EU, and its GDP is very low in comparison to other EU countries. It is therefore eligible for significant funding through the Structural and Cohesion funds, and its Development Ministry has prepared programming documents for use of these funds (without any stakeholder consultation, and no reference to the Environment Ministry). Local politicians are pushing for a dam on the stream that runs through FJ's farm to supply water to the cities nearby and promote population growth; and also to supply water to the tourist hotels on the coast. Politicians are also promoting construction of a motorway to connect the two cities (which will pass by the Jones farm). Although these infrastructure development activities require environmental impact assessments, the local politicians have promised development (in order to get elected) and are not interested in a good result for the environment or any delays. The developments are rushed through, without thorough assessment. There is not a strong NGO culture in Utopia, so no objections are voiced.



Water from the dam is channelled towards the coastal area and cities, and as it is excess to current tourism needs, some is used for irrigation of heavenberries (a new and profitable, but water-intensive crop). Though direct support from European funds is not available for the berries, rural development funds are made available under the Utopian rural development programme, in order to develop new agricultural areas at the coast. This includes building of new roads, and support for marketing of heavenberries. Heavenberry production has no benefits for biodiversity – the berries are grown in plastic tunnel houses.

As consumers prefer the new heavenberries to miraclefruit, Farmer Jones' market collapses. The birds that were breeding in his woodland area leave, due to disturbance from the motorway and dam construction. Eventually, Farmer Jones is forced to abandon his farm with negative results for biodiversity. Ecotourism is no longer an option as the natural values in the area have become so degraded due to the dam and the motorway.

Farmer Jones is left with no market for his miraclefruit, as consumers prefer heavenberries. The birds in his woodland have flown away due to the disturbances from construction of the motorway and dams, and destruction of their feeding and breeding areas.

CASE STUDIES

5. **CASE STUDIES**

Case Study 1: **Agricultural Subsidies and Cork Oak Ecosystems**

Case Study 2: **Threats to the Iberian Lynx**

Case Study 3: **Brown Bears and the Egnatia Highway**

Case Study 4: **Fisheries funds and Tuna farming**

Case Study 5: **Via Baltica and Natura 2000**

Case Study 6: **Navigation on the Danube and Natura 2000**

Case Study 7: **Odelouca Dam and the Monichique Natura 2000 site**

Case Study 8: **Biodiversity and Irrigation**

Case Study 1

Agricultural Subsidies and Cork Oak Ecosystems

Funding instrument(s) involved

CAP (Pillar 1), EAGGF

Main effects

Management of the cork oak ecosystem in southern Portugal is directly or indirectly supported to a large extent by EU funding. However, this funding is often misdirected, and so it only contributes marginally to solve major problems such as the increased risk and incidence of fire, increased severity of tree diebacks, reduced natural regeneration and loss of biodiversity. Indeed, EU funding may in at least some cases aggravate such problems, by supporting for instance the intensification of cattle grazing and ineffective and damaging fire prevention actions.

Country & Region

Southern Portugal
(similar issues exist in the Spanish dehesas)

Further information/reference

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"Montados" landscape, the corklands where cattle graze and plantations of pine and eucalyptus grow side by side together with cork trees. Monichique, Algarve region, Portugal.

Background

Cork oak landscapes represent a unique and valuable combination of natural and cultural heritage in the Western Mediterranean. Traditionally cork oak forest has been a key part of Portuguese montado systems which support varied species including the Spanish Imperial Eagle (Aquila adalberti), Bonelli's Eagle (Hieraaetus fasciatus), and Black Stork (Ciconia nigra). Cork oak landscapes are typically mosaics that include mixed habitat types such as holm oak and other oak species, stone and maritime pines, wild olive trees, maquis and rich pastures. Cork oak landscapes host a diverse and profitable economic system based on cork harvesting and processing for wine bottle stoppers and building material, livestock and agriculture products such as olive and wheat, mushrooms, acorns, cultural and ecological tourism, etc.

Due to the biodiversity values of cork forests, two cork oak habitats (Quercus suber, Quercus ilex) have been listed in the Habitats Directive (92/43/EEC). However, cork forests are currently under threat due to poor management, increasing human pressure on resources through overgrazing, overharvesting and forest clearance, land abandonment, urban development in coastal areas and forest fires. These threats, exacerbated by climate change, are affecting the health of cork oak landscapes and increase their vulnerability to diseases, pests, and large-scale fires. Threats arise from complex interrelated issues such as lack of good governance, perverse subsidies, poverty and lack of economic opportunities, lack of forest management capacity and investment to integrate environmental and social issues into management practices and land use planning.

Influence of EU Funds

In Mediterranean Europe, the management of forest landscapes is highly conditional on EU policies and funding schemes. However, their actual impacts on the sustainability of forest land uses are still poorly understood, thus limiting the capacity to design ecologically sound and cost-effective measures. This information would be particularly important in biologically rich forests such as that dominated by the cork oak, where nature conservation and rural development policies and funds could play a major role in facing challenges such as rural depopulation, abandonment of traditional land uses, oak mortality syndrome, large scale forest fires, and changes in forest product markets. These issues were addressed in a recent project (Suriberia) developed by WWF Mediterranean Programme in collaboration with Portuguese partners[27], which examined the links between policies, subsidy schemes and biodiversity conservation in upland cork oak landscapes of South-Western Portugal.

The study focused on an area of about 400,000 ha, including four Natura 2000 sites and interlinking corridors (The Southern Portugal Green Belt). The case study looked at:

1. documenting the ecological and socio-economic settings of the study area;
2. presenting a multi-scale, hierarchical framework to identify the Favourable Conservation Status (FCS) of cork oak landscapes, which was used to define the benchmarks against which the effects of forest management were ascertained;
3. identifying cork oak forest management practices and how their use is influenced by public regulations and funding schemes;
4. describing the links between forest management practices and biodiversity conservation in cork oak forest landscapes; and
5. recommending changes to regulations and funding schemes which might foster the uptake of the most favourable management practices.

27 ERENA, LPN, ADPM

Its results highlighted that biodiversity conservation in cork oak landscapes requires a mosaic of complementary habitat patches representing different management regimes, from grazed woodlands to undisturbed forests.

This type of management is not adequately addressed by current public policies and funding schemes, particularly where land ownership is very fragmented. EU subsidies are granted to individual landowners to undertake management actions which are often locally damaging and globally ineffective (eg clearing of undergrowth for fire prevention using heavy machinery). Changing this situation would require EU/public subsidies to be granted to associations of landowners instead of individual landowners, aiming at implementing coherent and ecologically sound forest management plans at a landscape scale instead of isolated actions at the local level. This is particularly important in Natura 2000 sites, where the conservation of habitats and species associated with cork oak forests is highly dependent on landscape scale management.

The Suriberia project's analysis of management practices supported by EU subsidies demonstrated that these have negative impacts in cork forests. Scrub cleaning and removal which is one of the most prevalent management actions in the study area, can have negative impacts through destruction of habitats for rare and sensitive plant and animal species, increased soil erosion, increased water run-off and reduced water infiltration, expansion of the road network increases human disturbance, negatively affecting sensitive species. In addition, ineffective fire prevention has had negative impacts on cork oak forests in the area. In the 2003-2004 period, there have been large areas of burned cork oak forest in the Mountains of Monichique and Caldeirao. Lack of attention to regeneration is resulting in the ageing of cork oak stands, thereby threatening their long-term sustainability.

With new rural development programmes being drafted for the 2007–2013 period, there is an opportunity to make changes to subsidy schemes, so that use of natural regeneration in the recovery of extent cork oak stands becomes more attractive. Projects that provide opportunities to contribute to biodiversity alongside other objectives (such as reduction in fire risk) should be promoted For example, the Cansino project launched in June 05 by WWF Mediterranean Programme in partnership with the Algarve reforestation commission and Portuguese forestry administration involves restoring burnt areas in Monichique Natura 2000 site and redesigning forest landscapes in consultation with land owners cooperative and other stakeholders in order to make them more resistant to fires, applying WWF/IUCN forest landscape restoration (FLR) approach.

Charred trees in burnt forest (2003 fires). Trees marked in red are selected to be cut down. Monichique, Algarve region, Portugal.

Case Study 2

Threats to the Iberian Lynx

Funding instrument(s) involved

EAGGF, ERDF, Cohesion Fund

Main effects

Support for construction of dams and other infrastructure with negative impact on nature, including fragmentation of habitat for the Iberian Lynx (Lynx pardinus).

Country & Region

Spain and Portugal

Further information/reference

- Guido Schmidt (WWF-Spain)
- Jesús Cobo (WWF-Spain)
- Luis Súarez (WWF-Spain)
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- See also case study 7 and 8

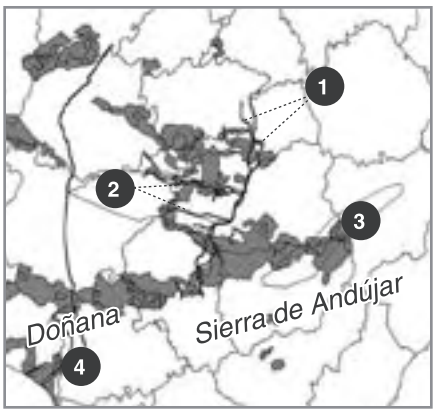
Background

The Iberian Lynx (Lynx pardinus) is classified by the World Union for Conservation (IUCN) as the world's most endangered feline species. In October 2002, the IUCN Red List of Threatened Species changed the status of the lynx to "Critically Endangered" following new evidence of decline (WWF-Spain 2003).

The most recent estimates for the lynx population are that there are less than 100 animals, including no more than 25 breeding females. Breeding has only been confirmed in two areas: Doñana and Sierra de Andújar (Eastern Sierra Morena), both in Andalucia (southwest of Spain).

It appears that decline in the Iberian lynx populations is caused by:

- decline in rabbit populations, (the basic prey of the lynx);
- mortality caused directly by humans in the form of traps, shooting and dogs;
- loss and fragmentation of habitat.



Main linear infrastructures in Lynx habitat

1. Highway Toledo – Ciudad Real
2. Freeway to connect the Ciudad Real – Puertollano highway and the Extremadura freeway
3. Freeway Linares – Albacete
4. Agricultural path between Villamanrique de la Condesa and El Rocío

© WWF-Canon/Fritz Vollmar

Iberian Lynx in Coto Doñana National Park, Spain.

Development of infrastructure such as roads, dams, railways and other human activities contribute to the loss and fragmentation of the Iberian lynx distribution area, creating barriers between the different populations and obstructing the exchange of individuals among them.

In 2001, the Spanish National Hydrological Plan (SNHP) proposed building more than 100 new dams in Spain. In 2003, WWF carried out an analysis of the proposals in the SNHP and found that the proposed dams could adversely affect 46 Spanish Natura 2000 sites. A particular point of concern was that some of the proposals were likely to adversely affect populations of the Iberian lynx. Dams were to be located in areas where there are still remaining lynx populations (WWF Spain 2003). 20 of these dams will have negative impacts on lynx areas and corridors, further threatening the spread and interaction of the species. In addition, some of the dams (eg Melonares, La Breña II) are predicted to adversely affect populations of the Spanish Imperial Eagle (Aquila adalberti), a species that is classified as "globally threatened" (Nagy and Crockford 2004).

The most controversial project included in the SNHP was the Ebro transfer, a project that was cancelled by Spain's Prime Minister Zapatero in June 2004. Nonetheless, water saving plans are still not developed and the construction of dams, transfers and 15 new seawater desalination plants goes ahead for new and doubtful coastal and rural development purposes

WWF-Spain has carried out an analysis of public works projects located at or near sites where lynx populations are known to exist (WWF-Spain unpublished). Out of 45 projects with potential impact on the Iberian Lynx, the analysis indicates that in 16 cases the fragmentation of lynx habitat is due to linear infrastructure. In particular:

- The new Highway Toledo-Ciudad Real-Puertollano-Córdoba; the freeway Linares-Albacete; and the freeway to connect the Ciudad Real-Puertollano highway and the Extremadura freeway are predicted to have important barrier effects within the central lynx metapopulation.
- The agricultural path between Villamanrique de la Condesa (Sevilla) and El Rocío (Huelva) which crosses Doñana Nature Park: this has been converted into an unofficial road and two lynxes have been killed in car accidents there.
- The change of the current Sevilla-Huelva railway to a high speed line is predicted to affect the Doñana meta-population.

Influence of EU funds

The Cohesion Fund has contributed to the construction of Spanish dams as "environmental projects" (eg Melonares dam) that have been accused by NGOs of having negative effects on species and habitats.

Two of the dams with a more relevant impact on the fragmentation of the territory of the Iberian lynx, La Breña II Dam and Arenoso Dam (both in the province of Cordoba) have received important funding through the ERDF funds. In fact in the first case (La Breña II Dam) the European Union provided € 79,878,501 of a total budget of € 159,757,002. In the second case (Arenoso Dam) the total budget is € 59,997,251 and the provision from the European funds is € 29,998,625. This case is specially relevant because we have to consider that the area of El Arenoso in Cordoba has been selected by the Regional Administration of Andalucia (Junta de Andalucía) as one of the candidates areas for the reintroduction of Iberian lynx in the new Life project that has been submitted 2005 to the Commission. The total budget of this project is about € 30 million (with a request to the European Commission of about € 11 million). The current Life project „Recuperación de las poblaciones de Lince Ibérico en Andalucía", LIFEO2/NAT/E/8609 has a total budget of € 9,285,000 (and the EC provides € 3,900,000).

Possible alternatives/solutions

It appears that the current model of infrastructure development in lynx areas is not compatible with the long-term survival of the Iberian Lynx. Adequate enforcement of the EU nature and water protection Directives, good environmental impact assessments, and a political commitment to save the lynx will all be necessary if things are to change. The European Community should continue to monitor the status of the lynx, to ensure that its survival is not threatened by infrastructure, especially where this is supported by European funds.

Although the Ebro transfer will not go ahead, Spain continues to build dams with support from European Funds. The environmental impact of many of these dams is still perceived as negative by NGOs. Transparent and comprehensive needs, alternatives and impact assessments, and an assurance that EU funds will not be accessible to projects that will lead to breaches of other EU Directives (such as the Habitats Directive) could assist in ensuring that future construction projects do not compromise nature conservation values, and sustainable development.

Road sign alerting drivers to slow down. Sierra Andújar, Spain.

Case Study 3

Brown Bears and the Egnatia Highway

Funding instrument(s) involved:
Cohesion Fund, ERDF, Trans European Networks fund (TENS-T), DG-Regional Development, LIFE-Nature

Main effects
Potential/effective fragmentation of Brown Bear habitat, impact on Brown Bear populations in Greece.

Country & Region
Greece

Further information/references

- Yorgos Mertzanis (Callisto – Wildlife and Nature Conservation Society)
- Spyros Psaroudas (Callisto – Wildlife and Nature Conservation Society)
- Yorgos Iliopoulos (Callisto – Wildlife and Nature Conservation Society)
- www.egnatia.gr
- www.callisto.gr/egnatia%20odos.htm (in Greek)

Background

Brown Bears originally occurred throughout mainland Europe. They have disappeared from most areas as human populations expanded and habitat was destroyed by deforestation and agriculture. Today the total number of Brown Bears in Europe is about 14,000 (outside Russia) which occur within an area of around 800,000 km² (outside Russia) (LCIE, undated).

Bears have a low reproductive rate and are vulnerable to human-related mortality. They require large habitats that make them vulnerable to changes in land use. Habitat fragmentation, particularly as a result of transportation infrastructure development, presents serious problems for a species requiring such large areas. Bear mortality caused by highways and rail networks throughout bear habitat is a major threat in some areas including Greece and Croatia (LCIE undated).

In this context, potential conflicts between the Egnatia Highway project and brown bear conservation in Greece were presented to the Hellenic Ministry of Environment, Physical Planning and Public Works in 1994. The partners in the LIFE-Nature project ARCTOS (LIFE93NAR/GR/01080) suggested changes to the alignment of a particular segment of the highway, cutting through Pindos mountains bear range, in order to reduce conflict with bears.

Forest is an important habitat for Brown Bear.
Bavarian Forest National Park, Germany.

The subsequent environmental impact assessment study (EIA) for the highway did not incorporate the suggestions from the ARCTOS project partners, and as a result, three Greek NGOs (Arcturos, WWF-Greece and the Hellenic Society for the Protection of Nature) appealed to the Greek Council of the State in 1995. In 1997 the Council's verdict was released in support of the NGOs. The decision stated that "the alignment to be decided should completely avoid bear habitat disruption and disturbance and therefore the only way is to bypass the sensitive area".

Following this decision, a new EIA was required and contacted by the state authorities. The results of this were released in 1999, but the preferred option remained close to the original alignment – with the addition of more appropriate mitigation measures covering about 42.7% of the 35 km highway stretch concerned (tunnels and bridges, viaducts and underpasses). This was still considered unsatisfactory by NGOs, but was accepted by the competent State authorities in 2000.

In 2000 and 2001, NGOs continued to pursue the issue with both the Greek national authorities, the Council of Europe and the EU Commission. As a result of discussions, a six-year monitoring and evaluation project in order to define the impact of the highway before and during construction and in operation was established by NGOs in cooperation with Egnatia Odos SA (the company supervising the construction of the highway), conforming to the EIA provisions. The target species included not only Brown Bear but Wolf, Ungulates and Avifauna as well. Co-funding came from national authorities (Hellenic Ministry of Environment, Planning and Public Works), and the European Commission (DG-Regio).

In 2005, the findings of the first phase of the project were released, and support further/additional modifications and improvements of the existing mitigation measures proposed by the reviewed EIA study. The new measures would provide total effective mitigation of more than 42.7% of the highway stretch (35 km) in question. In addition these would include modifications of accompanying infrastructure. It is currently unclear whether these additional mitigation measures will be accepted by Egnatia Odos SA and the state authorities.

Influence of EU funds

The construction of the Egnatia Highway has received 50% of its funding from the European Union through the Cohesion Fund, ERDF, and Trans European Networks (Transport). In addition, the Greek government and European Investment Bank have supported the project. On the positive side, European funds have supported LIFE projects in the area, and have been used to contribute to the new monitoring project.

Possible alternatives/solutions

To date, the Greek authorities and Egnatia Odos SA have appeared reluctant to take up suggestions made by NGOs for protection of Greece's Brown Bear population. Joint pressure from NGOs and the Commission's DG-Environment has led to improvements being made to the proposals.

This case illustrates the way in which funds applied by one "arm" of the European Commission can act counter to the interests of another "arm". In this case, DG-Regional Development financially supported a highway project that is predicted to have a negative impact on brown bears, while DG-Environment supported a LIFE project aimed at preserving the same bears.

The conflict illustrates the urgent need for rigorous environmental impact assessments under the SEA (Strategic Environmental Assessment) principle and a clear and transparent decision-making process as well. Construction of the Egnatia highway continues, assisted by European regional development funds. If the project eventually contributes to a decline in Brown Bear numbers in Greece, the project will not have fulfilled the sustainability objective of regional development.

Key information sources:

Information in this case study was largely obtained from Callisto Wildlife and Nature Conservation Society, 5 Nik. Foka st, GR-54621, Thessaloniki, Greece.

Case Study 4:

Fisheries funds and Tuna farming

Funding instrument(s) involved

Financial Instrument for Fisheries Guidance

Main effects

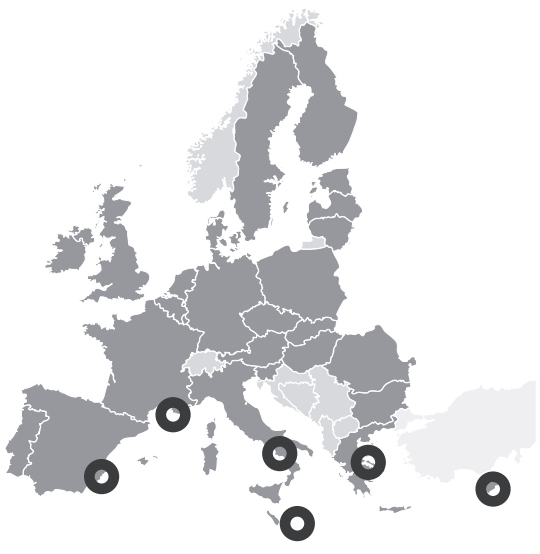
Subsidies for tuna farmers and for boat modernisation have increased catching capacity and encouraged development of the industry.

Country & Region

Mediterranean countries, including France, Spain, Greece, Italy, Malta, Cyprus.

Further information/references

- Raúl Garcia (WWF-Spain)
- Carol Phua (WWF European Policy Office)
- WWF 2004. Tuna in the Mediterranean: the Bluefin Tuna stock at stake. WWF/MedPO, WWF-Spain.
- WWF/MedPO 2005. Risk on local fish populations and ecosystems posed by the use of imported feed fish by the tuna farming industry in the Mediterranean.



Background

The Bluefin Tuna (Thunnus thynnus) is a large, long-lived pelagic fish species found in the Atlantic (including the Mediterranean) and the Pacific. It can measure over 3 metres in length and weigh more than 650 kg. Bluefin Tuna is a top predator that feeds on fish, squid and crustaceans.

The last assessment of the conservation status of the Bluefin Tuna was carried out by the Standing Committee on Research and Statistics (SCRS) of the International Commission for the Conservation of Atlantic Tuna (ICCAT) in 2002. The SCRS concluded that under prevailing fishing conditions, "current catch levels cannot be sustainable in the long term". Scientists were particularly concerned about the "abrupt" increase in catches of large fish since 1994.

Despite the concerns in the SCRS report, the ICCAT meeting in Bilbao in 2002 adopted a quota of 32,000 tonnes for the years 2003–2006. This was 23% higher than the maximum level that had been scientifically identified. More than half of this quota was allocated to the EU.

Tuna farming boat with feedfish.

Complicating quota management, is the practice of tuna "farming" in the Mediterranean. This industry is based on wild tuna that are caught alive through purse seining. The tuna are then transferred to pens where they are fattened in order to improve the oil quality in the flesh to meet Japanese market standards. The fattening period lasts around 6–7 months, during which time the caged tuna are fed on baitfish. Available information indicates that the conversion rate of baitfish to tuna is very low, making this a wasteful practice.

Tuna purse-seine fishery (French) in the Atlantic Ocean. September 1998.

Players from many Mediterranean countries are involved in the tuna farming industry, including six EU Member States: Cyprus, Greece, France, Italy, Malta and Spain. Some of these countries are involved as suppliers of fish to farms, rather than in actually running such farms.

Tuna farming has been implicated in problems with reliability of tuna fishing statistics in the Mediterranean. Lack of accurate catch figures compromises the effort to carry out stock assessments and then set catch quotas to keep the fishery within sustainable limits. There appears to be a specific issue with statistical inclusion of fish that are transhipped after catch between vessels and farms whose nationalities are different.

WWF is also concerned with regard to the risk to local fish populations and ecosystems posed by the use of imported feed fish by the tuna farming industry in the Mediterranean. Other impacts include the destruction of Posidonia beds by tuna cages, including effects in protected areas.

The effects of tuna farming have created conflicts between local fishermen/communities and tuna farmers in countries such as Spain, Croatia and Malta.

Fisherman with caught Yellow Fin Tuna (Germa albacora) in the enclosures of a marine farm in the Canary Islands, Spain.

Influence of EU funds

European funds have contributed to the modernisation of the French and Spanish purse seine fleets. This has fuelled competition between purse seiners and traditional longliners with negative social implications for traditional fishers.

In addition, funds from the FIFG have been used to directly support tuna farming. The fund can provide a subsidy of up to 75% of the total cost, aimed at increasing of aquaculture capacity, modernisation, processing, building cold stores, research, etc.

Identifying and quantifying the exact contributions of the FIFG to tuna farming is difficult. Even in the best cases, the information is scattered, badly elaborated and difficult to process. However, WWF estimated in 2004 that at least € 19–20 million of European funds had been allocated to tuna farming since 2000.

A report by Advanced Tuna Ranching Technologies (ATRT 2004, available from WWF) estimated that US $ 34 million has been distributed to France, Greece, Italy, and Spain since 1997. According to more recent information only aid for French purse seiners fleet renewal would reach another € 20–25 million.

Possible alternatives/solutions

Reform of the FIFG has led to the elimination of subsidies for fleet renewal after 2004. The new funding instrument that will replace the FIFG will be the European Fisheries Fund. This instrument is unlikely to allow support for boat building activities.

The reliance of tuna farming on capture fisheries should not be ignored, and support for tuna farming should be removed from provisions to support aquaculture activities under the new EFF. Maintenance of subsidies to tuna farmers appears to violate the principle underlining the reform of structural aids to fisheries – phasing out subsidies that promote overfishing or destructive practices.

Case Study 5

Via Baltica and Natura 2000

Funding instrument(s) involved

TENs-Transport

Main effects

Potential negative effects on sites designated as part of the Natura 2000 network.

Country & Region

Poland, Podlasie Region

Further information/reference

- Marta Majka Wisniewska (WWF-Poland)
- Przemek Chylarecki (OTOP – BirdLife in Poland)
- Robert Cyglicki (CEE Bankwatch Network)
- http://conventions.coe.int/
- www.bankwatch.org

Background

The construction of the Polish section of the Via Baltica, a new international expressway, began in 2004. The road is to run from Warsaw to Helsinki, and is part of Trans-European Corridor I which will connect the countries of southern and western Europe with Finland. NGOs consider that its current route through Bialystok will threaten four important bird areas (IBAs) that have been designated as part of the Natura 2000 network (areas meet the requirements of SACs). In addition, the route would cut important migratory corridors for large mammals, especially lynx and wolf.

The sites that could be affected by the Via Baltica include:

- **The Biebrza Marshes:** this site is Poland's largest national park, and protects one of the largest and most important natural peatlands in Central Europe.
- **The Augustowska Forest and the Knyszynska Forests**: both have significant breeding populations of bird species that have unfavourable conservation status in Europe, and many features of continental primeval forest.

There is at least one viable alternative route for the Via Baltica, which would pass through Lomza town and avoid the Natura sites. However, NGOs are concerned that local political support for the Bialystok alternative will overrule Poland's conservation obligations.

General view over the north-middle part of the Biebrza Marshes in spring. Poland.

Following a recommendation from the Council of Europe, the Polish authorities (General Directorate for Public Roads and Motorways, Ministry of Infrastructure) have issued a tender to undertake a full Strategic Environmental Assessment (SEA) of the proposed route. This should consider all possible alternatives in order to minimise the deterioration of natural areas. The SEA should be finalised by the end of 2006. However, projects are currently underway to upgrade some sections of the existing road along the Bialystok route. NGOs are concerned about the adequacy of the environment assessments being carried out on for individual projects, as they do not consider the overall cumulative impacts. In addition, there is concern that the upgrades may foreclose real consideration of the options that will be considered in the SEA.

Influence of EU funds

The Via Baltica is part of the Trans-European Networks for Transportation that is being promoted by the EU (though not one of the present list of 30 priority projects). To date, no EU funds have been allocated for construction of the Via Baltica route via Bialystok, but the World Bank is reportedly seriously considering financing the project, and World Bank funds have already been used for works on some small sections of the Bialystok route. Funds from the European Investment Bank could also be used. EU support through the PHARE programme is currently being used to upgrade an alternative route for the Via Baltica, and EU funds has been used to develop other sections of the road.

Possible alternatives/solutions

At least one viable alternative route for the Via Baltica exists, and could be used. The alternative would avoid all significant nature conservation sites.

Key reference

BirdLife International, OTOP, RSPB, WWF-Poland and CEE Bankwatch (2005): Follow-up Recommendation No. 108 (2003) Construction of the Via Baltica Expressway in Poland. Report by NGOs to the Council of Europe/Berne Convention. T-PVS/Files (2005) 7. http://conventions.coe.int/

Case Study 6

Navigation on the Danube and Natura 2000

Funding instrument(s) involved

TENS-T, and possible involvement of Cohesion Fund and Structural Funds

Main effects

Alteration of river flow (hydromorphological alteration) could affect biodiversity through flooding, canalisation, damming etc.

Country & Region

All Member States neighbouring the Danube (10 countries, 2850 km of river)

Further information/references

- Ulrich Eichelmann (WWF-Austria)
- Christine Bratrich (WWF Danube Carpathian Programme)
- WWF 2002. Waterway Transport on Europe's Lifeline, the Danube (Vienna)
- WWF 2005. The Danube – a lifeline or just a navigation corridor? WWF Position Paper on inland navigation on the Danube (draft)

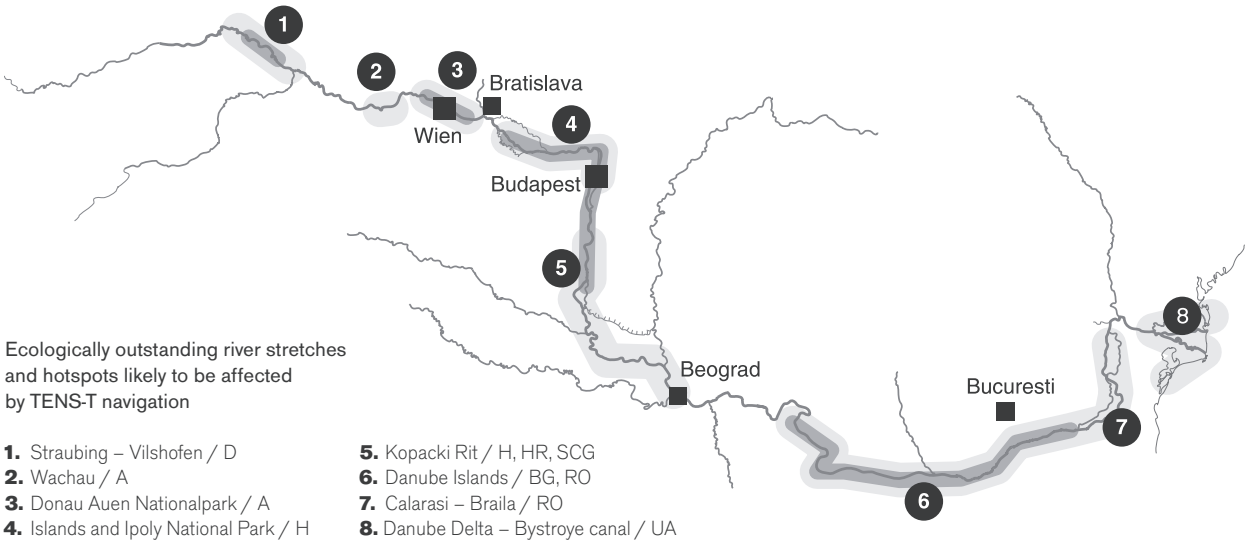
Background

The Danube still retains outstanding ecological qualities. The river is home to a rich and in many cases unique biological diversity, including over 100 different types of fish, among them six endangered species of sturgeon. Other rare species are the White Pelican (Pelecanus onocrotalus), the Dalmatian Pelican (P. crispus), the White-tailed Eagle (Haliaaetus albicilla), the Beaver (Castor fiber) and the Otter (Lutra lutra) etc. At the same time the Danube is one of the major transport waterways in Europe. It is also one of the major waterways in Europe and part of the TEN corridor VII.

Apparently these are conflicting objectives, in the TENs Danube project – the EU has identified stretches of the Danube as "bottlenecks" for navigation, and WWF has identified many of the same areas as ecological hotspots, including three national parks, 11 Ramsar sites plus biosphere reserves and two World Heritage sites. According to the EU more than 65% of these bottlenecks are existing or possible Natura 2000 sites.

The Rhine/Meuse-Main-Danube Inland waterway axis is one of the 30 priority projects that were identified in the revision of the Trans-European Network's guidelines and financial rules in 2004 (CEC 2005b). Specific sections have been identified as priority areas for action, and it is feared that adaptations such as dredging, river training, canalisation and damming (to increase depth) will affect floodplains and affect species such as the Beluga Sturgeon (Huso huso) along with the many bird species that utilise the Danube.

NGOs are concerned that a piecemeal approach is being taken to assess potential impacts of projects on the Danube, where a more holistic approach is more appropriate.



Ecologically outstanding river stretches and hotspots likely to be affected by TENS-T navigation

1. Straubing – Vilshofen / D
2. Wachau / A
3. Donau Auen Nationalpark / A
4. Islands and Ipoly National Park / H
5. Kopacki Rit / H, HR, SCG
6. Danube Islands / BG, RO
7. Calarasi – Braila / RO
8. Danube Delta – Bystroye canal / UA

Influence of EU funds

The estimated amount of investment required to carry out the 30 priority projects included in the TENs proposal is around € 225 billion by 2020, of which € 80 billion will be needed by 2006. The expected private sector contribution is 20% of the budget, with the remainder financed by national governments, and the Community budget. The size of the TENS-T is dependent on the outcome of the overall budget negotiations between the Council and the Parliament on the new financial perspective.

WWF and other NGOs consider that the result of efforts to promote navigation on the Danube has led to substantial damage to the ecological quality and the integrity of the river without substantial positive effects on waterway transport.

According to the Roof Report 2004 of the International Commission for the Protection of the Danube River (ICPDR), large parts of the Danube (86%) are “at risk” or “possibly at risk” of failing the objectives of the EU Water Framework Directive due to hydromorphological alterations. The main hydromorphological driving force is navigation on the Danube River.

Possible alternatives/solutions

Firstly, NGOs are calling for a strategy for the Danube that looks at the whole river basin, in the spirit of the Water Framework Directive (WFD). There is a strong need for a “Danube Masterplan” that includes both ecological and transportation needs. The appropriate tool for this plan could be a Danube wide Strategic Environmental Assessment (SEA). It is vital that developments funded under TENS-T are required to comply fully with the requirements of the Habitats and Birds Directives. This should include impact assessments as required under Article 6 of the Habitats Directive.

Secondly, the necessary upgrade of the fleet offers a chance to introduce state-of-the-art technology (eg shallow draught inland vessels, reduced emissions, less wastewater produced). The current fleet on the Danube in average is about 30 years old. Improved navigation instruments in combination with better forecasting quality regarding water levels should also be explored. In addition, development and improvement of multi-modal logistical infrastructure should be promoted. Adequate harbour centers to transfer goods from ships to other modes of transport (preferably rail) are required for efficient freight transport.

It is better to adjust the ships to the river than vice versa!

Case Study 7

Odelouca Dam and the Monichique Natura 2000 site

Funding instrument(s) involved:
Cohesion fund, CAP, Structural Funds

Main effects
Flooding of Natura 2000 site, fragmentation of habitat for Iberian Lynx, negative effects on endemic fish and bird species. Destruction of valuable habitats. CAP support for unsustainable irrigation practices driving dam construction.

Country & Region
Portugal, Western Algarve

Further information/references

- Rita Alcazar (LPN)
- Pedro Beja (ERENA)
- Francesca Antonelli (WWF Mediterranean Programme)
- www.lpn.pt
- www.panda.org/mediterranean

Background

Portuguese authorities started construction of the Odelouca dam in 2002. The site for the proposed dam is within the Monichique Natura 2000 site in Portugal's Algarve region. When complete, the dam will be 73 metres high, and will submerge over 20 kilometres of the Odelouca river inside the Natura site.

The Monichique site, together with the neighbouring Natura 2000 sites of Costa Sudoeste and Caldeirão, is one of the few regions in Portugal still holding a sufficiently large extent of habitat for persistence of a viable Iberian Lynx population. Besides reducing lynx habitat (the valley to be flooded holds some of the best lynx habitat at Monichique), the dam will destroy the only known corridor linking the lynx populations of Monichique to those of southeast Portugal and Spain. This may compromise the capacity of Monichique to hold a viable lynx population in the long term.

The dam is predicted to have severe impacts on fish species in the Arade basin, especially endemic cyprinid species. LPN (2004) highlighted potential effects on Leuciscus aradensis, Chondostoma lusitanicum, and Barbus sclateri in particular. The former two species have a very small range, as they are exclusive endemics in small basins in south-western Portugal.

Charred trees in burnt forest (2003 fires), Monichique, Algarve region, Portugal.

The area where the dam will be built is important to several bird species, including Bonelli's Eagle (Hieraaetus fasciatus). Construction of the dam will destroy several important nesting and feeding areas. The valley that will be flooded holds a high quality tract of riparian woodland and includes several habitats and species that are listed in the annexes of the Habitats Directive.

The dam would be part of the Odelouca-Funcho hydraulic system, which is designed to supply water to the western Algarve. NGOs consider that water from the dam will be used for both public consumption and irrigation, as it will be linked to two other dams built for the purposes of irrigation, using EU Structural funds.

NGOs have been strongly opposed to the construction of the Odelouca dam since the first stages of the proposal. The EU has suspended use of European funds for the project, as it has been found to be in breach of the Habitats Directive. Since 2000 the dam would also infringe the Water Framework Directive (WFD) that requires that river basins are in good ecological (including habitats & species) and chemical conditions. However, the Portuguese government has decided to continue to build the dam despite its violation of European law.

Influence of EU funds

Initially, the Portuguese government applied for funding for the Odelouca dam through the EU's Cohesion fund. However, this funding was suspended when the project was found to be in breach of the Habitats Directive in 2001, and no European funding has been used to directly fund construction of the dam.

However, the Cohesion Fund has been used to fund some other components of the Odelouca-Funcho irrigation system, such as pipelines – thus creating facts to argue for the continuation of the project. NGOs have been critical of this approach, where interdependent aspects of a project are funded without assessment of the impact of the full project.

According to LPN (2004), construction of the Odelouca dam has largely been driven by the action of CAP subsidies that encourage unsustainable irrigation. Although construction has been justified on the basis of supplying water to urban populations, the European Commission has not recognized this argument as a real need. LPN considers that the desire to increase irrigation in the western Algarve is the real reason for dam construction.

In the Algarve region, support for citrus is particularly significant. During dry years, such as 2005, citrus farmers exert significant pressure on water resources to preserve their orchards. Some citrus farmers in the Algarve are eligible for agri-environment support (such as support to organic farming). This support is not contingent on sustainable use of water.

Possible alternatives/solutions

The European Commission has already found (in a reasoned opinion) that construction of the dam is in breach of the Habitats Directive and would infringe the Water Framework Directive. The Commission should ensure that the dam is not completed at the expense of a valuable Natura 2000 site. European funds should not be applied to support aspects of larger, unsustainable projects.

CAP subsidies should not be used to support systems that require unsustainable use of water resources. In particular, agri-environment spending should not be applied to systems that are harmful to the wider ecosystem. In this case, funds should be applied to help farmers in minimising water consumption and avoiding contamination of valuable aquifers.

Key information sources:

Information in this case study was largely obtained from: Liga para a Protecção da Natureza: LPN (2004) Fact sheet for CAP reform. Case study for Portugal: Odelouca Dam; and from Erena and WWF (2005) Implications of EU subsidies and policies to the conservation of freshwater ecosystems in southern Portugal: the Greenbelt case study.

© drawing Paul Barruel

Spanish Imperial Eagle (*Aquila adalberti*).

Case Study 8

Biodiversity and irrigation

Funding instrument(s) involved

EAGGF, Structural Funds, Cohesion Fund

Main effects

Reduction of competitiveness of dryland areas and subsequent abandonment leads to reduced biodiversity and increased risk of desertification.

Country & Region

Spain, especially Extremadura and Guadalquivir basin

Further information/references

- Guido Schmidt (WWF-Spain)
- Thomas Nielsen (WWF European Policy Office)
- Schmidt 2004. Saving Water by changing CAP, Palermo Workshop.
- Schmidt 2005. Sustainable use of water resources in agriculture: WWF proposals for the PAC reform in Spain.
- Beaufoy 2005. Europe's Living Countryside Spain.

Background

Spanish agriculture is now heavily reliant on irrigation. In 1999, the land cultivated by irrigation covered some 3.7 million ha. This was 14.5% of useable agricultural land, and irrigation represented 80% of total water demand in Spain (Dwyer et al 2000). WWF have criticised agricultural policy in Spain, claiming that it has led to an increase in intensive farming with a high consumption of water, pesticides and other agricultural inputs, abandonment of farming in marginal areas, and advancing desertification (WWF/Adena 2005).

Currently, the main rural development measure in Spain is for new irrigation, and for increasing the efficiency of water use in current irrigation. The measure does not aim to achieve overall reductions in water use (Beaufoy 2005), and any water savings are often used to enlarge irrigation areas, or to cultivate crops that consume more water (WWF 2005d).

Many irrigation projects have had direct impacts on natural values. For example, studies of bird populations in Spain have shown that the conversion of land by introducing irrigation is the most significant factor affecting declines in some important species. The Lesser Kestrel (Falco naumanni), and Spanish Imperial Eagle (Aquila adalberti) are affected by both changes in crops grown with irrigation and also by the accompanying irrigation infrastructure of dams and canals (see Dwyer et al 2000).

Hydrological works on ecological compensation measures, Melonares, Spain.

Investments in irrigation have been justified in some cases on the grounds that they will stabilise rural populations and thus prevent land abandonment (which can harm biodiversity values). However, in operation, irrigation schemes are often concentrated in more "dynamic" areas (such as coastal areas) and do not have a positive impact in dryland areas. In fact, irrigation schemes can reduce the relative competitiveness of dryland areas by supporting agriculture elsewhere (Beaufoy 2005). Eventually, this reduced competitiveness leads to abandonment of land and reduced biodiversity. A third of Spain's surface is facing desertification, often due to inappropriate agriculture.

Irrigation of crops has been blamed for degradation of the Tablas de Daimiel National Park (Castilla La Mancha, Spain). The wetland has been reduced in size due to unsustainable abstraction of water for use in agriculture. Salinisation of groundwater and contamination and eutrophication of surface water has also occurred, in addition to a reduction in nesting areas due to changes in vegetation, including peat fires, and land subsidence (EEA 2003). The park is one of the most important wetlands on the Iberian Peninsula, and is a Natura 2000 and Ramsar site.

Influence of EU funds

The CAP is widely recognised as one of the most significant drivers of land-use in Europe. In the past, CAP payments to the producers of many agricultural commodities have been directly linked to production. The CAP drives water consumption in several ways: by differentiating subsidies for irrigated and non-irrigated crops, by investing into irrigation systems, by not applying compulsory water standards as a basis for CAP subsidies, and finally by subsidising the export of over-production in Europe. WWF believes, this situation is especially problematic when it occurs in areas that are facing water scarcity in Europe (Schmidt 2004).

The complexities of the issues surrounding agricultural payments are illustrated in the case of the olive production industry. Spain is the largest producer of olives in the world, with the regions of Córdoba and Jaén producing 40% of world production. Traditionally, olive farming has been carried out without irrigation, but differential CAP subsidies (subsidies increased the difference in net income between irrigated and dryland plantations by as much as 600%) for irrigated crops have encouraged the introduction of irrigation systems in many plantations (Beaufoy 2001). The olive grove, traditionally a rainfed crop, has become the major water consumer in the Guadalquivir basin (WWF/Adena 2005), and now olive irrigation consumes twice as much water as the urban areas in the basin (WWF 2005e).

During the last forty years irrigation systems have been heavily developed within olive farming in spite of the great costs involved in such investments. The interest of irrigation is barely explained by the difference of yield between intensive farming without irrigation (4500 kg/ha) and with irrigation (6500 kg/ha). But this difference of 2000 kg/ha regarding to the price of olive represents only an increase of income of € 90/ha under irrigation.

In fact the real reason for irrigation development is to be found in the previous CAP support to production. Indeed with a support per kg of olive produced, the difference between farming with and without irrigation shifted to € 530/ha. This means that the difference of benefits between these two types of production for the farmer increased by 600% by CAP aids. It should be taken into account that there is already an overproduction of olives in the EU. Although the olive subsidies regime was reformed earlier in 2005, 60% of the payment will continue to be paid on the same basis as prior to the reform, basically fixing high payments to those producers who, in the past, invested into intensively irrigated olive production. 40% of the payment is now to be distributed according to social, cultural or environmental priorities –within the olive sector; to be defined by each Member State.

Pillar One payments under the CAP have now been completely or partially decoupled from production levels for most products, including olives. NGOs have generally agreed that decoupling is a positive step. But there is still progress to be made. Analysis by Beaufoy (2004) indicated that the reforms in relation to olives will not result in a sufficient shift of support in favour of low intensity, high nature value plantations as growers will still be paid 60% of their former production-linked payments. Matters could be improved through effective use of Pillar 2 (rural development) measures to support traditional growers.

Another Spanish crop which is heavily dependent on irrigation is strawberries. Strawberry farming practices affect water quality and quantity because of pesticides and irrigation systems. Illegal boreholes have been developed in order to support the water demands of strawberries in southern Spain. This case is especially worrying, as the downstream Doñana National Park's aquifer, supporting one of the biggest wetlands in Europe and of international importance, is severely affected by these abstractions (Schmidt 2004).

Strawberry production does not receive any direct payment support from the CAP. However, it is helped by rural development measures such as:

- training for farmers;
- assistance with marketing and promotion;
- investments in infrastructure, eg plastics and irrigation systems.

In addition development of roads and other measures financed under the European Structural Funds may provide indirect assistance to growers (Schmidt 2004).

In order to provide water for irrigation, the Cohesion Fund has contributed to the construction of Spanish dams as "environmental projects" (eg Melonares dam) that have been accused by NGOs of having negative effects on species and habitats (see, eg case study 2). In some cases serious questions have been raised about whether additional dams were in fact necessary (eg WWF 2005a).

Location of planned dam, Melonares, Spain.

Possible alternatives/solutions

Reforms to the CAP are already underway. Decoupling of support from production levels has been recognised as a positive step in relation to the environmental impacts of the production of many commodities. However, additional changes are needed, such as the completion of decoupling for olive production (see discussion above).

Design of new rural development programmes for the 2007–2013 period should be informed by a comprehensive analysis of the key environmental issues in rural areas. Agri-environment measures should then be designed to suit particular regional characteristics. In most areas of Spain, it seems that the promotion of dry cultivation and reduction of irrigation should be a priority for both nature conservation and rural development goals, given the situation and trends in water availability.

There is potential for win-win situations involving schemes that are nature friendly whilst providing other benefits. For example, ERDF money is currently used for fire extinction operations. However, fire prevention measures are far less developed. In particular, there are no measures to maintain or promote extensive grazing in marginal upland areas as a fire-prevention tool (Beaufoy 2005).

With very limited exceptions, environmental NGOs have not been involved in programming for use of European funds in Spain (Beaufoy 2005). Involving such organisations at an early stage in designing adequate and measurable targets and developing the programmes for the 2007–2013 period might assist Spain in developing programmes that contribute to environmental improvement and sustainable regional development.

European institutions must clearly promote the application of the Water Framework Directive (WFD) and ensure accomplishment of its goals for sustainable water basin management. Inclusion of the WFD in cross-compliance would be a way of assisting in this.

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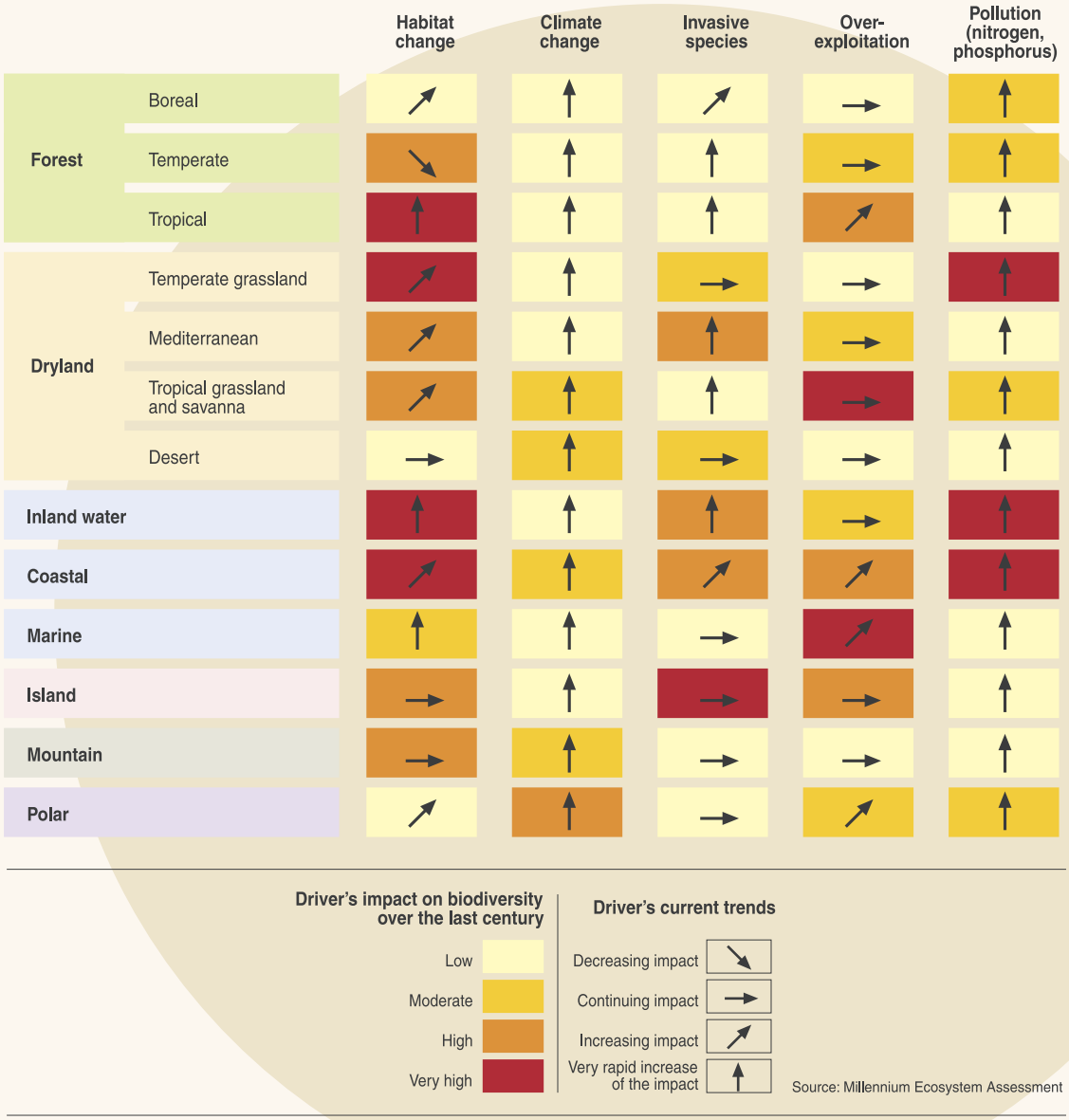
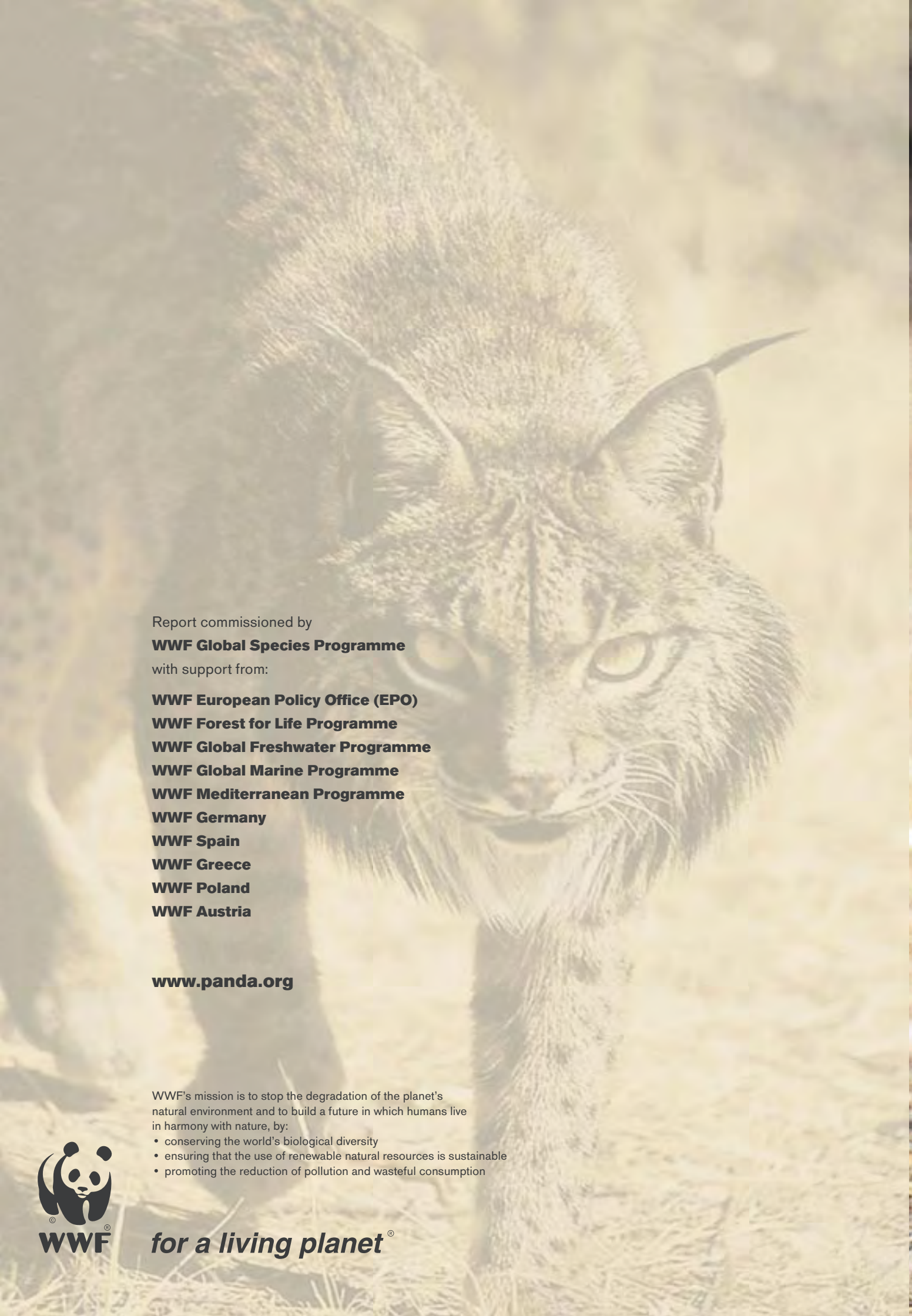


Main direct drivers of biodiversity loss.

The figure demonstrates how almost all direct drivers of biodiversity loss are constant or are expected to increase in intensity in the future. The cell colour indicates the impact to date of each driver on biodiversity in each biome over the past 50–100 years. The arrows indicate the trend in the impact of the driver on biodiversity. Horizontal arrows indicate a continuation of the current level of impact; diagonal and vertical arrows indicate progressively increasing trends in impact. This Figure is based on expert opinion consistent with and based on the analysis of drivers of change in various chapters of the Millennium Assessment report of the Condition and Trends Working Group. This Figure presents global impacts and trends that may be different from those in specific regions.

Source: Millennium Ecosystem Assessment 2005, www.MAweb.org



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